Crafting out of poverty

GREEN PRODUCTION AND TRADE
MDG-F
MDG ACHIEVEMENT FUND

JOINT PROGRAMME ON GREEN PRODUCTION AND TRADE
TO INCREASE INCOME AND EMPLOYMENT OPPORTUNITIES FOR THE RURAL POOR

IMPACT ASSESSMENT

Main Findings of the Endline Survey Aimed to Assess the Impact of the Joint Programme for Rural Households and Companies

Hanoi, June 2013

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HANOI, JUNE 2013

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LIST OF ABBREVIATIONS

FAO	Food and Agriculture Organization
GDP	Gross Domestic Product
HRPC	Vietnam Handicraft Research and Promotion Centre
ILO	International Labour Organization
ITC	International Trade Centre
JP	Joint Programme
LED	Local Economic Development
MDG-F	Millennium Development Goals Fund
MOIT	Ministry of Industry and Trade
MOU	Memorandum of Understanding
NGO	Non-Governmental Organisation
NPK	Nitrogen (N), Phosphorus (P) and Potassium (K)
PPC	Provincial People’s Committee
RUDEC	Rural Development Center
SME	Small and Medium Enterprise
SYB	Start Your Business
TPO	Trade Promotion Organisation
UNCTAD	United Nations Conference of Trade and Development
UNIDO	United Nations Industrial Development Organization
VC	Value Chain
VCCI	Vietnam Chamber of Commerce and Industry
VIETCRAFT	Vietnam Handicraft Exporters Association
VIETRADE	Vietnam National Trade Promotion Organization
VND	Vietnamese Dong

FOREWORD

Reducing poverty and improving livelihoods in rural areas and among ethnic minority communities has been a continual challenge in Vietnam, despite its status as a Middle Income Country since 2010. The average poverty rate in Vietnam has been dramatically reduced from 58.1% in 1993 to 12% in 2011. However, inequality is widening quickly between urban and rural areas as well as between Vietnam's ethnic minority groups. Poverty is concentrated predominantly in rural areas (91%) and ethnic minorities, which comprise 14% of the population, but make up 47% of Vietnam's poor in 2010 (compared to 29% in 1998).

In many rural areas of Vietnam, agriculture remains the most important economic sector. However, the income generated from farming is often not sufficient for smallholder farmers to reach an income level above the national poverty line of 500,000 VND per capita/month (about 0.80 $ per day). The cultivation and processing of natural raw material and the production of handicrafts, mostly undertaken at times when farm work slows down, constitute some of the most important sources of additional income for farmers.

Recognizing the need to increase income and to promote employment opportunities for the rural poor in Vietnam, the Government of Vietnam and the United Nations launched a Joint Programme on Green Production and Trade to Increase Income and Employment Opportunities for the Rural Poor in 2010. The programme supports the handicrafts sector, recognizing its importance as an important source of income for smallholder farmers and landless poor. Some 1,400 raw material growers/collectors and craft producers from rural communes and ethnic minorities have been included in the list of beneficiaries. The programme is one of 128 Joint Programmes supported by the Millennium Development Goals Fund (MDG-F), which was created in December 2006 with a generous contribution of 900 million US$ from the Government of Spain to the UN system with the aim of accelerating progress on the MDGs as well as of bringing together United Nations agencies in a collective effort, thereby strengthening the UN system's ability to deliver as one entity.

The present study discusses the main findings of a comprehensive research to assess the impact realized during the course of the programme's three year implementation. Based on a comprehensive baseline study in 2010 and a similar endline survey conducted in 2013, the study compares the situation for programme beneficiaries, based on a number of indicators, before and after programme support, which is then benchmarked by comparing it to a control group that did not receive programme support. We hope this study will contribute to draw important conclusions and inform future policies and programmes that aim to support the craft sector in Vietnam as a vehicle for income development and poverty alleviation among rural households in Vietnam.

For further details on the present report, or the programme, please contact the Programme Management Unit, at: pmu@greentrade.org.vn or visit us on the web at www.greentrade.org.vn.

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National Programme Director
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EXECUTIVE SUMMARY

The Programme

The Joint Programme "Green Production and Trade to Increase Income and Employment Opportunities for the Rural Poor" aims to increase income and employment opportunities of raw material growers/collectors and grassroots producers of handicrafts in the four northern provinces Thanh Hoa, Nghe An, Hoa Binh and Phu Tho.

The national coordinating authority (Line Agency) is the Ministry of Industry and Trade (MOIT). The project owner (national implementing partner) on behalf of the MOIT is the national trade promotion organization VIETRADE. Under the coordination of VIETRADE, the Vietnam Handicraft Exporters Association VIETCRAFT is the lead partner in managing and coordinating inputs and delivering outputs. The programme is funded by the Spanish MDG Achievement Fund with the aim of accelerating progress on the MDGs as well as of bringing together United Nations agencies in a collective effort, thereby strengthening the UN system's ability to deliver as one entity. As such, It is implemented jointly by five UN agencies, namely the Food and Agriculture Organization (FAO), the International Labour Organization (ILO), the United Nations Industrial Development Organization (UNIDO), the United Nations Conference of Trade and Development (UNCTAD) and the International Trade Centre (ITC), each bringing in their core competence on market development, trade, SME promotion, cleaner production, empowering of grassroots producers and smallholder farmer development.

The programme applies a value chain approach to develop better integrated, pro-poor and environmentally sustainable "green" value chains, enabling growers, collectors and producers to improve their skills and products, and to link these to more profitable markets. The programme has intervened in five value chains: bamboo & rattan, sericulture/silk, sea grass, handmade paper and lacquer. Altogether 4,038 households in the four provinces, mostly farm households supplying raw material for handicraft production and craft producers, as well as 198 Small and Medium Enterprises (SME) have benefitted from the programme directly.

The main outputs of the programme were a) training of farmers on sustainable cultivation/collection of raw material, b) distribution of seedlings and other inputs, c) training of craft producers on technical skills and business skills, cleaner production, group formation, occupational safety and health, d) promotion of improved business linkages in the value chains, e) introduction of innovative equipment and tools, f) entrepreneurship training for SMEs, g) capacity building for support organizations on Local Economic Development (LED) and trade promotion.

The Impact Assessment Methodology

740 households and SMEs - the same households and SMEs that had been interviewed for the baseline survey - were interviewed to compare income development, poverty reduction, employment creation, turnover development of SMEs, environment protection, natural and physical capital, occupational safety, skills development, improved framework conditions etc. The baseline

data for 2009 collected by the programme among the 740 households and SMEs are compared with endline data which were compiled in a survey in March/April 2013.

Of the 740 households and SMEs, 409 are farm households that cultivate raw material for craft production, 300 are craft producing households and 31 are craft producing SMEs.

523 of the 740 surveyed households and SMEs participated in programme activities, representing 12% of all direct programme beneficiaries. The remaining 196 households and SMEs which have not participated in any programme activity serve as a control group against which the development in the beneficiary group is benchmarked. This allows an assessment as to which results can be realistically attributed to programme support interventions and which results are due to external factors.

Field surveys were conducted by the Rural Development Center (RUDEC) under FAO contract and by the Vietnam Handicraft Research and Promotion Centre (HRPC) under UNIDO/ILO contract. The endline surveys took place in the four programme provinces in March/April 2013 based on updated versions of the baseline survey questionnaires. In addition to the questionnaires, the research teams conducted a number of in-depth interviews with value chain stakeholders and commune representatives. The findings of the surveys and the in-depth interviews were reviewed with a number of value chain actors and provincial/commune representatives in two validation workshops in Hoa Binh/Phu To and Thanh Hoa Nghe An on 9-10 May 2013. The data of both surveys were then aggregated into the present report.

Income Development of Programme Beneficiaries

The impact assessment shows that the average annual income of households in the group of project beneficiaries increased from 27.7 million VND in 2009 to 58.4 million VND in 2012 (nominal increase of 110.8%) which is equivalent to an inflation-adjusted real overall income increase of 52.4%. The average annual income from surveyed products – i.e. the products of the respective value chains such as bamboo & rattan, sericulture/silk, sea grass, lacquer/lacquer ware and handmade paper - increased from 4.7 million VND in 2009 to 9.2 million VND in 2012 (increase of 97.5%) which is equivalent to a real income increase from surveyed products of 41.5%.

The comparison between sample group and control group at aggregated level (craft producers and raw material growers combined) shows that the overall income developed similarly. The project sample group still has a higher total income and the income difference between sample group and control group remained stable (5.5 million VND in 2009 compared to 6 million VND in 2012). In between baseline and endline survey, the income increase achieved by the control group is even higher than that of the project sample group due to higher income from other sources outside the agriculture and handicraft sector. The dominating factor for household income increase in both sample group and control group are other income sources.

While the overall income increase does not show a big difference between sample group and control group, the income development from the surveyed products (bamboo & rattan, sericulture/silk, sea grass, lacquer/lacquer ware and handmade paper) does. The income increase from the surveyed products is nearly three times higher in the sample group than in the control group. This is particularly the case in the sericulture/silk value chain, where the income from surveyed products contributed 26.5% to the overall household income in 2012 (compared to 16.7% in 2009), while the control group's income from sericulture/silk only contributed only 8.2% to the overall household income in 2012.

The craft producing households supported by the programme increased their overall income from 31.1 million VND/household to 50.1 million VND per household. This means an inflation adjusted real income increase of 16.5% compared to 9.2% for the control group. The income from surveyed crafts contributed 23% to the overall household income of the sample group in 2012, while this is only 8.5% in the control group. While there was no significant statistical difference between sample group and control group in the income from surveyed products in the baseline survey, there is a significant statistical difference in the endline survey. This implies that the programme has contributed significantly to the income increase from surveyed products at craft producer level.

The raw material suppliers supported by the programme reached an average household income of 64.8 million VND in 2012 (real income increase of 86.7%). The overall income in the control group remained with 59.0 million at lower level, but showed a steep real income increase of 224.5% which is largely due to the fact that a few households had opened transport companies, shops or received outstanding incomes from family members working in factories or abroad. The average annual income of supported raw material suppliers from surveyed products increased from 2.7 million VND in 2009 to 7.5 million VND in 2012 (real income increase of 100.8%) despite the fact that first effects from the plantation of bamboo & rattan and lacquer trees can only be expected in 2014. The increase in income achieved from surveyed products in the control group remained with 6.1 million VND at lower level (real income increase of 37.8%), but there is no significant statistical difference visible yet between the overall household income or the income from surveyed products between sample group and control group in both baseline and endline survey.

Sericulture Value Chain shows the best Result ...

Bamboo & rattan cultivation, as it is done currently, is just a marginal side activity of rural households, so that the endline study was not able to trace a visible average income impact resulting from improved sustainable harvesting. Nonetheless, there is evidence from individual bamboo & rattan growers who achieved a strong income increase due to better sustainable harvesting of bamboo and intensive cultivation of rattan. As first effects on income development from bamboo & rattan plantations can only be expected in 2014, it is still too early to measure an income impact. The handicraft producers in the bamboo & rattan VC supported by the project did not obtain a real income increase; however, the programme did effectively encourage weavers to maintain the bamboo & rattan business, while non-supported weavers generated a minor income.

The sericulture/silk value chain shows the best results in terms of income increase of both sericulture farmers and silk weavers. This can be attributed to the programme interventions as there is a strong difference between the beneficiaries group and the control group. There are examples where sericulture farmers increased the income from 1 ha of mulberry plantation to 24.5 million VND based on the introduction of the new VH13 mulberry tree variety, the distribution of hybrid silkworm eggs and training on mulberry cultivation/silkworm rearing by the programme. The revitalisation of sericulture at commune level was successful in many cases. At the level of weaver groups and cooperatives, the introduction of new weaving looms to improve productivity, design advice and skills training have resulted in final products of higher value and the promotion of market linkage activities has increased the average household income from silk from 13.8 million VND/household to 40 million VND/household.

Sea grass farmers supported by the project have reported a real income increase of 34.1%, compared to a real income decrease in the control group. Farmers were encouraged to continue sea grass cultivation by receiving production training and fertilizer. On the other hand, among the sea grass craft producing households who suffered from increased raw material prices, their inflation-adjusted real income decreased in both beneficiary group and control group.

The handmade paper value chain is exclusively confined to one small producer group in Hop Hoa, Hoa Binh province, in which only some 20 producers of handmade paper have continued to improve their product quality and have reported an increased income. Hence, the impact of the programme on the handmade paper value chain is limited. The initial expectation that other households would take up handmade paper production turned out not to be realistic, as a consequence of which only a minor average income increase can be reported in the handmade paper value chain.

In the group of lacquer tree farmers, both sample group and control group have reported a strong income increase. An impact from the plantation of lacquer trees will only become visible in the coming years, as it takes three years to harvest the first lacquer from newly planted trees. There is evidence from supported communes and farmers who have obtained increased income due to better plantation management, but this is not visible in the comparison between beneficiary group and control group. No effects were measured at household level in terms of the production of final lacquer ware items, as these are only produced by companies.

Thanh Hoa Province reports highest Income Increase ...

The income of programme beneficiaries increased in all four provinces. The programme was particularly successful in Thanh Hoa province where the sample group reached 86% of the average income level in the province and where the surveyed sericulture/silk households who participated in the programme reached an annual income of 120 million VND, thereof 38.7% from surveyed products.

70% of Beneficiaries are Women ...

In 70% of all cases, female household members were reported to have been the main programme beneficiaries. The programme has made an important contribution towards income generation for women, though their average income remained much lower than the income of male programme beneficiaries.

Muong Ethnic Minority shows highest Income Increase ...

The income increases reported by ethnic minorities were similar to those achieved by the overall programme beneficiaries. While beneficiaries with ethnic Muong background have generated increased income from sericulture/silk, beneficiaries with Thai ethnic background hardly achieved an increased income from surveyed products.

Households escape Poverty ...

The number of households living below the national poverty line went down from 88 households in 2009 to 65 households in 2012 in the group of programme beneficiaries (decrease of 26.1%). This means that the poverty rate in the sample group decreased from 16.8% to 12.4%. As particularly ethnic minorities (which development lags behind the national average) and poor households and communes had been selected for the programme, it is a good result that the poverty rate decreased similar to the national average. It is important to note that the decrease in the group of programme beneficiaries is stronger than in the control group.

Linked to income development, food safety improved as well. The percentage of households with enough food every day increased from 82.2% to 86.4% in the sample group, while it decreased from 86.0% to 76.9% in the control group.

The programme did not have a visible effect on savings and loans. The number of account owners and the number of account owners with savings in the bank went up in both sample group and control group, but still remained at low level in both groups. Particularly for account owners with savings in the bank, the percentage remained low.

SMEs increase Turnover and create Employment ...

The 21 surveyed SMEs which participated in the programme developed much better than the 10 SMEs surveyed in the control group. The average annual turnover of the surveyed SMEs supported by the project more or less doubled from 18.0 billion VND in 2009 to 36.9 billion VND in 2012. This is equivalent to a real turnover increase of 47.9% which compares to a real turnover decrease in the control group of 46.3% in the same period. The turnover increase achieved by the SMEs supported by the project suggests that the capacity building activities undertaken by the programme were successful and that the support indeed made a difference to the SMEs.

The successful development of the SMEs supported by the programme led to a significant employment increase. In the SMEs in the sample group, the number of jobs on average more than doubled from 41.2 fulltime jobs/SME in 2009 to 87.2 fulltime jobs/SME in 2012. This means that 966 new fulltime jobs have been created in the surveyed 21 SMEs supported by the project. Two-third of the newly created fulltime jobs benefit female employees (665 new fulltime jobs for women). Part-time employment also went up sharply, from 91.9 part-time employees per company in 2009 to 370.8 part-time employees in 2012. The total number of part-time jobs created in the 21 surveyed SMEs supported by the project is 5,857. While the part-time employment of men went down, a total of 6,185 part-time jobs were created for women. The findings related to both fulltime and part-time employment underline the relevance of the handicraft sector for women employment and suggest that the programme has had an impact on employment creation.

The employment figures obtained from households also show that the programme has had a positive employment effect on household level. While the impact has not been as significant as it has been at SME level, nevertheless, a large number of part-time jobs have been created within the families. Particularly part-time jobs in households in the four provinces provide income opportunities for the resource-poor and less-skilled population in rural areas. An important poverty alleviation impact of the project can be assumed at this level as well.

The Environment benefits also ...

With regard to an increase in the average cultivation area per household, an impact can only be observed in the sericulture/silk value chain, where the average area per household doubled from 0.55 ha/household to 1.13 ha/household in the beneficiaries group, while the control group remained more or less at the same level as before. While there is no important change in the area under cultivation/harvesting per household (except in sericulture), the number of trees planted has been significantly increased with support from the programme. Bamboo & rattan households planted on average 1,414 bamboo & rattan seedlings per household, which is nearly two times more than in the control group. For the 104 bamboo & rattan households surveyed in the sample group, this makes a total of 147,056 new plants. In sericulture, sea grass and handmade paper, the sample group planted a large number of high-quality and new hybrid variety seedlings as well (average of 2,156 mulberry trees per farmer, 1005 sea grass seedlings per farmer, 1,579 trees for handmade paper production per farmer), while no new planting activities were observed in the control group. The planting activities undertaken by the farmers are long-term investments and can be a stable source of income from which the households and communes can benefit in future.

The programme has also made a contribution towards environmental protection as large areas of bamboo & rattan are now under protection in the supported communes. Some communes report that up to 700 ha of natural bamboo forest have been preserved in the commune. Based on sustainable exploitation, commune examples suggest that this generates an income of about 6 million VND/household and year for a large number of households.

The number of households applying environmental regulations in the beneficiaries group rose from 2 households in 2009 to 118 households in 2012. This is equivalent to 52.0% of all households in the beneficiaries group, while the percentage of households applying environmental regulations in the control group was 39.7% in 2012.

Based on the Cleaner Production Training, households report minimized use of toxic chemicals, use of natural dyes, more efficient use of by-products, careful treatment of wastewater etc. 20% of surveyed households in the beneficiaries group do now collect waste or recycle waste, while this percentage was only 2% in 2009 and only 5.5% in the control group in 2012. The percentage of companies applying environmental regulations nearly doubled from 38.1% to 71.4%, though this picture is similar in the control group. There is no statistical effect visible in terms of improvement of water drainage system or wastewater treatment system.

The Impact of Trainings ...

Impact of technical training, input supply and technology innovation is visible at household level in terms of increased income from surveyed products. However, as the average overall income of the sample group has not increased significantly compared to the control group, it is assumed that the more general business and entrepreneurship training provided at the household level has not resulted in a significant overall income increase by the sample group. While it is clear that such impact may not be expected immediately, the feedback given from the households in the in-depth interviews is also mixed. While some interviewees comment that the entrepreneurship trainings have had an effect at household level, other comments are less positive. At SME level, EMPRETEC entrepreneurship trainings were a key element of capacity building of entrepreneurs and the feedback from companies on the training impact is positive. SME entrepreneurship was stimulated and the turnover development of supported companies suggests a positive impact as well.

The Number of Accidents decreased ...

With regard to Occupational Safety and Health, the number of craft producing households reporting work accidents decreased significantly during the project period. Moreover, the frequency of accidents was also reduced. While 90% of the households in the sample group reported more than 5 accidents per year in 2009, all households in the sample group did not have more than 5 accidents in 2012. SMEs report a strong decrease of work accidents as well and the percentage of companies with emergency equipment increased. However, in all cases, the sample group and the control group are showing similar results.

Cooperative Membership increases …

Social benefits paid to employees by SMEs did not increase in the beneficiaries group, while there is some improvement in the control group. The cooperation between farmers and craft producers was strengthened in so far as 23.3% of the programme beneficiaries do now belong to cooperatives, while this was only the case for 5% in 2009 and while this increase was reported much less in the control group.

Beneficiaries have reported an increased productivity due to the innovative equipment and tools supplied by the programme which seems to have been an important factor for income increase at processing level. This applies to different value chains and equipment such as weaving looms which allowed weavers to diversify their product range or bamboo splitting machines which allowed them to undertake a first raw material processing.

Structural Changes at national Level …

Access to entrepreneurship trainings has been improved, as trainers have been qualified and a new entrepreneurship training approach has been introduced in Vietnam. As VIETRADE is currently setting up an EMPRETEC training center in Vietnam, it is likely that these capacities can be used for future entrepreneurship trainings.

With the start-up support to LifeStyle Vietnam, the programme contributed substantially to establishing an important international platform for business matchmaking which impacts the whole handicraft sector in Vietnam. 300 exhibitors at LifeStyle Vietnam 2013 saw 1,400 international business visitors and mostly reported good business from the fair. The impact reached with the start-up support to LifeStyle Vietnam is an important contribution to the overall development of the handicraft sector in Vietnam.

VIETCRAFT was supported to enhance its service provision for craft exporting companies in Vietnam. An on-line information system has been developed and put into operation on the domain www.vietcraftservices.com since January 2013. It helps to facilitate business contacts between international buyers and Vietnamese exporters of home decor and gift sector.

... and also at provincial Level

The capacities of target communes were strengthened in the area of Local Economic Development (LED). This resulted in the fact that a number of communal People's Committees have developed new land allocation plans or have played an active planning and promotion role to revitalise particular value chains.

Provincial advisory boards were established in Nghe An and Thanh Hoa provinces. The mandate of the Provincial Advisory Boards, which will continue to exist beyond the duration of the programme, is to foster interdepartmental collaboration to support the creation of income and employment opportunities for poor rural households engaged in craft-related value chains, such as bamboo, rattan and mulberry. In addition, the Board is responsible for creating favorable conditions for the successful implementation of relevant projects/programmes and providing policy recommendations and guidance for local economic development.

Lessons learned from the programme encouraged provincial advisory boards already to mobilize sources of provincial funding for up-scaling and replication of programme activities. Following the decision to establish the board in Nghe An province, the provincial authorities developed a decision from the Provincial People's Committee to develop the bamboo/rattan and sericulture value chains. Objectives include the creation of 5,000 permanent and 8,000 part-time jobs by 2015 and 8,000 permanent and 30,000 part-time jobs by 2020.

1. THE JOINT PROGRAMME

1.1 Introduction

Handicraft production in Vietnam is deeply rooted in the culture and traditions of its people. Promoting a rapidly growing handicraft industry in Vietnam is part of the Vietnamese government's plan to foster economic development across all regions of the country, reducing unemployment, especially in the rural areas, and raising exports. Vietnam is gradually revealing both its potential and the wide range of its products to the international handicraft markets. The handicraft sector has created millions of jobs for local workers, elevating their living standards while helping to preserve ancient traditions. In general, handicrafts are produced at household level, whereas product finishing, packaging and trading are mostly undertaken by SMEs. Several hundred crafts exporters with large producer networks throughout the country are providing employment for 1.35 million people in some 2,000 craft villages.

The Joint Programme "Green Production and Trade to Increase Income and Employment Opportunities for the Rural Poor" aims to increase income and employment of raw material growers/collectors and grassroots producers of handicrafts and small furniture in the four northern provinces Thanh Hoa, Nghe An, Hoa Binh and Phu Tho. The national coordinating authority (Line Agency) is the Ministry of Industry and Trade (MOIT). The project owner (national implementing partner) on behalf of the MOIT is the Vietnam National Trade Promotion Organization VIETRADE. Under the coordination of VIETRADE, the Vietnam Handicraft Exporters Association VIETCRAFT is the lead partner in managing and coordinating inputs and delivering outputs. The programme is funded by the Spanish MDG Achievement Fund.

The programme applied a value chain approach to develop better integrated, pro-poor and environmentally sustainable "green" value chains, enabling poor growers, collectors and producers to improve their skills and products, and to link these to more profitable markets. The approach combines the complementary and comparative expertise of five UN agencies, including the Food and Agriculture Organization (FAO), the international Labour Organization (ILO), the United Nations Industrial Development Organization (UNIDO), the United Nations Conference of Trade and Development (UNCTAD), and the International Trade Centre (ITC), each bringing in their core competence on market development, trade, SME promotion, cleaner production, empowering of grassroots producers and smallholder farmer development.

The four provinces Thanh Hoa, Nghe An, Hoa Binh and Phu Tho were selected, as they were home to 11 out of the 61 poorest districts in Viet Nam. In 2009, 20% of the households in the 12 districts targeted by the programme lived below the national poverty line, which was 400,000 VND/month at that time, about 0.6 $ per day (before adjustment of the national poverty line in 2012).

The designated intervention districts were:

- Nghe An: Quynh Luu, Yen Thanh, Dien Chau
- Thanh Hoa: Nong Cong, Nhu Thanh, Nga Son, Thieu Hoa
- Hoa Binh: Lac Son, Mai Chau, Luong Son
- Phu Tho: Cam Khe and Tam Nong.

A total of 25 communes were chosen within the selected districts and within these communes an effort was made to prioritize poor households that are to receive support under the programme.

Figure 1: Programme structure

The project focused on five value chains: bamboo & rattan, sericulture/silk, sea grass, handmade paper and lacquer/lacquer ware.

Table 1: Overview of value chain structures

	Raw material supply	Processing	Production	Trading	Consumption
Bamboo/Rattan	Bamboo and rattan collectors and growers	Processors (cutters, splitters etc)	Bamboo and rattan weavers (basketry, home accessories)	International Importers National Exporters Provincial Wholesalers Collectors on district level	Export markets Local markets
Sericulture	Mulberry tree/silk worm farmers	Silk yarn producers	Silk yarn weavers		
Sea grass	Sea grass farmers	Sea grass twisters	Producers of final sea grass articles (mats, etc.)		
Lacquer ware	Lacquer tree farmers	Lacquer processors	Lacquer ware producers		
Handmade Paper	Raw material growers/collectors	Handmade paper producers			

1.2 Programme Outcomes

The programme aimed at contributing to achieving four main outcomes:

- **Outcome 1:** Improved understanding of the handicrafts and small furniture value chains in four provinces. Indicators to be monitored: Baseline data surveys available on farmer/collector, grassroots crafts producer and SME level; VC studies elaborated; problem areas at micro, meso and macro level identified.
- **Outcome 2:** An environmentally and economically sustainable increase in craft raw material growers'/collectors' incomes in four provinces. Indicators to be monitored: Reduction of the number of households living below the national poverty line in communes targeted by the programme by 50%; 30% income increase of raw material growers/collectors (absolute, relative) in programme communes with info on ethnic minorities, gender, youth, and people with disabilities; increase in cultivation area of rattan and bamboo (ha planted); increase of mulberry tree plantations (ha planted); increase of lacquer ware plantations (ha planted); increase in sales volumes of raw materials (quantity, price); changes applied to sustainable bamboo collection.
- **Outcome 3:** A sustainable increase of crafts related rural households' and enterprises' incomes in four provinces. Indicators to be monitored: Reduction of the number of households living below the national poverty line in communes targeted by the programme by 50%; 30% income increase of craft producers (absolute, relative) in programme communes with info on ethnic minorities, gender, youth, and people with disabilities.
- **Outcome 4:** Improved policies and regulatory frameworks at the provincial and national level that meet the needs of rural small enterprises, in particular raw materials and crafts producers, processors and traders. Indicators: Provincial crafts development action plans in four provinces available; VIETRADE (MOIT) provided with policy recommendations for the national level.

The total number of direct beneficiaries targeted was 4,480. The actual number of direct beneficiaries reached is 4,236 (thereof at provincial level 4,038 households and 87 SMEs) plus 110 SMEs at national level. In addition, the programme was expected to reach out to a much larger number of indirect beneficiaries that are part of the supply networks of the crafts SMEs, employees and household members.

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Table 2: Direct project beneficiaries at household level in the four provinces by value chain

	Nghe An	Thanh Hoa	Hoa Binh	Phu Tho	Total
Bamboo & Rattan	1,088	487	659		**2,234**
Sericulture/Silk	226	236	296	436	**1,194**
Sea grass		259			**259**
Lacquer ware				277	**277**
Handmade paper			74		**74**
Total	**1,314**	**982**	**1,029**	**713**	**4,038**

1.3 Programme Implementation

During the course of programme implementation, which formally started in February 2010 and will end on 30 June 2013, the programme has intervened to address constraints and to develop better integrated, pro-poor and environmentally sustainable value chains. This starts by introducing better agricultural practices, including a reduced use of harmful pesticides, and high-yielding varieties for raw material cultivation such as rattan and mulberry. Moving along the value chain, craft producing households increase their productivity through healthier and safer work conditions, but also vocational skills training and equipment and tools needed for processing of raw material are improved. Producers are supported to enhance their business skills and the organization producer groups and cooperatives, which instilles better business planning and shall enable better access to microcredit. Craft producers are assisted to develop new products, are linked to export companies and are taken to domestic trade fairs to expand their client base. Similarly, export-oriented companies expand their product range with new sustainable product designs to meet global market trends and are supported to attract new buyers through participating in national and international trade fairs. The expectation is that employment is created for household craft producers as well as raw material growers, when companies increase their export sales. Since these products are produced within the traditional set up of 'craft villages' characteristic for Vietnam's cultural industry, this also helps to vitalize and sustain the local culture.

In order to facilitate and coordinate the implementation, a programme management unit has been set up hosted by VIETRADE. Under VIETRADE, the national handicraft exporters association VIETCRAFT is the main Vietnamese counterpart responsible for the day-to-day management of the programme and provision of technical advice. At the province level one provincial department, often DARD, has been nominated by the Provincial People's Committee (PPC) to lead the implementation in the province concerned. Provincial coordinating teams at district and commune level were established to help define priorities, assess the relevance of JP activities, lead and coordinate field-level support activities. Provincial authorities, NGOs, women unions and the private sector are regularly consulted on VC specific interventions. At province level, provincial coordinating teams have been established to help define priorities, assess the relevance of JP activities and coordinate field level support.

The main achievements of the Joint Programme can be summarized as follows.

Outcome 1: Improved understanding of the handicrafts and small furniture value chains in four provinces.

- Preparation of baseline studies providing socio-economic data of grassroots crafts and small furniture producers; endline survey underway.
- Preparation, validation and dissemination of value chain studies for bamboo & rattan, sea grass, sericulture/silk, lacquer and handmade paper.
- Participatory Rural Appraisals conducted for identifying specific interventions for farmers in the five value chains.
- Local Economic Development (LED) forums organized in the four provinces allowing local stakeholders to review and update VC maps and prioritize VC upgrading activities.
- Preparation of a case study on "Taking a Value Chain Approach towards Local Economic Development and Women's Economic Empowerment", funded under the UN WOMEN Global

Documentation Initiative

- Programme website; media outreach; dissemination of news and documents via One UN and MDGF websites; documentary videos completed.

Outcome 2: An environmentally and economically sustainable increase in craft raw material growers'/collectors' incomes in four provinces.

- Training materials developed on planting, cultivating and harvesting of raw materials in five value chains and Training of Trainers conducted.
- 1,781 farmers improved knowledge on planting, cultivating and harvesting through Farmer Field Schools.
- Availability of seedlings improved through the creation of nursery gardens. Using these nursery gardens, more than 700 farmers have been supported in the creation of about 59 ha of demonstration areas (forest for bamboo, intensive cultivation, intercropping of rattan, mulberry, etc.); about 700,000 seedlings and over 40,000 kg of fertilizer have been provided.
- Training and study tours for rattan and mulberry cultivation.
- Farmer groups established with developed action plans; commitment by provinces and communes to continue support and upscale areas and number of households.

Outcome 3: A sustainable increase of crafts related rural households' and enterprises' incomes in four provinces.

Households

- 900 craft producers improved their understanding on business group formation; 52 business groups in four provinces have been established.
- 340 households improved understanding on Occupational Safety and Health, contributing to productivity enhancement.
- 1,140 craft producers improved their understanding and skills on business management through ILO training on Get Ahead and Start and Improve Your Business (SYB).
- 1,430 craft producers were guided to make their production cleaner and more sustainable; 261 of these received advanced vocational skills training to improve their skills to develop more value-added products.
- 106 craft producers enhanced their understanding on micro-credit.
- Households of selected communes received new tools and equipment.
- Cooperatives are in a better position to access finance.
- Producers groups and companies received support to establish legal contracts specifying mutual rights.

Companies:

- 198 companies strengthened their entrepreneurial skills and behavior through EMPRETEC training, of which 40% are women entrepreneurs. 103 so called "Empretecos" have benefited from the Business and Financial Planning trainings.
- 48 companies enabled to identify critical environmental bottlenecks in need of improvement (e.g. treatment waste water, energy efficiency, etc.); pilot models on the introduction of new cleaner production techniques in 8 companies (including equipment supply).
- Training on US and EU markets, fair trade, product and range development; trade fair

participation allowed companies to understand markets better and respond accordingly.

- VIETCRAFT developed new international partnerships and was assisted to develop an on-line information system.
- New product collections designed for companies in 2011 and 2012. Companies exhibiting at Lifestyle Vietnam generated orders worth 200,000 $ in 2012. Orders worth over 100,000 $ were reported for newly designed products.
- Support to the promotion of ‘LifeStyle Vietnam’ contributed to the participation of more than 1,400 foreign visitors in 2013. 1,059 contracts and MOUs were signed at the fair with a value of more than 5 million $.
- Based on a collaboration with universities in Japan and China, 2 lacquer refining equipments were assembled. A Chinese business delegation visited Vietnam to investigate trading cooperation with Vietnamese partners on lacquer sap and lacquer ware.
- Advice on environmentally sound technology for bamboo treatment against mould and insects provided to two companies.
- Ethnic minority groups received design assistance and participated in domestic trade fairs. A study tour to Laos for the silk value chain resulted in sales of 1.2 tons of yarn worth approximately 26,500 $.
- A total of 89 provincial TPOs and 81 enterprises benefitted from training on e-commerce, trade fair participation, market research and data collection. TOT on trade promotion and e-commerce was provided to some 11 local trainers, which will receive continued support from VIETRADE.

Outcome 4: Improved policies and regulatory frameworks at the provincial and national level that meet the needs of rural small enterprises, in particular raw materials and crafts producers, processors and traders.

- Establishment of LED dialogue forums in 4 provinces. The forums fostered local dialogue and ownership on VC upgrading and identified constraints in the Business Environment.
- A national workshop was jointly organized with the Labour Relation project/Legal Department of MOLISA in which findings from the study on the situation analysis on labour law coverage of home workers by value chains were presented.
- 25 local facilitators were trained in a ToT on participatory M&E through the COMPASS of local competitiveness. One day events enabled 130 stakeholders in the four provinces to monitor and assess, in a participatory manner, programme results, prioritize actions and assign local actors responsible.
- Provincial Advisory Boards were established in Nghe An and Thanh Hoa provinces to foster interdepartmental collaboration and to promote income and employment opportunities.
- The Ministry of Agriculture and Rural Development received support to prepare a circular for bamboo and rattan development.
- A sustainability plan was developed to investigate the possibilities and commitment of the provinces to take the necessary measures to sustain programme achievements.

2. THE IMPACT ASSESSMENT

2.1 Research objectives

The underlying purpose of the research was to determine whether the programme has achieved its intended social, economic and environmental impact for joint programme beneficiaries.

In this regard, the endline report should measure a progression of "capital" for the joint programme beneficiaries (households and companies), by comparing the results of the baseline (conducted at the start of the programme in 2010) and endline surveys. Derived from the overall goal of sustainable income and employment enhancement and the specific envisaged interventions, an elaborate set of 'Indicators of Change' was devised to enable the programme to eventually measure the success of the programme, on the following aspects: financial capital, natural capital, human capital, social capital, physical capital as well as the enabling environment.

1. **Financial capital**: Issues to include were household income and employment situation, cooperative finance, etc, with special attention to women and ethnic minority groups. Indicators include: percentage of total income generated from craft production of raw material cultivation; absolute average income of households, savings, poverty rates, and SME sales turnover.

2. **Natural capital**: Issues include the number of new plants and trees, number of households with new plants/trees, size of land of new plantations, yield/productivity, future income generation potential from crops that will only be harvest-ready after completion of the Joint Programme etc.

3. **Human capital**: Indicators include knowledge development, capacities and skills for VC activities, business management skills, occupational safety and health, good agricultural practices, business group formation, development of stable business linkages etc.

4. **Social capital**: Indicators include access to credit, networks and technical assistance, forward and backward linkages within value chain concerned.

5. **Physical capital**: Indicators include households and companies benefiting from equipment and tools provided with the support of the programme, productivity enhancement as a result of using new tools or equipment, benefits of technology innovations etc.

6. **Enabling environment**: Issues include access to government support programmes, provincial development plans, sector-wide initiatives, enhanced capacities of local service providers and enhanced access to high quality services.

2.2 Questionnaire development

The questionnaires used for the baseline survey were reviewed with RUDEC and HRPC and discussed with the United Nations Industrial Development Organization (UNIDO), the International Labour Organization (ILO), the Food and Agriculture Organisation (FAO) and the International Trade Centre (ITC). All questions used in the baseline survey allowing a reasonable baseline/endline comparison were maintained for the endline survey. Questions which were used in both baseline surveys in a slightly different way were homogenized wherever possible. Other questions were taken out of the questionnaire, as they were important in the baseline survey for programme planning purposes only but not for impact monitoring. New questions referring to programme participation and results were added.

2.3 Definition of the sample group and control group

All households interviewed in the baseline survey were visited again and interviewed a second time. Only 17 households and SMEs could not be met again, as they meanwhile migrated to other provinces, and an additional 37 households interviewed in the baseline survey were taken off, as they did not belong to any of the supported value chains. This means that a comparison of baseline and endline data was possible for 93% of all households and SMEs interviewed at the beginning of the project. A group of 409 farm households supplying raw material for craft production, 300 craft producing households and 31 crafts producing SMEs, amounting to a total number of 740 households and SME, could thus be interviewed both in the baseline and the endline survey.

The sample and control group were defined based on the question: “Did you participate in the programme?” All households and SMEs who answered this question with “Yes” were considered as programme beneficiaries and thus constitute the sample group. All households and SMEs who answered this question with “No” were considered Non-beneficiaries and became part of the control group. Out of the total number of 740 households and SMEs surveyed, 544 households and SMEs were programme beneficiaries which represent 12% of the total number of direct programme beneficiaries. 196 interviewed households and SMEs formed the control group.

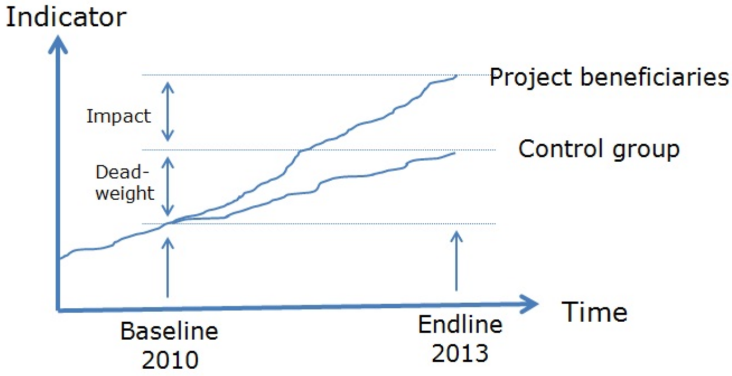
Table 3: Composition of sample group and control by value chain and type of value chain actor

	Commune	**Value chain**	**Raw Material growers**		**Craft Producers**		**Companies**	
			Sample Group	Control Group	Sample Group	Control Group	Sample Group	Control Group
NGHE AN	Chau Hanh	Sericulture/Silk	11	1	10	2		
	Chau Thang	Bamboo & Rattan	10	1				
	Nghia Hoi	Bamboo & Rattan	12					
	Quynh Trang	Bamboo & Rattan	11					
	Quynh Thach	Bamboo & Rattan	11				1	
	Dien Van	Bamboo & Rattan			10	8		
	Chau Tien	Sericulture/Silk	12				1	
	Ben Thuy	Sericulture/Silk					1	
	Do Thanh	Bamboo & Rattan					1	
	Dien Kim	Sericulture/Silk	10	2				
	Kim Thanh	Bamboo & Rattan	11	1				
	Lang Thanh	Bamboo & Rattan	5	7				
THANH HOA	Hai Long	Bamboo & Rattan	20	3				
	Thang Binh	Bamboo & Rattan			46	29		
	Tan Tho	Bamboo & Rattan						
	Nga Tan	Sea grass	13	26	27	7		
	Nga Thai	Sea grass	19	19	9	7		
	Thieu Do	Sericulture/Silk	21	4	17	3	1	
	Nga Thanh	Sea grass					1	
	Hoang Thinh	Bamboo & Rattan						1
	Industrial area	Sea grass						1
HOA BINH	Lien Son	Bamboo & Rattan	13	7	51	7		
	Hop Hoa	Handmade paper	27	6	17	3	1	
	Man Duc	Sericulture/Silk			9	1	1	
	Tan Lac	Sericulture/Silk						
	Na Phon	Sericulture/Silk	9	3				
PHU THO	Di Nau	Lacquer	24	11				
	Tinh Cuong	Sericulture/Silk	10	18				
	Yen Tap	Bamboo & Rattan	22	0	31	6	1	
	Gia Cam	Lacquer ware					1	
	Tho Van	Lacquer ware	36	4			1	
	Thuy Van Ind. Area	Bamboo & Rattan					1	
OTHER PROVINCES							9	8
Total			**296**	**113**	**227**	**73**	**21**	**10**

Comparing results of the sample group with those of the control group, consisting of households and SMEs that did not participate in the programme, allows a meaningful assessment as to which results can be realistically attributed to the project and which results are due to external factors. It is used to filter out the impact of the programme and 'prove' attribution of impact to programme support interventions. The comparison between the control group and the JP beneficiary group removes effects of the broader macro-economic development of the country, which affects all households more or less in a similar manner. The logic is explained in the below diagram.

Figure 2: Impact assessment based on control group

- Household income
- Employment
- Poverty alleviation
- SME turnover
- Household assets
- Natural resources
- Health and safety conditions
- Respect of environmental regulations
- Waste disposal, wastewater treatment
- Access to support networks.



2.4 Data collection, logging and treatment

The field surveys were conducted by RUDEC and HRPC in the four provinces in March/April 2013 based on the developed questionnaires.

In addition to the standard questionnaires, the two research teams conducted a number of in-depth interviews on the basis of pre-determined interview guides with household beneficiaries, SMEs and commune coordinators to gather additional qualitative information such as to what extent the households have developed new knowledge and skills, use new equipment and tools, have established new business linkages, etc.

On completion of survey data collection, RUDEC and HRPC logged the survey responses into databases and prepared completed Excel sheets containing the survey results. The Excel sheets containing the survey results were reviewed with the interviewer team in order to correct mistakes and check the comprehensiveness of the data.

2.5 Validation workshops

Two validation workshops were held in Hoa Binh on 9 May 2013 (for Hoa Binh and Phu To) and Thanh Hoa on 10 May 2013 (for Thanh Hoa and Nge Anh) to discuss and validate the findings with provincial VC stakeholders and provincial authorities. The workshops, which included the provincial coordinating teams, helped to verify the information received. The two research teams of RUDEC and HRPC presented their findings and the following discussion provided feedback on the outcome of the survey. Representatives of different producer groups and companies commented on the results presented for their value chains and reported about their own experience. The discussion particularly helped getting a better understanding of the reality behind the figures.

2.6 Relevant Framework Conditions

Economic Development in Vietnam

Vietnam reached low Middle Income Status in 2010 with a per-capita income of 1,130 $. Due to political and economic reforms and the government's commitment, the breath-taking economic development was characterized by strong growth over the past 20 years. The poverty rate decreased gradually from 58 percent in 1993 to 28.9 percent in 2002, 14.5 percent in 2008 and 12 percent in 2011.[1]

Framework conditions Vietnam

Per capita income in Vietnam 2010:	1,130 $
Per capita income in programme provinces 2012:	~ 18.6 mio. VND
Households below poverty line in 2011:	12%
National poverty line 2012 (income/person/year):	6 mio. VND
Annual GDP increase in Vietnam 2010-2012:	6.0%
Accumulated inflation rate Vietnam 2010-2012:	38.3%
Export increase in supported VCs 2010-2012:	29.9%
Exchange rate April 30, 2013: 1 $: 20,888 VND	

However, Vietnam's economic development during the last three years shows a "mixed" picture. The pace of the economic growth has been slowing down from 6.8% increase in the Gross Domestic Product in 2010 over 5.9% in 2011 to 5.2% increase in the Gross Domestic Product in 2012 (average annual GDP increase 2010-2012: 6.0%)[2]. The last 3 years were perceived in Vietnam as a difficult economic period. According to the Vietnam Chamber of Commerce and Industry (VCCI), as many as 53,000 enterprises went bankrupt in 2011 and 35,500 enterprises ended operations in the first eight months of 2012. The number of bankruptcies in the past two years equaled more than 40% of total bankruptcies since Vietnam initiated the reform.[3]

Inflation during the programme period

The inflation rate in Vietnam was 8.9% in 2010, 18.7% in 2011 and an estimated 7% in 2012.[4] For the project period, this means an accumulated inflation rate of 38.3% for 2010-2012.

Poverty rates in programme beneficiary provinces

The average per-capita-income in the four programme provinces Thanh Hoa, Nghe An, Hoa Binh and Phu Tho in 2012 was much lower than the national average and ranged from 15.66 million VND in Thanh Hoa and 17.88 million VND in Hoa Binh to 20.28 million VND in Nghe An and 20.4 million VND in Phu Tho, which is equivalent to 750-977 $.[5]

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[1] http://en.wikipedia.org/wiki/Poverty_in_Vietnam

[2] http://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG/countries, http://www.worldbank.org/en/news/feature/2012/12/26/vietnam-in-2012-lower-inflation-amidst-slower-growth

[3] http://vccinews.com/news_detail.asp?news_id=27784

[4] http://data.worldbank.org/indicator/FP.CPI.TOTL.ZG/countries, http://www.worldbank.org/en/news/feature/2012/12/26/vietnam-in-2012-lower-inflation-amidst-slower-growth

[5] http://www.mof.gov.vn/portal/page/portal/mof_vn/1539781?pers_id=2177014&item_id=78655308&p_details=1, http://www.baohoabinh.com.vn/11/68424/Phan_dau_thu_nhap_binh_quan_dau_nguoi_nam_2012_dat_275_trieu_dong_.htm, http://thanhhoa.gov.vn/vi-vn/thongke/Pages/Article.aspx?ChannelId=2&articleID=68, http://dantri.com.vn/chinh-tri/tong-bi-thu-lam-viec-tai-hai-tinh-phu-tho-vinh-phuc-700407.htm

Export development during programme period

Export-related industries were, in general, still developing well during the last three years. While the export of goods and services accounted for 68% of the GDP in 2009, this share increased to 87% in 2011. And for 2012, the World Bank expects Vietnam to record the highest export growth rate among developing East Asia.

Handicraft export figures compiled by the Vietnam Handicraft Exporters Association VIETCRAFT based on an analysis of official export figures by using HS code of handicraft items show an overall nominal turnover increase of handicraft exports with regard to natural fiber, lacquer ware and handmade textile products of 30% which is more or less similar to the accumulated inflation rate of 38.3% for the same period.

Table 4: Handicraft exports in programme-related value chains

	Export turnover 2009	**Export turnover 2010**	**Export turnover 2011**	**Export turnover 2012**
Natural fiber/bamboo, rattan, sea grass, water-hyacinth, palm leaves, banana	175 million $	199 million $	225 million $	252 million $
Lacquer ware	42 million $	55 million $	49 million $	43 million $
Textile/Handmade	19 million $	23 million $	23 million $	22 million $
Paper	no record	no record	no record	no record
Total	885 million $	998 million $	1.12 billion $	1.15 billion $

Source: VIETCRAFT

3. INCOME DEVELOPMENT AT HOUSEHOLD LEVEL

3.1 Aggregated Income Development

The average annual income of the project sample group increased from 27.7 million VND in 2009 to 58.4 million VND in 2012 (increase of 110.8%) which is equivalent to a real overall income increase of 52.4%.[6] The average annual income from the surveyed product increased from 4.7 million VND in 2009 to 9.2 million VND in 2012 (increase of 97.5%) which is equivalent to a real income increase from the surveyed product of 41.5%.[7]

The income from surveyed products contributed 14.7% (4.5 million VND) to the overall income increase of 30.7 million VND. The contribution to the overall income increase is at a similar level as cultivation and livestock, while the most important source of income increase is from other income outside of the agriculture and handicraft sector.[8] The increase of 30.7 million VND is mainly due to an increase of "other income", which contributed 37.1% to the overall income increase.

Table 5: Income development in the household sample group (in million VND)

Categories	Bamboo & Rattan		Sericulture/ Silk		Sea grass		Handmade paper		Lacquer		Average	
	2009	2012	2009	2012	2009	2012	2009	2012	2009	2012	2009	2012
Total	30,2	54,7	26,9	73,9	20,6	47,8	17,1	56,2	34,7	59,1	27,7	58,4
1. Cultivation	6,8	10,0	5,9	10,8	3,6	9,6	4,3	8,9	5,2	4,3	5,8	9,4
2. Livestock	5,3	8,2	3,0	8,0	2,0	8,5	5,1	10,1	6,5	15,1	4,5	9,1
3. Fisheries	0,2	0,2	0,0	0,0	0,5	0,0	0,4	0,0	4,1	0,8	0,6	0,2
4. Forestry	1,0	1,7	0,1	0,2	0,0	0,0	0,6	8,3	0,3	0,6	0,6	1,6
5. Salt cultivation	0,4	0,3	0,0	0,0	0,0	0,0	0,0	0,0	_	_	0,2	0,1
6. Services	0,4	2,2	3,7	10,8	0,2	4,7	0,2	2,5	0,2	5,5	1,0	4,7
7. Surveyed product	3,7	4,0	4,5	19,6	6,3	6,8	0,1	0,5	10,5	20,5	4,7	9,2
8. Other industries	4,1	8,3	1,8	1,9	4,2	8,8	0,4	0,8	0,3	0,2	2,9	5,5
9. Other incomes	8,2	19,7	8,2	22,6	3,7	9,5	6,0	25,2	7,7	12,1	7,3	18,6
No. of households	242	242	109	109	68	68	44	44	60	60	523	523

Source: Aggregated data of HRPC and RUDEC results

The control group shows a strong increase of the overall income as well which went up from 22.5 million VND in 2009 to 52.4 million VND in 2012 (increase of 132.9%). This is equivalent to a real income increase of 68.4%. The average annual income from the surveyed product increased from 3.8 million VND in 2009 to 5.1 million VND in 2012 (increase of 34.2%) which is equivalent to a real income decrease of 3%.

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[6] The real income increase is computed by adjusting the absolute income increase with the inflation rate during the programme implementation period.

[7] "Surveyed product" or "surveyed craft" refers to the value chains supported such as bamboo/rattan, sericulture/silk, sea grass, lacquer and handmade paper.

[8] Other income largely refers to salaried employment in a company or factory.

Table 6: Income development in the household control group (in million VND)

Categories	Bamboo & Rattan		Sericulture/ Silk		Sea grass		Handmade paper		Lacquer		Average	
	2009	2012	2009	2012	2009	2012	2009	2012	2009	2012	2009	2012
Total	26,6	58,3	24,6	64,6	17,7	31,7	7,9	57,7	29,2	73,6	22,5	52,4
1. Cultivation	6,0	6,5	5,2	10,2	2,0	2,7	2,0	5,1	4,8	4,2	4,3	5,7
2. Livestock	2,4	4,3	3,0	8,0	0,9	3,7	1,4	6,2	3,2	10,6	2,1	5,4
3. Fisheries	0,0	0,1	0	0,3	0,0	0,2	0,0	0,0	2,7	2,4	0,3	0,3
4. Forestry	0,6	3,3	0	0,0	0,0	0,0	0,7	8,9	0,0	0,2	0,2	1,7
5. Salt cultivation	1,2	0,6	0	0,0	0,0	0,0	0,0	0,0	–	–	0,4	0,2
6. Services	2,2	1,8	2,4	13,4	0,6	3,0	0,1	5,5	4,7	2,0	1,8	4,5
7. Surveyed product	3,4	0,6	0,6	5,3	6,0	5,6	0,0	0,0	6,2	26,5	3,8	5,1
8. Other industries	5,5	12,7	1,3	1,7	6,5	4,8	0,0	0,5	0,0	0,0	4,4	7,6
9. Other incomes	5,2	28,4	12,5	25,8	1,5	11,7	3,7	31,5	7,7	27,8	5,5	22,7
No. of households	69	69	34	34	59	59	9	9	15	15	186	186

Source: Aggregated data of HRPC and RUDEC results

The comparison between sample group and control group shows that the overall income developed similarly. The project sample group still has a higher total income and the income difference between sample group and control group remained stable (5.5 million VND in 2009 compared to 6 million VND in 2012), while the income increase percentage of the control group is even higher than the project sample group during the three years.

While the overall income increase does not show a big difference between sample group and control group, the income development of the surveyed product does. The income increase of the surveyed product is nearly three times higher in the sample group than in the control group.

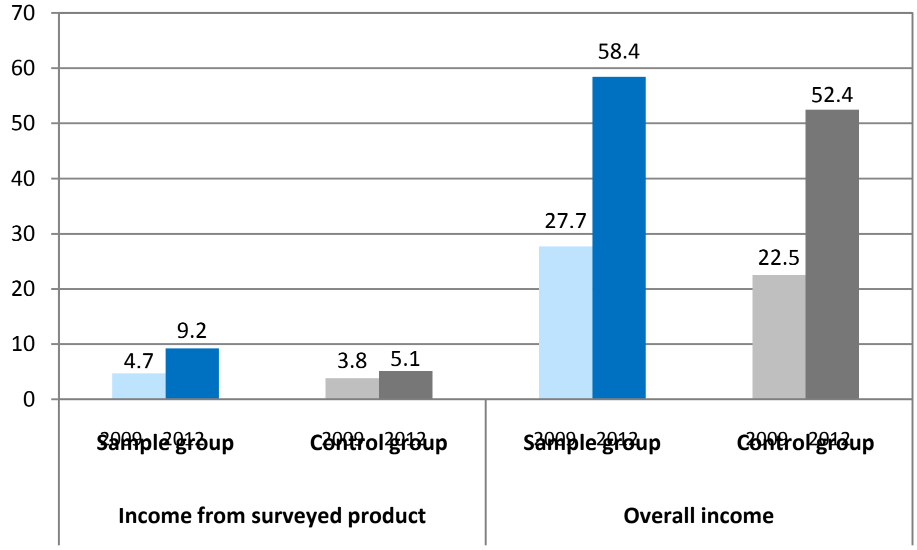
The impact indicator aiming at 30% income increase which was defined at the beginning of the project is achieved in general, but in terms of comparison with the control group it is only achieved for the income increase from surveyed crafts.

The main difference between sample group and control group in terms of overall income development is that the sample group shows a much stronger increase of "other incomes" outside the agriculture and handicraft sector, which contributed 57.5% to the overall income increase in the control group.

In summary, the programme was successful in raising the incomes from the surveyed product and thus contributed to an overall income increase for households and SMEs participating in the programme, whereas the control group was able to increase the overall income to a similar extent based on other income sources outside the agriculture and handicraft sector.

The endline survey revealed that the households from the sample group were able to increase their incomes generated from the surveyed products in all five value chains. The real income increase from the surveyed products as shown above can particularly be attributed to the strong income increases obtained from sericulture/silk and lacquer, while bamboo & rattan and sea grass have generated only small nominal income increases. The inflation-adjusted real income from bamboo & rattan products and sea grass went down. The income from handmade paper remained at low level.

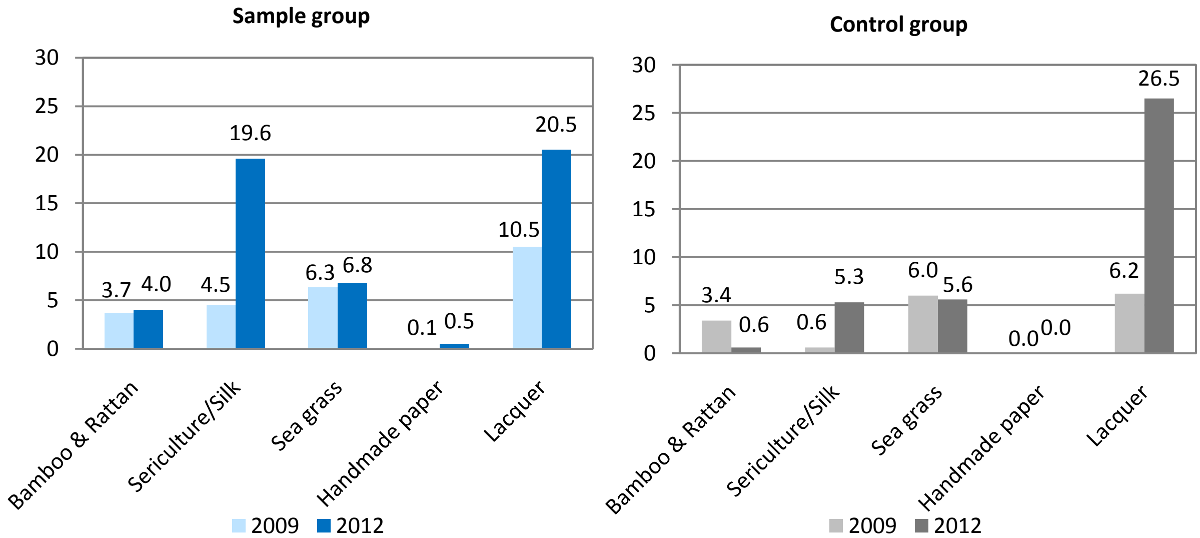
Figure 3: Average household income and income from surveyed products (in million VND/household)



Income increase surveyed product sample group: 95.7%
Income increase surveyed product control group: 34.2%

Compared to 2009, households in the sericulture/silk and lacquer value chains now generate an important part of their incomes from sericulture/silk and lacquer production. In 2012, the income from sericulture/silk generated by the households supported by the programme contributed 26.5% to their overall household incomes (compared to 16.7% in 2009) while the income from lacquer contributed 34.7% to the overall incomesof the households supported by the programme (compared to 30.3% in 2009). The income from bamboo/rattan only contributed 7.3% to the overall household incomes while the income from sea grass contributed 14.2% to the overall household incomes.

Figure 4: Household income from surveyed products by VC (in million VND/household)



The comparison between sample group and control group shows that:

- The slight increase of the nominal income from bamboo & rattan in the sample group compares to a sharp decrease of the income from bamboo & rattan in the control group. Though the real income from bamboo & rattan did not increase, the comparison with the control group shows that there is an impact of the programme.
- The income from sericulture/silk shows a strong increase for both sample group and control group, but the sample group generates an income from sericulture and silk which is almost four times higher than the income of the control group.
- The slight increase of the nominal income from sea grass in the sample group compares to a slight decrease of the income from sea grass in the control group.
- Handmade paper: No control group companies started handmade paper production or raw material collection.
- In the lacquer value chain, the sample group has not performed better than the control group. On the contrary, the control group was able to quadruple their income from lacquer from a basis that was originally lower than the incomes of the sample group.

3.2 Income development of craft producers

As the income development graph shows different results for craft producers and raw material producers, a disaggregation of the income figures of craft producers and raw material suppliers allows better understanding of the overall result.

Compared to the aggregated general picture, craft producers supported by the programme performed better both in terms of overall income increase and in terms of income increase generated from the surveyed product. The total income of craft producers rose by 61.1% in the sample group compared to 51.2% in the control group. At craft producer level, the programme achieved an inflation rate-adjusted real overall income increase of 16.5%, compared to 9.2% for the control group.

Table 7: Income development of craft households, sample group (in million VND)

Categories	Bamboo & Rattan		Sericulture/ Silk		Sea grass		Handmade paper		Lacquer		Average	
	2009	2012	2009	2012	2009	2012	2009	2012	2009	2012	2009	2012
Total	32,4	42,3	40,7	75,0	23,8	50,1	15,1	60,4	–	–	31,1	50,1
1. Cultivation	3,7	8,4	7,0	17,2	3,5	15,2	4,1	8,3	–	–	4,2	10,9
2. Livestock	6,8	6,4	4,5	11,1	3,5	11,2	2,6	6,3	–	–	5,6	7,9
3. Fisheries	0,0	0,1	0,0	0,0	0,8	0,0	0,0	0,0	–	–	0,1	0,0
4. Forestry	0,0	0,9	0,0	0,6	0,0	0,0	0,4	15,2	–	–	0,0	1,8
5. Salt cultivation	0,7	0,5	0,0	0,0	0,0	0,0	0,0	0,0	–	–	0,4	0,3
6. Services	0,3	0,2	9,7	0,0	0,3	2,4	0,6	0,0	–	–	1,8	0,5
7. Surveyed product	6,4	6,9	13,8	40,4	7,7	5,0	0,2	1,2	–	–	7,3	11,5
8. Other industries	7,1	14,0	3,1	2,2	3,1	13,2	0,0	0,0	–	–	5,3	11,0
9. Other incomes	7,4	5,0	2,6	3,6	4,9	3,1	7,0	29,4	–	–	6,2	6,3
No. household	138	138	36	36	36	36	17	17	–	–	227	227

Source: HRPC survey

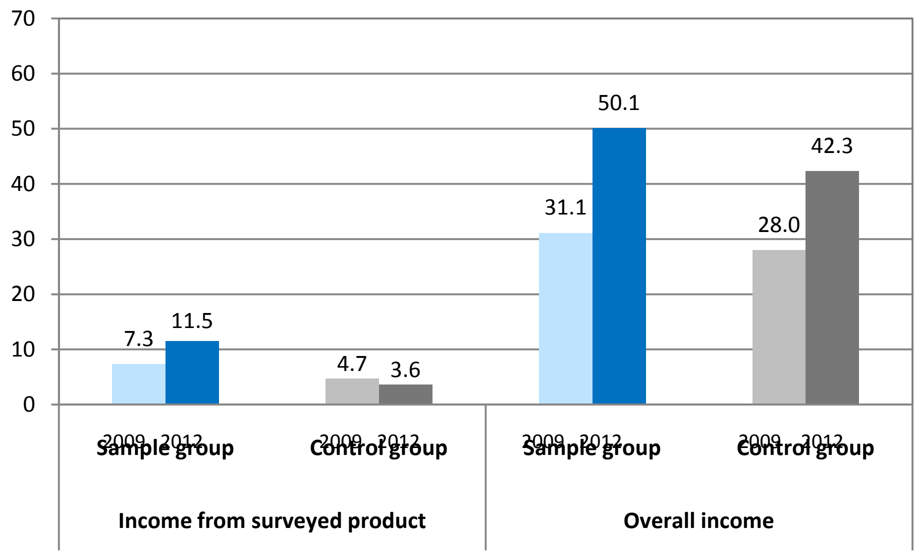
The annual income from the production of the surveyed product achieved by households in the sample group increased by 57.5%, whereas the income from surveyed crafts in the control group went down by 23.4%.This means that the real income increase from the surveyed product for the sample group was 13.9%, compared to a significant decrease of the real income from the surveyed product for the control group of 44.6%. While theincome of the craft producers supported by the programme from the surveyed product contributed with more than 20% to their total household income, crafts only contributed with 8.5% to the household income of the control group in 2012 (compared to a share of 16.8% in 2009).

Table 8: Income development of craft households, control group (in million VND)

Categories	Bamboo & Rattan		Sericulture/ Silk		Sea grass		Handmade paper		Lacquer		Average	
	2009	2012	2009	2012	2009	2012	2009	2012	2009	2012	2009	2012
Total	26,0	41,5	60,3	72,6	26,0	26,1	5,6	70,8	–	–	28,0	42,3
1. Cultivation	3,5	5,6	7,9	23,3	3,1	5,4	1,8	7,8	–	–	3,7	7,1
2. Livestock	2,2	3,5	5,1	7,4	1,1	5,2	0,7	8,4	–	–	2,2	4,4
3. Fisheries	0,0	0,1	0,0	0,0	0,2	0,0	0,1	0,0	–	–	0,0	0,1
4. Forestry	0,0	0,0	0,0	0,0	0,0	0,0	0,0	24,0	–	–	0,0	1,0
5. Salt cultivation	1,7	0,8	0,0	0,0	0,0	0,0	0,0	0,0	–	–	1,1	0,6
6. Services	1,3	0,1	13,3	8,3	2,6	1,1	0,3	0,0	–	–	2,5	1,0
7. Surveyed product	4,6	0,7	1,0	27,0	7,7	4,8	0,0	0,0	–	–	4,7	3,6
8. Other industries	7,0	16,5	5,7	6,5	9,6	7,3	0,0	0,0	–	–	7,0	13,2
9. Other incomes	5,8	14,1	27,3	0,0	1,7	2,2	2,7	30,7	–	–	6,7	11,3
No. household	50	50	6	6	14	14	3	3	–	–	73	73

Source: HRPC survey

Figure 5: Average income/income from surveyed products of craft producers (in million VND/household)



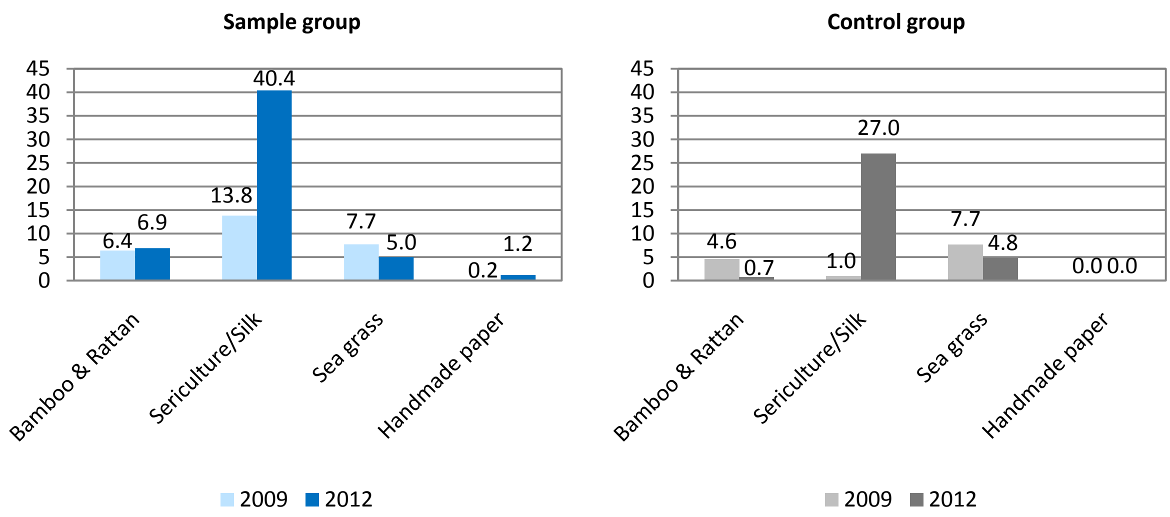
The statistical analysis of the increase in both the overall income and the income from the surveyed product based on a Paired Samples T-Test and an Independent Samples T-Test (see annexe V: Statistical assessment) provides the following results:

- Regarding the overall income: Both sample group and control group show a significant increase in the overall income, but there is no significant difference between the overall income achieved by the two groups in 2009 or 2012.
- Regarding the income from surveyed products: While there was no significant difference between the average income from surveyed products in the sample group and control group in 2009, there is a significant difference between sample group and control group in 2012. The income from surveyed products increased significantly in the sample group, whereas the change in the control group is insignificant. This means that the programme had a significant impact on the income from surveyed products in the crafts producers group.

The comparison by value chains shows that:

- The picture for bamboo & rattan is very similar to the overall picture explained above. There is a strong difference between the sample group and the control group who lost most of the income from bamboo & rattan.
- Craft producers in the sericulture/silk value chain generate by far the highest income from the surveyed product, which makes up for 53.9% of the total household income in 2012.
- The income of sea grass producers went down from 7.7 million VND to 5 million VND. In terms of real income from the surveyed product, this is a decrease of 53.1%.
- The income from handmade paper showed a strong increase, but remained low on average.
- There were no household producers of lacquer ware.

Figure 6: Income of craft producers from surveyed products by VC (in million VND/household)



3.3 Income development of raw material producers

In the group of raw material producers, the annual income of the project sample group increased from 25.1 million VND in 2009 to 64.8 million VND in 2012 (real income increase of 86.7%). The annual income from the surveyed product increased from 2.7 million VND in 2009 to 7.5 million VND in 2012 (real income increase of 100.8%) despite the fact that first effects from the plantation of bamboo & rattan and lacquer trees can only be expected in 2014.

Table 9: Income development of raw material producers, sample group (in million VND)

Categories	Bamboo & Rattan		Sericulture/ Silk		Sea grass		Handmade paper		Lacquer		Average	
	2009	2012	2009	2012	2009	2012	2009	2012	2009	2012	2009	2012
Total	27,2	71,1	20,4	73,3	16,9	45,3	18,4	53,6	34,7	59,1	25,1	64,8
1. Cultivation	11,0	12,1	5,3	7,7	3,8	3,1	4,4	9,2	5,2	4,3	7,0	8,2
2. Livestock	3,4	10,7	2,2	6,4	0,4	5,4	6,7	12,5	6,5	15,1	3,7	10,1
3. Fisheries	0,4	0,4	0,0	0,0	0,1	0,1	0,4	0,0	4,1	0,8	1,0	0,3
4. Forestry	2,4	2,8	0,2	0,0	0,0	0,0	0,7	4,0	0,3	0,6	1,0	1,5
6. Services	0,5	4,8	0,7	16,1	0,0	7,3	0,0	4,1	0,2	5,5	0,4	7,9
7. Surveyed product	0,1	0,1	-0,1	9,4	4,8	8,9	0,0	0,0	10,5	20,5	2,7	7,5
8. Other industries	0,2	0,8	1,2	1,7	5,5	3,8	0,7	1,3	0,3	0,2	1,1	1,3
9. Other incomes	9,2	39,3	10,9	32,0	2,3	16,8	5,4	22,5	7,7	12,1	8,2	28,0
No. household	104	104	73	73	32	32	27	27	60	60	296	296

Source: RUDEC survey

The overall income in the control group remained at lower level than in the sample group, but showed a steep real income increase of 224.5% which is largely due to income from other non-agricultural sources. The average figure is partly due to a few households which opened transport companies, shops or received outstanding incomes from family members working in factories or abroad. The income from the surveyed product only rose from 3.2 million VND to 6.1 million VND, equivalent to a real income increase of 37.8%.

Table 10: Income development of raw material producers, control group (in million VND)

Categories	Bamboo & Rattan		Sericulture/ Silk		Sea grass		Handmade paper		Lacquer		Average	
	2009	2012	2009	2012	2009	2012	2009	2012	2009	2012	2009	2012
Total	28,2	102,6	17,0	62,9	15,1	33,4	9,0	51,2	29,2	73,6	19,0	59,0
1. Cultivation	12,4	8,7	4,6	7,4	1,7	1,9	2,1	3,7	4,8	4,2	4,7	4,8
2. Livestock	3,1	6,3	2,6	8,1	0,8	3,2	1,8	5,1	3,2	10,6	2,0	6,0
3. Fisheries	0,0	0,1	0,0	0,4	0,0	0,2	0,0	0,0	2,7	2,4	0,4	0,5
4. Forestry	2,3	12,1	0,0	0,0	0,0	0,0	1,0	1,3	0,0	0,2	0,4	2,1
6. Services	4,7	6,3	0,1	14,5	0,0	3,6	0,0	8,3	4,7	2,0	1,4	6,8
7. Surveyed product	0,3	0,2	0,5	0,6	5,5	5,9	0,0	0,0	6,2	26,5	3,2	6,1
8. Other industries	1,6	2,6	0,4	0,7	5,6	4,0	0,0	0,8	0,0	0,0	2,6	3,9
9. Other incomes	3,8	66,1	9,3	31,3	1,5	14,7	4,2	31,9	7,7	27,8	4,8	30,1
No. household	19	19	28	28	45	45	6	6	15	15	113	113

Source: RUDEC survey

The real income increase from the surveyed products generated by raw material producers in the sample group by 100.8% compares to a real income increase of 37.8% in the control group.

The statistical analysis of the increase in both the overall income and the income from the surveyed product based on a Paired Samples T-Test and an Independent Samples T-Test (see annexe V: Statistical assessment) provides the following results:

- Regarding the overall income: Both sample group and control group show a significant increase in the overall income, but there is no significant difference between both groups with regard to the overall income in 2009 or 2012.
- Regarding the income from surveyed products: Both sample group and control group show a significant increase in the income from surveyed products, but there is no significant difference between the income from surveyed products in both groups in 2009 or 2012.
- This means that the programme had no significant impact on both the overall income and the income from surveyed products in the raw material producers group.

This result was to be expected, as an income impact from new plantations can only be expected in three of the five value chains (bamboo & rattan, lacquer, handmade paper) starting from 2014.

Figure 7: Average income and income from surveyed products of raw material producers (in million VND)

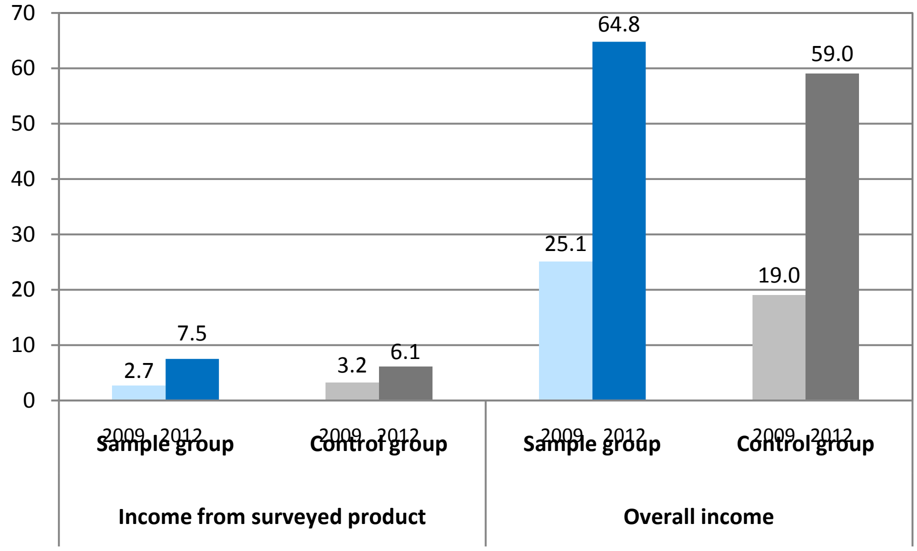
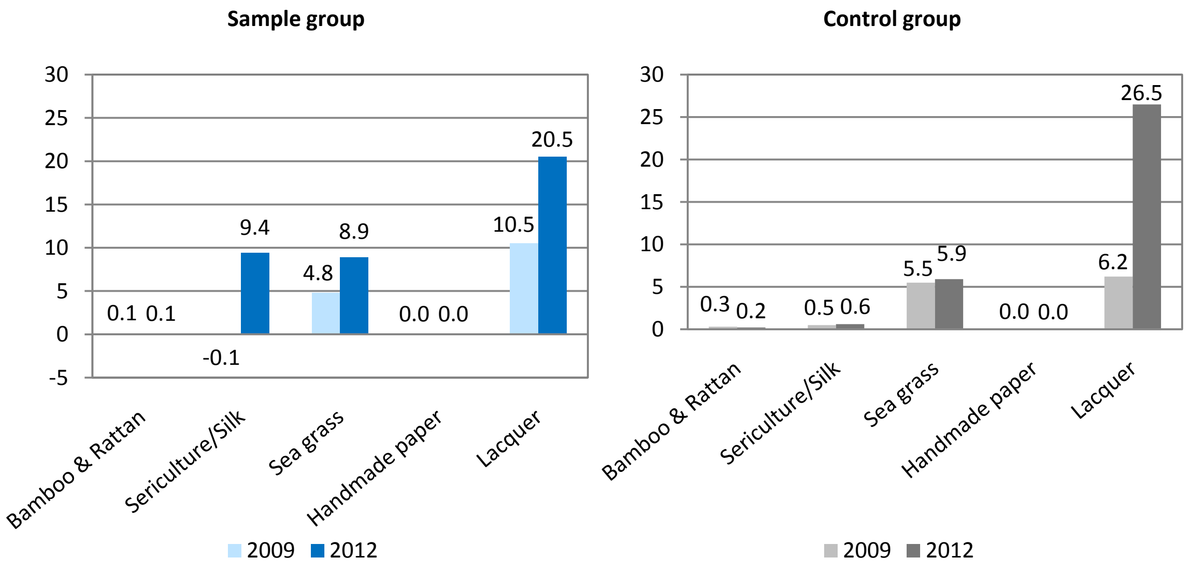


Figure 8: Income of raw material producers from surveyed product by VC (in million VND/household)



The comparison by value chains shows that:

- On average, bamboo & rattan collection is just a marginal side activity of rural households and provides an income of 0.1-0.3 million VND/household only. This is equivalent to 5-15 $/household/year which did not increase. An income impact from improved sustainable harvesting is not traceable yet on average. First effects from intensive bamboo & rattan plantations can only be expected in 2014.
- The income increase from surveyed products is largely due to sericulture, sea grass and lacquer.
- In case of sericulture and sea grass, the sample group is performing much better than the control group and a programme impact is visible.
- While the sericulture households supported by the project reported a loss in income from sericulture for 2009, they reported an average income of 9.4 million VND/household in 2012. This strong increase compares to a real income decrease in the control group.
- Sea grass farmers supported by the project report a real income increase of 34.1% which compares to a real income decrease in the control group.
- For lacquer, the control group is performing even better than the sample group. However, although the endline basis has shown a strong income increase, this cannot be attributed to the programme. Like for bamboo & rattan, an impact from lacquer tree plantations cannot be expected yet and an income effect from better cultivation practices is not visible on average.

3.4 Assessment of the income development by value chain

The assessment of the income development by value chain is best done by having a differentiated look at the development in incomes by raw material producers on the one hand and craft producers on the other.

Bamboo & Rattan

As indicated above, bamboo & rattan cultivation, as it is done currently, is just a marginal side activity of rural households and an income impact from improved sustainable harvesting is not traceable on average. As the first effects from the plantation of bamboo & rattan on income development can only be realistically expected in 2014, it may still be too early to measure the impact of sustainable harvesting of bamboo & rattan. Nonetheless, there is evidence from bamboo & rattan growers who achieved a strong income increase due to better bamboo caring and the application of fertilizer. In the text box below, a farmer in Nghe An province reports that the income from bamboo harvesting increased from 0.5 million VND to 5 million VND (239 $/year). Communes report similar achievements in terms of sustainable conservation and sustainable exploitation of large areas of bamboo. In Chau Thang commune in Nghe An, this led to an income increase of about 6 million VND/household/year for 180 households (equivalent to 287 $).

Household escaped poverty thanks to sustainable bamboo caring, protecting and harvesting

Mr. Lu Van K, Xet 2 villag, Chau Thang commune, Quy Chau district, Nghe An

As a poor and disadvantaged Thai ethnic household in 2009 with an allocated forest land area of 3.2 ha including 1.5 ha of bamboo, Mr. Lu Van Ky's household was selected as one of the two pilot models of "sustainable bamboo growing, caring, protecting and harvesting" supported by the programme.

Before 2010, the household encountered some difficulties in developing bamboo: (i) not enough family workers (ii) lack of capital to invest in production, (iii) no understanding of best practices in bamboo caring, protecting and harvesting. Hence, the bamboo was neglected to grow naturally without proper care and protection. As a result, the household only earned a small income from bamboo (500,000 VND/year).

Facing such difficulties, the programme supported the household with: (i) training courses on sustainable bamboo caring, protecting and harvesting techniques; (ii) 2.4 million VND for forest surface clearing, trimming old and underdeveloped plants and making fences; (iii) supporting 600 kg of NPK fertilizer; (iv) direct and specific instruction on steps for proper bamboo caring, protecting and harvesting techniques.

Such support led to significant changes in Mr. Ky's household: (i) better understanding of transferred techniques; (ii) enhanced awareness: considering bamboo as a major plant which bring sizable income to the household; (iii) the bamboo grew and developed better (more shoots (3-4 shoots/cluster); bigger plants and longer internodes than the old plant; (iv) thanks to protection measures, other households can no longer poach from the family's bamboo forest area; (v) the production increased to 2.5 tons/year (equivalent to 5 million VND/ year);

Based on the above positive experience, the household continued investing in bamboo as well as other production activities which helped the household successfully escape poverty in 2013. This is a typical model that many households in the commune visit, learn from and will replicate.

For intensive rattan plantation, based on current prices, it is expected that 1 ha of concentrated rattan plantation could provide an annual income of 87.5 million VND per ha (equivalent to 4,189 $), as is explained in the example of a household in Nghe An in chapter 6.

Handicraft producers in the bamboo/rattan VC supported by the project have not obtained a real income increase. In real terms, the income went down by 22.1%. The comparison with the control group shows, however, that the programme did effectively encourage weavers to maintain the bamboo & rattan business, while the income of non-supported weavers went down.

Income increase from rattan processing and bamboo and rattan weaving

Ms. Bui Thi Vung, a leader in Don Van hamlet, Lien Son commune, Hoa Binh

According to Ms. Vung, the programme has had a positive impact on the life of the villagers. Almost all households in Don Van hamlet continue to work on rattan and bamboo weaving and no one is leaving the craft. People are loyal to the craft and the number of households making bamboo and rattan products is increasing.

The discussion in the validation workshops in Hoa Binh and Thanh Hoa revealed that the poor overall performance shown with regard to the average income increase from bamboo & rattan weaving is partly due to the selection of communes for the impact survey. For the baseline survey, communes were selected which eventually were less active on bamboo & rattan than expected, and less active than other communes supported by the project (which were not part of the endline survey). In retrospect, it was considered that the sample chosen was not very representative for the programme as a whole. There were a number of bamboo/rattan producer groups who reported significant income increases which are not reflected by the average figures.

In addition, bamboo & rattan producers indicated that the selling price of their products hardly increased (and perhaps decreased when adjusted for inflation) which provides further explanation for the low average real income increase. The provision of splitting machines and skills training, however, did effectively assist weaving producer groups to improve productivity and workshop participants confirmed that trainings positively impacted on production behaviour. However, low market prices did not allow weavers to benefit financially from these improvements.

Sericulture and Silk

As presented above, the sericulture/silk value chain shows the best results in terms of income increase for both sericulture farmers and silk/brocade weavers. Sericulture farmers increased their income from the surveyed product to an average of 9.4 million VND per household, whereas weavers of silk products even increased their annual income to an average of 40 million VND per household.

Individual case studies present many successful examples attributed to the programme. In the case of the sericulture household from Nghe An in the text box below, the income from 1 ha of sericulture increased to 24.5 million VND. Key interventions at farm level were the introduction of the new VH13 mulberry tree variety, the distribution of hybrid silkworm eggs, training on mulberry cultivation and silkworm rearing. The revitalisation of sericulture at commune level was successful in many cases.

Model household applying technical advances in sericulture

Mr. Ngo Tri Vong's family in Hoang Chau Village, Dien Kim Commune, Dien Chau District, Nghe An

Like many other households in the village, Mr. Vong's family has pursued and maintained the sericulture tradition. In 2010 his family planted mulberry in an area of one ha and reared 9-10 silkworm broods per year which produced 300 kg of cocoon. At that time, Mr Vong's family faced many difficulties: the Ha Bac mulberry variety generated small and thin leaves with low resin content; silkworms easily got diseases due to limited rearing techniques; they did not know about cleaning and disinfection of the rearing chambers; their breeding technique was mostly based on past experience resulting in high mortality rate and weak hatchlings. Consequently, they harvested a low cocoon yield of only 10 kg per vong of larvae (1 vong is equivalent to 100 gr). In 2010 the programme supported this household with training workshops on techniques in nursery, cultivating and caring for new mulberry variety (VH13); in breeding to produce hatchlings by household group; in caring and disease prevention for silkworms; on improvement of their knowledge about business and market; cleaner production; equipment and appliances; accounting etc. The household received 2,000 mulberry seedlings of the VH13 variety; 15 vong of hybrid eggs (yellow silkworm) generating silkworms for a group of 10 households (when the larvae are up to standards, they will be provided to other households in the group free of charge); 1 disinfectant sprayer; 2 silkworm baskets, disinfectant, disease-preventing medicine. Benefitting from programme support, the family has achieved positive changes/results. It replaced 1,500 sqm of old mulberry variety plantation by the new VH13 variety which has a higher yield of 10 tons per ha per year with big and thick leaves, thus reducing labor when harvesting leaves (1 hour less per 100 kg of leaves as compared to earlier). Moreover, the new variety has higher resin content which is better for the silkworm. The household grasped new breeding techniques to produce stable healthy hatchlings to provide to other households. It also grasped techniques and know-how to rear mature silkworm and keep the rearing area clean and free of diseases. As a result, the cocoon yield increased by 20% (before 1 vong of larvae yielded 10 kg of cocoon, now it gives as much as 13-14 kg of cocoon). In short, from sericulture this household harvests 400 kg of cocoon per year amounting to 28 million VND. Deducting the cost of inputs, they earned a profit of VND 20 million/year with just 2 main workers. In addition, the family generates an extra income of VND 2.5 million from selling the by-products of mulberry cultivation (fire wood) and VND 2 million from silkworm waste.

There are a number of communes that report a remarkable revitalisation of the sericulture tradition in their commune, see text box below. Both validation workshops in Hoa Binh and Thanh Hoa confirmed the successful re-establishment of sericulture, the good results from the new varieties, improved business linkages for selling cocoons and improved productivity based on new reeling machines. Altogether, validation workshop participants stated that sericulture now provides higher income than other crops. Participants recommended continuing the promotion of sericulture as demand for silk is still increasing.

At the level of weaver producer groups and cooperatives, the introduction of new weaving looms have contributed to improve productivity, design advice and skills training to develop new higher-value final products and market linkage activities to achieve income increases among the producers. Brocade weavers participating in the validation workshop in Hoa Binh province, which was attended by several ethnic minority weaver groups, confirmed that productivity and income increases had taken place due to the supply of equipment and advice. The Vong Ngan Cooperative in Hoa Binh province received 40 double frame looms, which doubled their productivity and helped the cooperative increase production capacity to meet its growing orders.

Ethnic minority weaving groups from Hoa Binh and Nghe An provinces received design assistance, and participated in domestic trade fairs, including Lifestyle Vietnam, the Hanoi Gift Show, Agro and Handicrafts Trade Fair in Nam Dinh province, which resulted in direct sales at the fairs and several orders worth about USD 25,000. In addition, groups were linked to export-oriented companies and shops in tourist-areas in Hanoi.

Income increase from weaving silk

Bui Thi Cop, silk and brocade villager in Man Duc commune, Hoa Binh

"I attended classes and joined with the cooperative since the first day. I now know many natural dyeing techniques. In the past, dyeing colors were too monochromatic, with very basic colors. However, since the programme has been launched, we combine natural dyeing techniques with new techniques to enhance the quality. We have learnt how to dye so that colors are fixed on the textile cloth faster."

Sea grass

Sea grass farmers supported by the project report a real income increase of 34.1%, compared to a real income decrease in the control group. By receiving production training and fertilizer, farmers were encouraged to continue sea grass cultivation. Farmer representatives participating in the validation workshop confirmed productivity increases and reported that the farmers who were encouraged to continue sea grass farming also benefited from a price increase for sea grass.

Improvements in sea grass cultivation

Ms. Tran Thi Que, sedge grower in hamlet 3, Nga Tan commune, Thanh Hoa

The project organized classes on growing and caring for sea grass. Farmers were provided with fertilizer. In general, thanks to the training courses, the quality and productivity has improved. She said: "The first crop was good, the next crop will be better". The residents were also trained to irrigate and enrich the soil and improve the sea grass fields.

The situation is different for sea grass craft producing households. The slight increase in the nominal income from sea grass craft production in the sample group compares to a slight decrease of the income from sea grass in the control group. However, the real income of producers of crafts made from sea grass such as sedge mats and bags etc. supported by the project decreased by over 50%. The control group shows more or less the same picture. Household sea grass craft producers in Nga Son, Thanh Hoa province mainly depend on supplying craft producing SMEs. There are reports that some of the companies in the area have been struggling and some went bankrupt.

Due to large demand from Chinese traders the price of twisted sea grass has gone up considerably. Though this may be good news for sea grass growers, it obviously adds considerably to the input cost of craft producing households or sea grass companies.

Producers of sea grass products who attended the validation workshop in Thanh Hoa province confirmed the difficult situation for sea grass craft producing households which face increased raw material costs. As a result, the programme has not brought about real income increase for craft producing households.

Handmade paper

The handmade paper value chain is exclusively confined to one small producer group in Hop Hoa, Hoa Binh province. The endline survey does not report any income at all from raw material production for handmade paper. Besides, the income of producers of handmade paper products supported by the programme showed a strong increase, but remained low on average (1.2 million VND/household). This can be explained as follows.

At the start of the programme in 2010, the handmade paper group in Hop Hoa consisted of some 20 households. The programme had the ambition to enlarge the group five-fold to some 100 households. When the baseline survey was conducted in 2010, 20 households were randomly chosen from the envisaged 100 beneficiaries. However, most of these households were not active in handmade paper production at the time and in fact never did take up the practice. This also explains the low income from paper production reported as the same households were interviewed in the endline survey. It can be concluded that the programme did not live up to its (perhaps unrealistic) ambition to encourage large numbers of households to take up the paper production business.

The same can be said for raw material growers. A total number of 150 households were selected as envisaged raw material growers and about 30 households were randomly chosen from this group for the baseline survey. Before the start of the programme there were not any households that were growing Duong trees, as these were simply collected from the forest. In the end, 19 households received support and are currently successfully cultivating Duong trees in their gardens. Often these households were also part of the paper making group, so instead of selling the bark they simply used it in their household paper making business. Therefore, when the endline survey team revisited and interviewed again the same 30 households as the baseline survey, it was not surprising that no income from Duong tree growing was reported.

However, using newly established nurseries the programme supported some 20 households with some 20,000 seedlings of Duong trees, of which the bark is used for paper production. This effectively increases the local availability of the required raw material for paper making. This has a positive environmental impact as before households had to travel to a forest in which they collected the trees in the wild with little regard for sustainable harvesting practices.

The programme impact for the handmade paper value chain remains limited to some 20 paper producers who continue to improve their product quality and sales as shown by the example of the Suoi Co Production Group. As the following text box shows, the households that are part of this production group did effectively increase their household income from paper making. As explained above, this income increase is simply not reflected in the endline survey.

Income increase from handmade paper

Suoi Co Production Group, Mr. Nguyen Van Chuc

Mr. Chuc, leader of the handmade paper group, said, "The group has been trained on business skills, improving work conditions at home and was provided with a big boiling pot for productivity improvement. In addition, the group has been assisted in product design and the development of new products (handbags, etc.) which have attracted interest from many customers. As a result, income has clearly increased from 70 million VND to 120 million VND per year.

Following advanced vocational training, the group is capable of making products with a high degree of difficulty, rich designs with different colors. The productivity of the group for traditional handicraft products such as Dó papers, books, and postcards etc. is significantly improved. The cost of production is reduced and the goods are delivered to customers on time.

Lacquer and lacquer ware

The programme support for lacquer focused on Tam Nong district in Phu Tho province. As for lacquer tree farmers, both sample group and control group show a strong income increase. Supported communes and farmers do report positive programme results, see also text box below. Nonetheless, the control group improved considerably as well. As it has been performing even better than the sample group, the endline survey does not confirm a particular programme impact on the income of lacquer tree farmers so far based on an improved management of existing lacquer tree plantations.

A typical example for good caring and sustainable management of lacquer trees

Ms. Han Thi Hoa, Di Nau commune, Tam Nong District, Phu Tho

Although having the tradition of planting lacquer trees, when taking care of the lacquer trees, Ms. Hoa mainly relied on her past experience. Without an understanding of modern techniques, the productivity of lacquer trees is not very high and negatively affected by diseases and insects resulting in a short tree lifespan and low yields. In addition, the fluctuation in the sales price and high cost for inputs contributes to a decrease in the production area of her household.

Thanks to support from the programme including the provision of seedlings and fertilizer as inputs (50 kg NPK), and especially the training on the techniques for caring (including the use of fertilizer and pest control against diseases and insects) and better harvesting, she realized that proper care of the lacquer tree is essential to reach high productivity, quality of lacquer sap and lengthen the lifespan of lacquer trees.

Now her household exploits 400 trees which generate 3.5 kg of raw lacquer per year. The selling price of raw lacquer liquid is 300,000 VND on average and lacquer trees contribute 94 million VND/year to her household income (comprising 65% total of the household income).

The programme established some 10 nurseries in Tam Nong, Phu Tho provinces, which generated many seedlings and some 29 households received support to establish 5 ha of new pure red lacquer plantations with 16,400 seedlings provided by project nursery gardens. The demonstration of a plant management model of lacquer trees cultivation was supported for 8 households with a total of 5 ha including support for planting materials, fertilizer and on-farm technical guidance.

As it takes 3 years to harvest the first lacquer from newly planted trees, the impact from the plantation of lacquer trees will only become visible in the coming years. As lacquer tree cultivation contributes almost one-third to the family income, a considerable income increase is expected in the coming years due to programme support.

No effects were measured at household level in terms of the production of final lacquer ware items, as these are only produced by companies.

A Sustainable development of red lacquer value chain

Di Nau commune, Tam Nong District , Phu Tho

Although Di Nau is located to the South of Tam Nong district, with favorable natural conditions for the development of agricultural and forestry crops such as rice, maize, peanut, soybean, etc. and especially red lacquer trees – a plant with high economic value, contributing to poverty reduction for people in the commune. However, in recent years, due to the impact of changes in product prices (lacquer latex price in 2010 ranged from 160,000 VND/kg to 200,000 VND/kg), unstable market (the Chinese market accounted for 98% of sales and only 2% of sale was to the domestic market) and continuously increased prices of inputs (chemical fertilizers), lacquer growers faced numerous difficulties. Lacquer trees were at risk of being either replaced by other crops or not given proper care, resulting in reduction in both productivity and quality. Facing such problems and challenges, with the support from the project "Green Production and Trade to Increase Income and Employment Opportunities for the Rural Poor" in terms of seedlings, organic fertilizer, technical training for people etc., the Di Nau commune gradually restored and developed its area of red lacquer trees in a sustainable way. In 2012, the total area of lacquer in the commune was 93.5 ha (accounting for 7.5% of the total natural area of the commune) of which the area of newly planted lacquer trees was 7.5 ha. The area of mature lacquer trees ready for harvesting was 65 ha. The estimated revenue from red lacquer trees was 6.45 billion VND, accounting for 6.6% of the total value of key commodities in the commune (the yield of red lacquer tree reached 320 kg/ha and the actual selling price of lacquer latex in 2012 was 310,000 VND/kg). With the high economic value and low investment requirement, lacquer was considered as a key crop to help reduce poverty in the commune. Up to date, 400 households engaged in growing lacquer, accounting for 40% of the total households in the area. In which, the household with the largest area had about 4,000 plants whereas households of smallest scale had at least 800 to 1,000 trees. Through technical training, people have applied the technical process for caring and exploitation in practice. Besides, a cooperative group for growing lacquer in Di Nau commune was established in 2012 with the support from the project with a total of 11 members to exchange experience and man-days, thereby increasing the area of lacquer tree receiving good care and sustainable management in the area to 65% (equivalent to 60.78 ha).

3.5 Income development by province

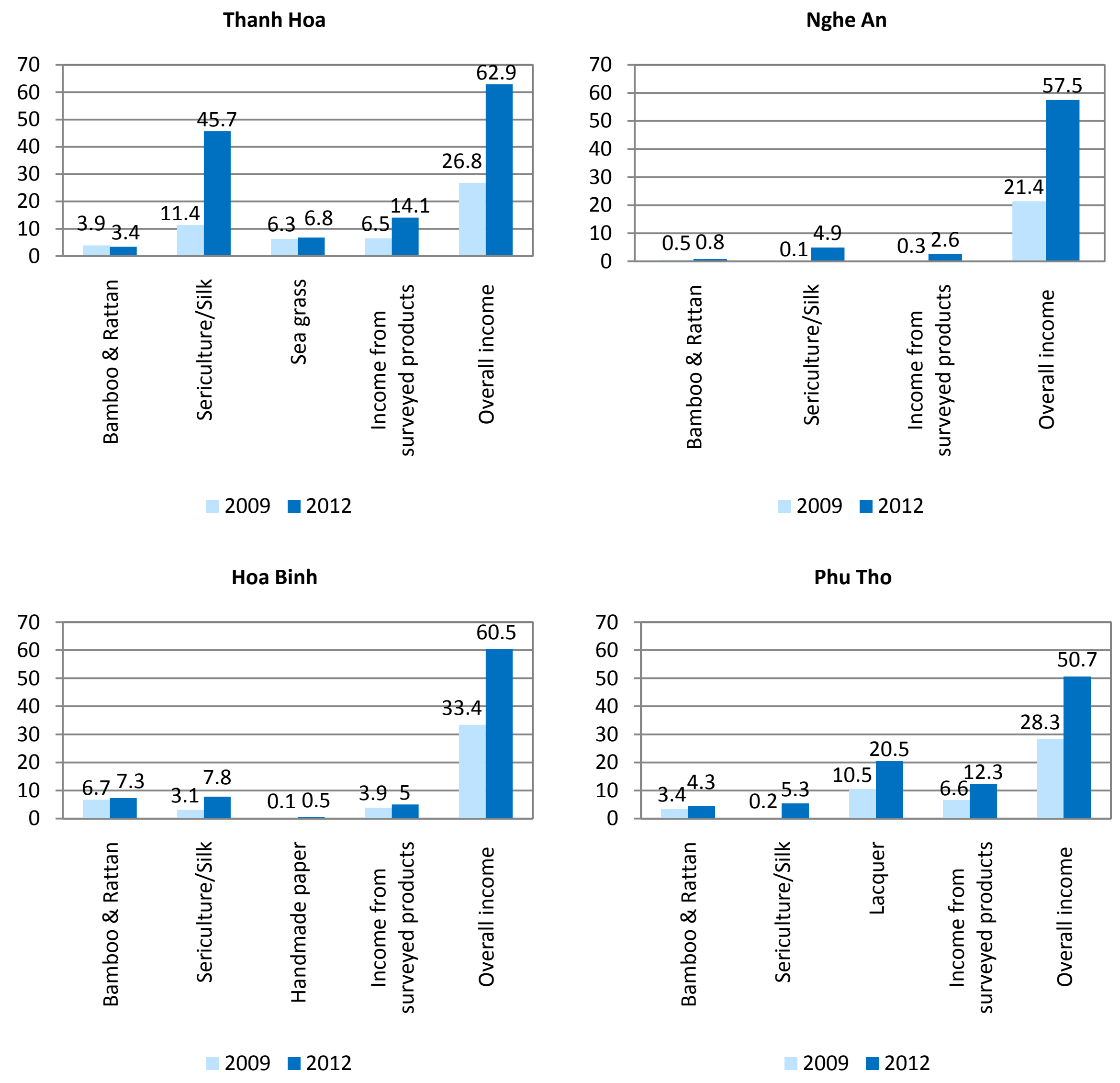
With regard to the four different provinces, the programme beneficiaries in Thanh Hoa reached both the highest total income (62.9 million VND) and the highest income from surveyed products (45.7 million VND for sericulture/silk and 14.1 million VND for surveyed products in general). The net real income increase from the surveyed product in Thanh Hoa is 56.8% and for sericulture/silk there is even a real income increase of 189.9%.

Compared to Thanh Hoa, the income from surveyed products generated by programme beneficiaries in Nghe An remained at a very low level, though the overall income increased strongly due to other income sources. One of the reasons for the low increase in income from surveyed products in Nghe An is the large number of bamboo & rattan raw material producers, who have hardly increased their income. But also in sericulture/silk, beneficiaries in Nghe An are behind the other provinces.

Programme beneficiaries in Phu To reach an average overall income of 12.3 million VND due to the high income from lacquer. Programme beneficiaries in Hoa Binh reach a high overall income and have the highest income from bamboo & rattan, but the growth rate of the income from surveyed products is the lowest of all four provinces.

The most striking difference between the four provinces is the income difference from sericulture/silk between Thanh Hoa on the one hand and the other provinces on the other. The income from sericulture/silk is nearly 6-times higher in Thanh Hoa than in Hoa Binh and nearly 9-times higher than in Nghe An and Phu To. Supported sericulture households in Thanh Hoa were able to generate an average annual household income of 120.1 million VND, thereof 38.7% from surveyed products. The high income increase from sericulture/silk in Thanh Hoa is largely attributed to the successfull programme impact in Thieu Do commune, where the sericulture tradition was basically revitalized. In addition, a silk yarn trader in Thieu Do received support which resulted in considerable increases in silk yarn exports to Laos.

Figure 9: Average income and income from surveyed products by province (in VND million/household)



Sericulture Value Chain Development

Tinh Cuong commune, Cam Khe district, Phu Tho

Sericulture first started in Tinh Cuong commune in 1998. Thanks to the advantage of the alluvial plain area of the Red River that is favorable for the cultivation of mulberry trees, the development of sericulture was relatively strong during the period 2000-2005, engaging a total number of 200 households in the commune. However, after that the industry faced many difficulties and gradually weakened. By 2008, people in the commune no longer engaged in sericulture. The programme supported the restoration and development of the sericulture VC in the area. Specifically: (i) Planning an alluvial plain area for growing mulberry to feed silkworms with a total area of 80 hectares, of which 10 hectares were rented to people to plant mulberry to feed silkworms (rental price was 150,000 VND/360 m2/year); (ii) The project provided the new mulberry variety VH13 (1,800 seedlings/360 m2) and fertilizer (18 kg NPK/360 m2) and conducted technical training for people (techniques for cultivation, fertilizing, cutting, etc.). The commune mobilized people to grow new the mulberry variety and apply the provided techniques strictly to improve the yield and quality of mulberry; The new mulberry variety (VH13) was characterized by large and thick leaves and a productivity 1.5 to 2 times higher than the old variety with the average yield of 40 tons/ha. Besides, because of high sap content in mulberry leaves, cocoon productivity per 1 vong of silkworm eggs (1 vong is equivalent to 100 g) was also higher with an average yield of 18 kg cocoon/vong of silkworm egg. The new silkworm rearing technique helped reduce the silkworm mortality rate from 30-40% to 15-12%, contributing significantly to the improvement of cocoon yield per 1 vong of silkworm egg; (iii) Besides, upon the new rearing technique provided by the project through training courses, the communal authorities proposed the People’s Committee of Cam Khe district to create favorable conditions for households to access preferential loans from the Vietnam Bank for Social Policies at a monthly interest rate of 0.65% to build silkworm houses. The replacement of the traditional silkworm rearing method using circular flat bamboo trays with rearing silkworm on the floor helped reduce labor cost, attract younger and older workers, reduce silkworm mortality rate as well as ensure sanitation and improve living space of households; (iv) The Tinh Cuong Sericulture Cooperative was established to build linkages among silkworm farmers in the area in terms of inputs, techniques and selling products in large quantity. With the advice of the project and the Cooperative Alliance of Phu Tho province, the cooperative signed contracts with traders of quality silkworm eggs and cocoon sale to ensure stable output for households and avoid pressure to sell at low price (average of 85,000 – 90,000 VND/kg cocoon).

The average income figures per household in the sample group can be compared to the average per capita income in the four provinces. The baseline surveys undertaken in 2009 showed an average of 4.66 persons per household for all households assessed. Applying this number of 4.66 persons per household to the above average income figure, the following per-capita income figures in the sample group can be compared to the average income level in the province.

Table 11: Average per capita income in the four provinces and the sample group

	Average per capita income per year in the province 2012	**Sample group per capita income per year in the province 2012**
Thanh Hoa	15.66 million VND	13.50 million VND
Nghe An	20.28 million VND	12.34 million VND
Hoa Binh	17.88 million VND	12.98 million VND
Phu To	20.4 million VND	10.88 million VND

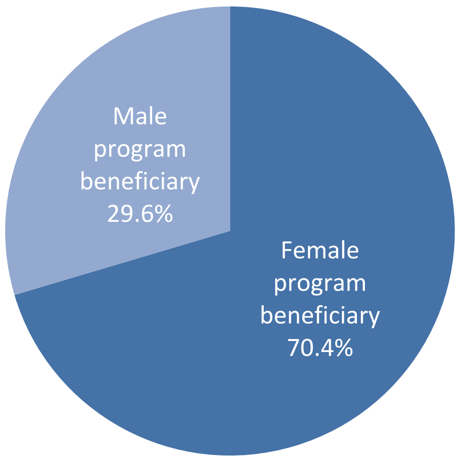
The comparison shows that the household benefiairies still have an income level ranging from 53-73% of the average in the province; except the particularly successful Thanh Hoa, where the sample group reaches 86% of the average income level in the province.

3.6 Income development by gender

It is not always clear whether the main programme beneficiary in a household is a man or a woman. In many cases, both male and female household members participated in the programme activities.

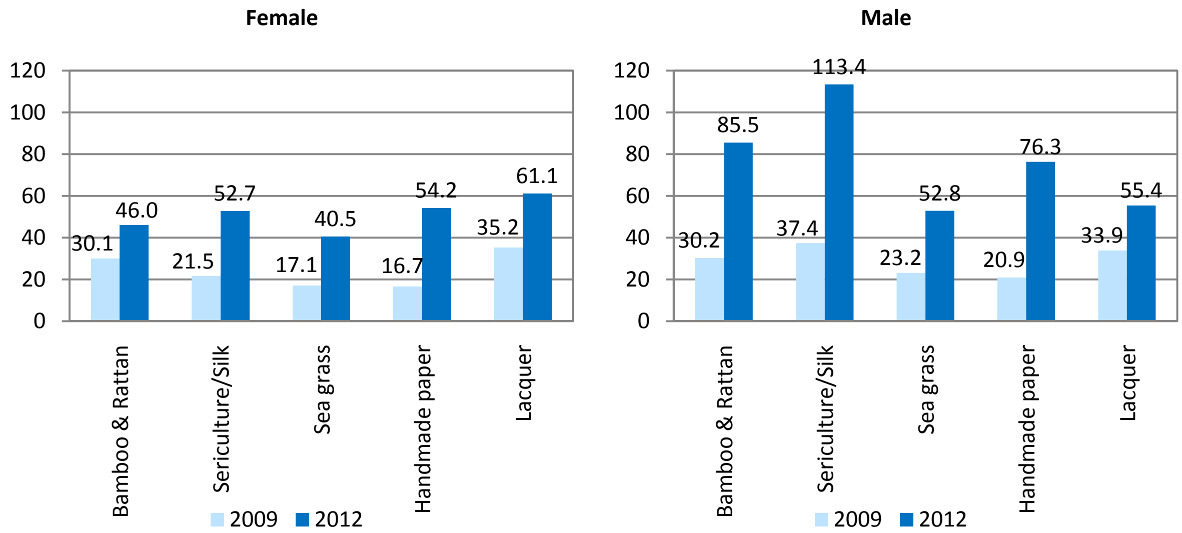
For a gender-differentiated impact assessment, all interviewed households were asked the question "Who was the main programme beneficiary?" A total percentage 70.4% of the interviewed households indicated that a female household member was the main beneficiary of programme activities (368 female programme beneficiaries out of the total of 523 surveyed households). Only 29.6% of the programme beneficiaries were men (155 persons). This can be explained as craft production is still predominantly practiced by women, whereas farming tends to be more a joint or male-dominated activity.

Figure 10: Percentage of female and male program beneficiaries



The overall income of female programme beneficiaries rose from 26.5 million VND to 49.3 million VND, while the income from surveyed crafts showed a real income increase of 15.3% (from 4.2 million VND to 6.7 million VND). But both the total income figures and the relative income increases are much lower than the figures obtained from male programme beneficiaries. Male programme beneficiaries reach a 62.1% higher total income than women and the income from surveyed crafts is 126.9% higher.

Figure 11: Average income of programme beneficiaries by gender and VC (in million VND/household)



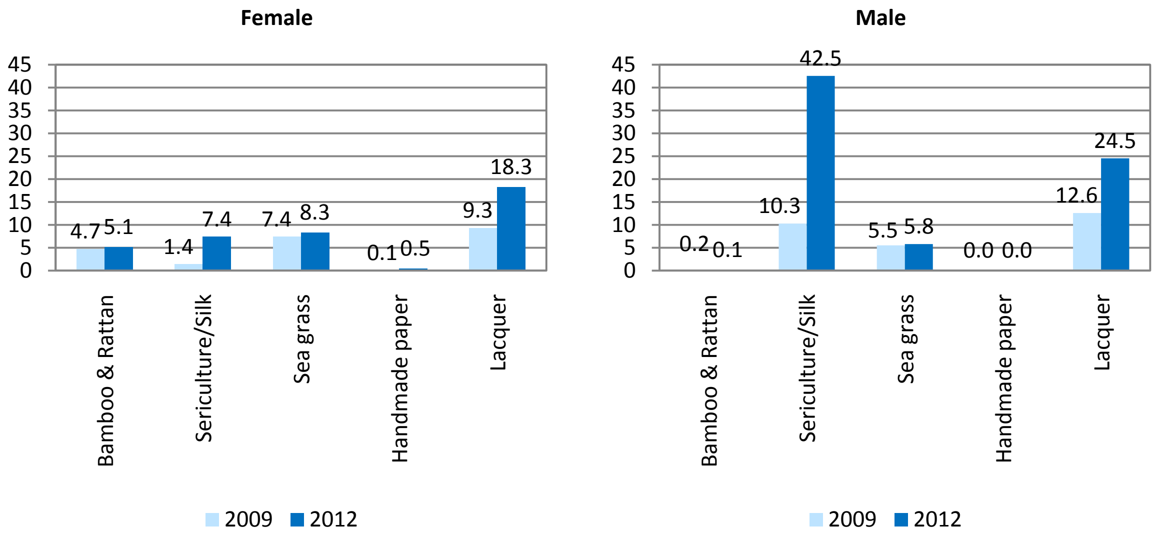
Total average income 2012: 49.3 million VND
Total income from surveyed crafts: 6.7 million VND
Real overall income increase: 34,5%
Real income increase from surveyed crafts: 15.3%

Total average income 2012: 79,9 million VND
Total income from surveyed crafts: 15.2 million VND
Real overall income increase: 89,4%
Real income increase from surveyed crafts: 92,8%

Women reach a higher income than men from surveyed crafts in 3 value chains: bamboo & rattan, sea grass and handmade paper. The income from bamboo & rattan is higher, as the income of bamboo & rattan weavers (an activity mostly undertaken by women) is higher than the income of raw material collectors (mostly men). Handmade paper was only produced by women, there was no male programme beneficiary in the sample group.

The biggest income difference is shown in the sericulture/silk value chain, where the income of the male programme beneficiaries is nearly 6times higher than that generated by female beneficiaries. This may be due to a number of households which do both sericulture and brocade weaving and where both, men and women, were involved, but where the man was indicated as the main beneficiary.

Figure 12: Income from surveyed products by gender and VC (in million VND/household)



3.7 Income development of ethnic minorities

63 of the households interviewed indicated that they belonged to the Thai ethnic minority, thereof 22 in the bamboo & rattan value chain and 41 in the sericulture value chain. While the surveyed producers in the bamboo & rattan value chain reach a much higher overall income than the average (75.9 million VND compared to 54.7 million VND), the income of the sericulture/silk producers went down (income 2012: 21.3 million VND compared to 73.9 million VND). These low-level incomes from surveyed products show that members of ethnic minorities have at least so far hardly benefitted from programme support.

This is partly explained by the choice of communes selected for the baseline and endline surveys. Chau Hanh commune in Quy Chau, Nghe An, was surveyed for Thai silk weavers. However, whereas support in Chau Hanh eventually remained limited to sericulture and not craft production, the programme directed a lot of support to Chau Tien, a neighboring commune in Quy Chau district which turned out to be the most successful weaving group supported by the project. This was also confirmed by the weaving cooperative in Chau Tien during the validation workshop in Thanh Hoa during which the leader of the cooperative reported substantial income increase thanks to the support provided by the programme. However, as this group was not surveyed, the substantial income increases in Chau Tien are not reflected in the endline survey.

The lack of income from bamboo/rattan cultivation for Thai beneficiaries may be explained by the fact that the first effects from the plantation of bamboo & rattan on income development can only be realistically expected in 2014.

Income Development in Hoa Tien Textile Cooperative

Ms. Sam Thi Bich, Chau Tien commune, Quy Chau district, Nghe An province

Ms. Sam Thi Bich, leader of Hoa Tien Textile Cooperative, said that the programme trained the cooperative on business environment and occupational safety. During the project, the cooperative made a lot of Thai-Nghe An style products and attended fairs for product promotion in order to enhance local people's capabilities. Thanks to the programme, the group's revenues increased from 10-15 million VND to 30 million VND per month.

Figure 13: Income of Thai ethnic minority programme beneficiaries (in VND million/household)

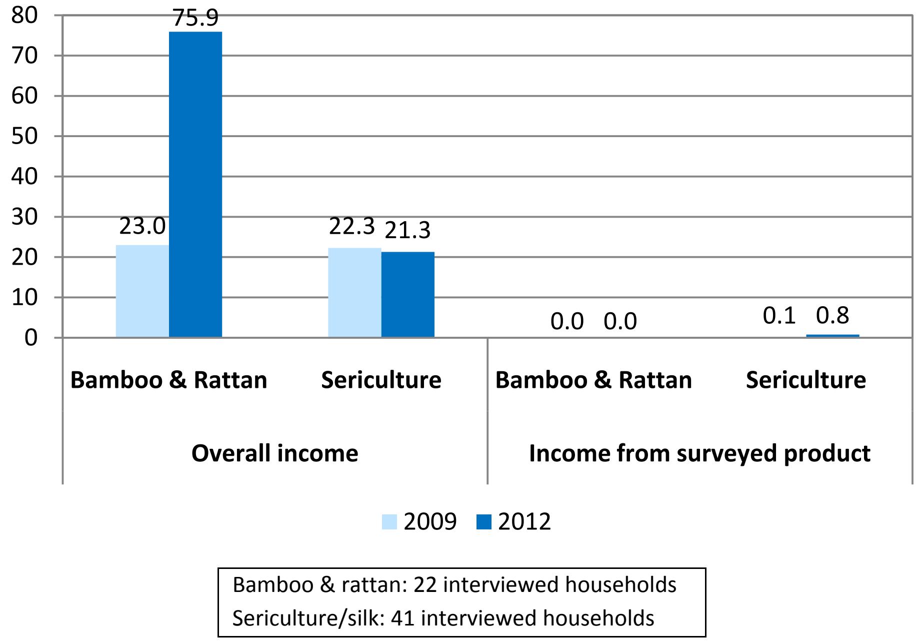
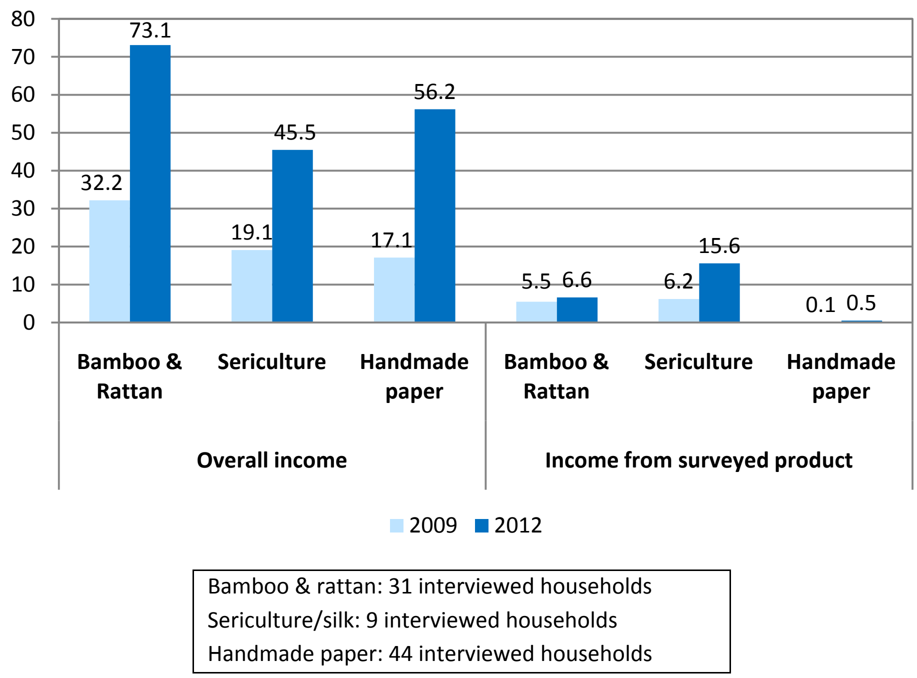


Figure 14: Income of Muong ethnic minority programme beneficiaries (in VND million/household)



A total of 84 interviewed households belong to the Muong ethnic minority. The income figures show that they have generated an increased income from the production of the surveyed product, similar to the average of other producers in these value chains. All handmade paper producers belong to the Muong ethnic group. The income from the surveyed product is low, as only very few households included in the survey are actually producing handmade paper (see also paragraph 3.4).

4. POVERTY ALLEVIATION

4.1 Households living below the poverty line

The national poverty line was increased by the Vietnamese government in 2012 from 4.8 million VND/year to 6.0 million VND/year, in order to adjust for inflation rate and reduced purchasing power. In order to account for the changes in the percentage of households below the national poverty line, the national poverty line of 4.8 million VND/year was applied in 2009 and the increased poverty line of 6.0 million VND/year was applied in 2012.

The number of households living below the national poverty line decreased by 26.1% from 88 to 65 in the sample group. This means that the poverty rate in the sample group, based on the increased national poverty line, decreased from 16.8% to 12.4% and more or less reached the national average. This is a good result in so far, as districts with a particularly high poverty rate were targeted by the programme.[9]

Table 12: Number of households living below the national poverty line

Categories	Bamboo & Rattan		Sericulture/ Silk		Sea grass		Handmade paper		Lacquer		Average		Change
	2009	2012	2009	2012	2009	2012	2009	2012	2009	2012	2009	2012	
Sample group	44	40	15	15	17	6	12	4	3	2	88	65	**-26,1%**
Control group	21	13	3	7	16	17	3	1	2	0	45	38	**-15,5%**

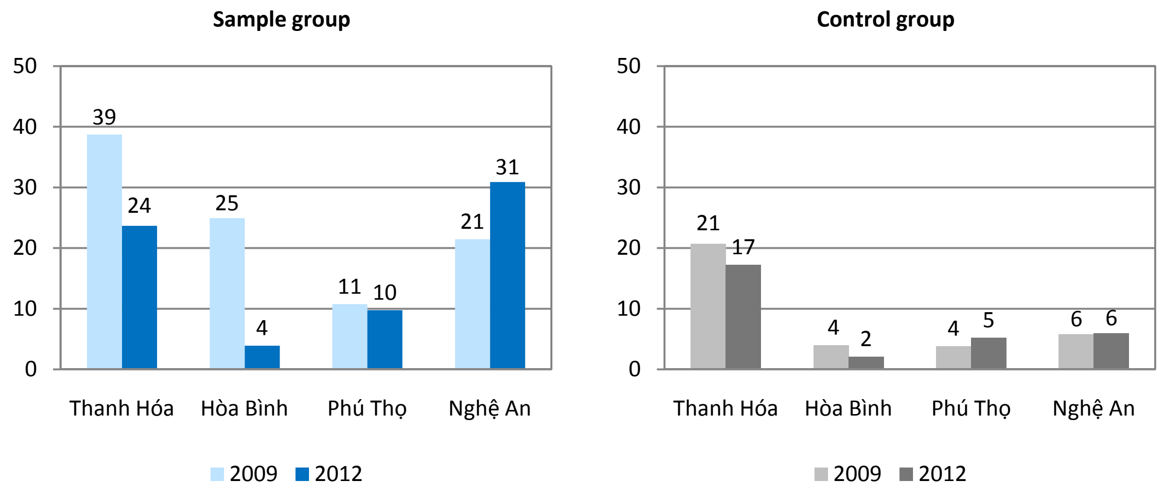
Source: Aggregated data of HRPC and RUDEC results

Moreover, the decrease of 26.1% is much stronger than the decrease of 15.5% reported for the control group, where the poverty rate remained above 20% (decrease from 24.2% to 20.4%). Compared to the targeted 50% reduction of the number of households living below the national poverty line, the indicator is partly achieved.

By province, Thanh Hoa and Hoa Binh show the strongest decrease in the number of poor households, while the number of poor households increased in Nghe An.

[9] In 2009, 20% of the households in the 12 districts targeted by the programme lived below the national poverty line, whereas more than 40% of the selected 4,500 direct rural household beneficiaries were formally classified as poor.

Figure 15: Number of households living below the national poverty line by province

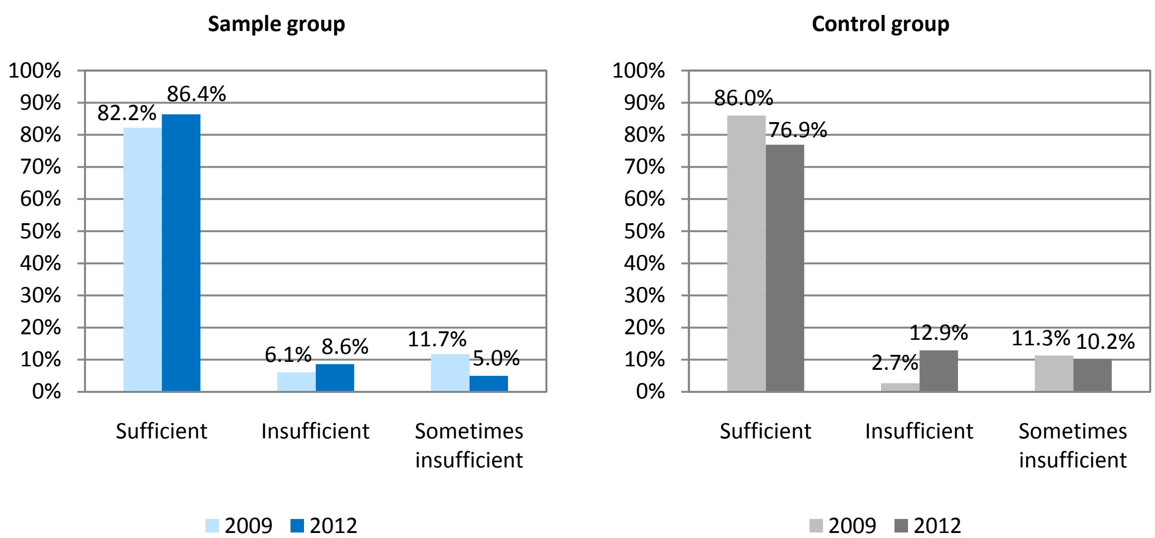


4.2 Food safety

The surveyed households were asked whether they have enough food for all the family to eat every day. The percentage of households with enough food every day increased from 82.2% to 86.4% in the sample group, while it decreased from 86.0% to 76.9% in the control group.

While the percentage of households indicating to have insufficient food increased as well by 2.5% as a shift from “Sometimes insufficient”, the sample group developed on average better than the control group and now enjoys better food safety.

Figure 16: Food safety of households



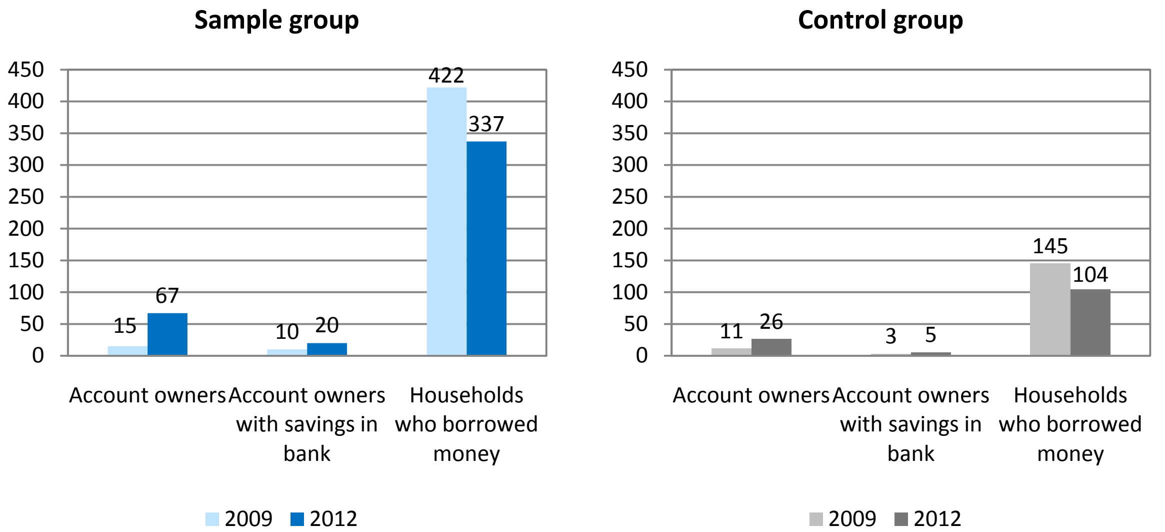
Number of households 2009:	429
Number of households 2012:	452

Number of households 2009:	160
Number of households 2012:	143

4.3 Savings and loans

The number of account owners and the number of account owners with savings in the bank went up both in the sample group and the control group, but still remained at a low level in both groups. Particularly for account owners with savings in the bank, the percentage remained rather low.

Figure 17: Savings and loans of households



Number of account owners 2012:	67
Accounts with savings in bank 2012:	20
Households borrowing money 2012:	337

Number of account owners 2012:	26
Accounts with savings in bank 2012:	5
Households borrowing money 2012:	104

The percentage of households who borrowed money went down in both groups. According to the results from the in-depth interviews, access to micro-finance does not seem to have been improved.

Access to micro-finance

Mr. Ho Van Hai, Sum hamlet, Lien Sơn commune, Hoa Binh

His family no longer works on bamboo and rattan products. He said that the job is too hard and too low paid. Speaking of the microfinance course, Hai said: "I do not have enough money to manage; I just spend all that I earn. Savings are not available. I do not dare to borrow from the bank as I'm not able to pay it back." Knowledge learnt on the training courses is virtually inapplicable to the real situation of his household.

5. SME DEVELOPMENT

5.1 Sales Turnover of SMEs

A total of 31 small and medium enterprises (SME) were surveyed, thereof 21 companies participating in the programme and 10 companies composing the control group. Out of the 21 companies participating in the programme, 12 were based in the four project provinces, while 9 of the surveyed companies were based outside the four project provinces (mainly national companies with sourcing activities in the project provinces). The companies based outside the four provinces were supported by the project as they were sourcing raw material or products in the four provinces. The companies were promoted with the idea to improve business linkages for producers and suppliers in the four provinces.

The supported SMEs mainly benefitted from the EMPRETEC entrepreneurship training and technical training, product design support, occupational safety and health training, business linkages, trade missions and trade fair participations and introduction of new cleaner technologies.

The average annual turnover of the surveyed SMEs supported by the project (sample group) doubled from 18.0 billion VND in 2009 to 36.9 billion VND in 2012. This is equivalent to a real turnover increase of 47.9%. This increase compares to a real turnover decrease in the control group of 46.3%. The SMEs supported by the programme therefore performed much better than the SMEs in the control group. The turnover increase achieved by the SME supported by the programme is even more impressive considering that four companies in the sample group went bankrupt during the project period, but the others more than compensated the missing turnover from these four companies.

The real turnover increase of 46.3% also suggests that the performance of supported SMEs is much better than the performance of handicraft exporters in Vietnam in related value chains in general who do not show any real turnover increase at all.

Table 13: Turnover development of SMEs (in million VND)

	Bamboo & Rattan		Silk		Sea grass		Handmade paper		Lacquer		Average	
	2009	2012	2009	2012	2009	2012	2009	2012	2009	2012	2009	2012
Sample group	28.905	72.506	7.158	14.373	8.500	12.600	40	202	19.208	32.057	18.037	36.901
No. of SMEs	8	8	6	6	1	1	1	1	5	5	21	21
Control group	12.479	13.600	6.700	2.400	79.113	54.000	_	_	4.632	4.828	29.537	21.968
No. of SMEs	3	3	1	1	3	3	0	0	3	3	10	10

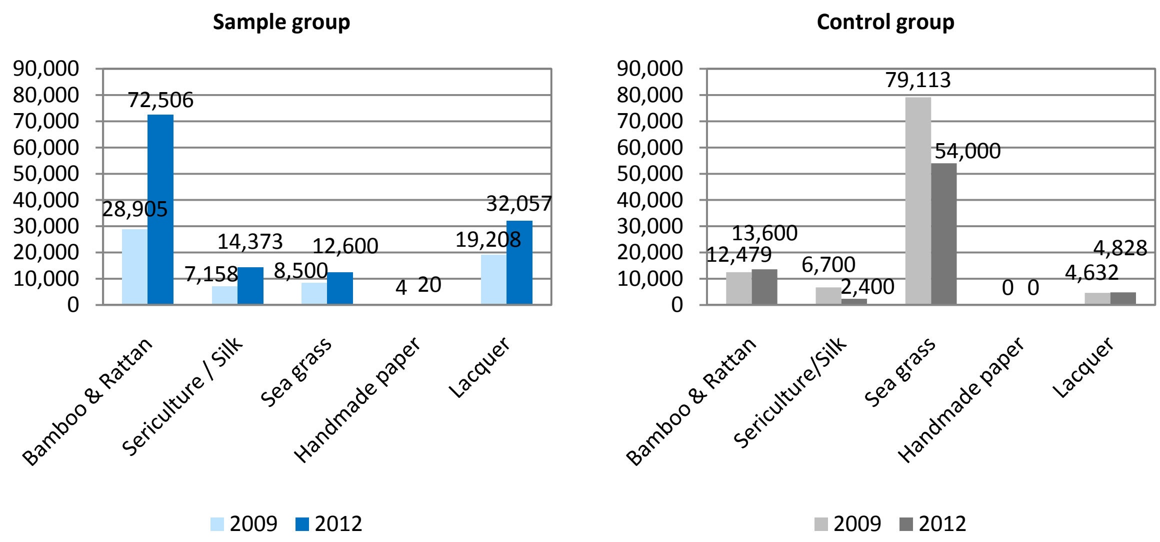
Source: HRPC SME survey

SMEs from the sample group have performed better than the control group in all 5 value chains, but the most successful companies are in the bamboo & rattan value chain.

The turnover increase achieved by supported SMEs in comparison with the control group suggests that the capacity building activities undertaken by the programme were successful and that the support indeed made a big difference to the SMEs.

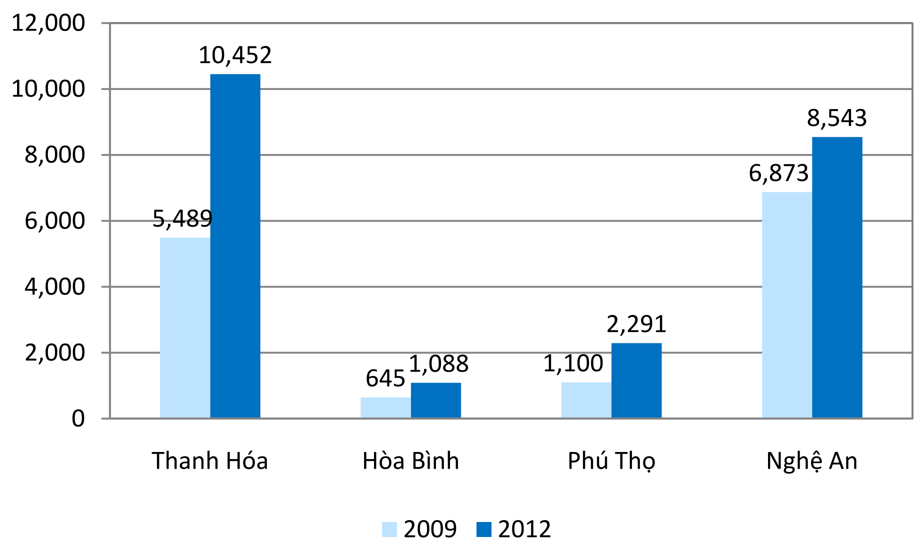
The most successful companies are in the bamboo & rattan value chain. Bamboo & rattan producing SMEs have achieved an annual turnover of 72.5 billion VND/year (3.5 million $), which is 5 times higher than the turnover achieved by the sample group of SMEs in the sericulture/silk and sea grass value chains. The strong turnover increase of bamboo & rattan SMEs does not correspond to the more or less unchanged income of bamboo & crafts households in the four provinces, which suggests that these companies are sourcing from craft producers in communes which are not supported by the programme.

Figure 18: Turnover development of SMEs by VC (in VND million)



12 companies in the sample group supported by the project were based in the four provinces. The turnover of these SMEs in the project provinces is much smaller than the turnover of other companies at national level. The average annual turnover of SMEs based in the four provinces increased from 3.68 billion VND in 2009 to 5.534 billion VND in 2012 (real turnover increase of 8.7%). The turnover increased in all four provinces, but is much less dynamic than the turnover increase of surveyed SMEs at national level.

Figure 19: Turnover development of sample group SMEs by province (in VND million)



Nb. of companies in Thanh Hoa 2012:	2		Nb. of companies in Hoa Binh 2012:	2
Nb. of companies in Nghe An 2012:	4		Nb. of companies in Phu To 2012:	4

5.2 Employment Creation

In the survey, the SMEs supported by the project reported a significant increase in employment. In the SMEs in the sample group, the number of jobs on average more than doubled and went up from 41.2 fulltime jobs/SME in 2009 to 87.2 fulltime jobs/SME. This means that 966 fulltime jobs have been created in the surveyed 21 SMEs supported by the project. Two-third of the newly created fulltime jobs benefit female employees (665 new fulltime jobs for women).

Part-time employment also went up sharply, from 91.9 part-time employees per company in 2009 to 370.8 part-time employees per company in 2012. The total number of part-time jobs created in the 21 surveyed SMEs supported by the project is 5,857. While the number of part-time jobs for men went down, a total of 6,185 part-time jobs were created for women.

The findings related to both fulltime and part-time employment underline the relevance of the handicraft sector for women employment and suggest that the programme has had an impact on employment creation in the supported companies.

Table 14: Employment in SMEs participating in the programme

Category	Form of	Average employee/business		Male		Female	
		2009	2012	2009	2012	2009	2012
Bamboo & Rattan	Full-time employees	69,38	108,63	16,63	31,38	52,75	77,25
	Part-time employees	208,50	725,13	38,33	97,50	239,67	627,63
	Family work without paid	2,13	0,50	1,25	0,25	0,88	0,25
Silk	Full-time employees	28,67	43,67	8,67	5,50	20,00	38,17
	Part-time employees	69,17	101,67	2,17	8,33	67,00	93,33
	Family work without paid	0,17	0,00	0,00	0,00	0,17	0,00
Sea grass	Full-time employees	50,00	25,00	8,00	2,00	42,00	23,00
	Part-time employees	30,00	200,00	5,00	50,00	25,00	150,00
	Family work without paid	4,00	0,00	2,00	0,00	2,00	0,00
Handmade paper	Full-time employees	15,00	15,00	0,00	2,00	15,00	13,00
	Part-time employees	0,00	5,00	0,00	2,00	0,00	3,00
	Family work without paid	0,00	0,00	0,00	0,00	0,00	0,00
Lacquer ware	Full-time employees	96,80	132,20	26,60	47,00	70,20	85,20
	Part-time employees	200,00	234,00	60,00	70,00	140,00	164,00
	Family work without paid	1,60	1,40	1,40	1,00	0,20	0,40
Average	Full-time employees	41,16	87,24	10,52	24,90	30,65	62,33
	Part-time employees	91,87	370,76	74,29	58,67	17,58	312,10
	Family work without paid	0,97	0,19	0,52	0,33	0,45	0,19

Source: HRPC SME survey

There is a strong difference between the sharp increase in employment in the sample group and the strong decrease in the control group during the same period, suggesting that the employment increase was indeed due to the capacity building effects of the programme. In comparison with the control group, the already large number of jobs created in the SMEs supported by the programme is even more impressive.

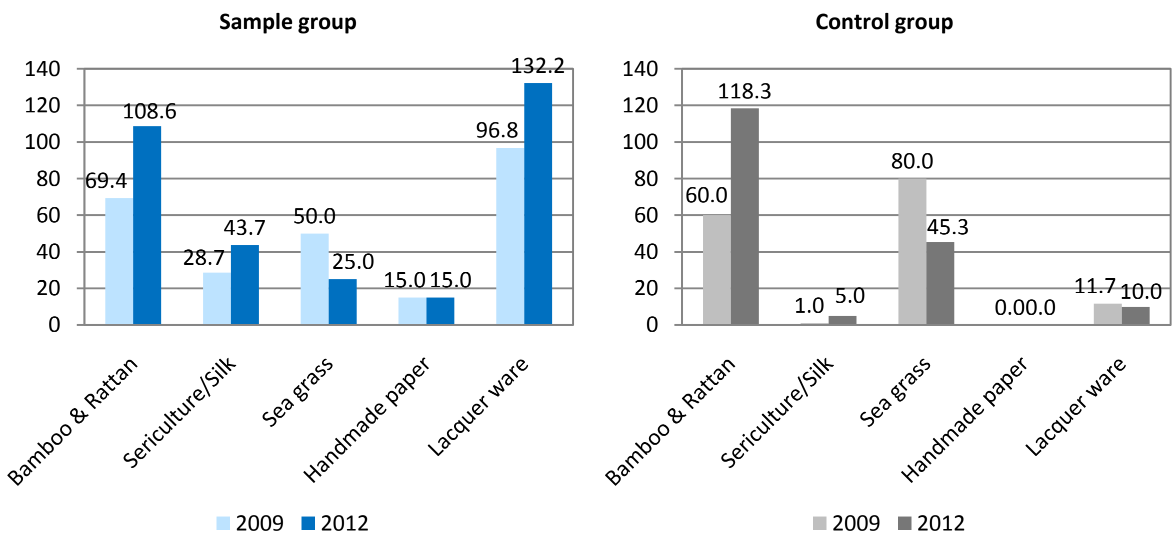
Table 15: Employment in SMEs in the control group

Category	Form of	Average employee/business 2009	Average employee/business 2012	Male 2009	Male 2012	Female 2009	Female 2012
Bamboo & Rattan	Full-time employees	60,00	118,33	41,00	45,33	19,00	73,00
	Part-time employees	4300,00	2700,00	3700,00	716,67	600,00	1983,33
	Family work without paid	0,00	0,00	0,00	0,00	0,00	0,00
Silk	Full-time employees	1,00	5,00	0,00	2,00	1,00	3,00
	Part-time employees	0,00	0,00	0,00	0,00	0,00	0,00
	Family work without paid	3,00	0,00	1,00	0,00	2,00	0,00
Sea grass	Full-time employees	80,00	45,33	54,00	11,67	26,00	33,67
	Part-time employees	12000,00	1500,00	9500,00	266,67	2500,00	1233,33
	Family work without paid	4,00	0,00	2,00	0,00	2,00	0,00
Handmade paper	Full-time employees		0,00		0,00		0,00
	Part-time employees		0,00		0,00		0,00
	Family work without paid		0,00		0,00		0,00
Lacquer ware	Full-time employees	11,67	10,00	8,00	6,00	3,67	4,00
	Part-time employees	1,67	21,67	1,67	17,67	0,00	2,40
	Family work without paid	0,00	0,00	0,00	0,00	0,00	0,00
Average	Full-time employees	152,67	52,60	103,00	19,10	49,67	33,50
	Part-time employees	16301,67	1266,50	13201,67	300,30	3100,00	965,72
	Family work without paid	7,00	0,00	3,00	0,00	4,00	0,00

Source: HRPC SME survey

Full-time employment of surveyed SMEs in the sample group went up in bamboo & rattan, sericulture/silk and lacquer ware companies.

Figure 20: Employment in SMEs by VC (number of jobs per company)



With regard to crafts producing households and farm households, only 69 out of 523 households employed hired laborers in 2012. The number of full-time employments decreased from a total of 61 jobs in 2009 to 23 jobs in 2012, while the number of part-time employments increased from 129 to 288 part-time employments. The number of family workers without payment increased strongly from 7 to 363 in the sample group.

The control group shows an even stronger decrease of full-time employments (from 26 down to 1) and the part-time employment decreased as well strongly (from 320 to 90). The number of family workers without payment increased less than in the sample group.

On average, the employment figures obtained from households also show that the programme has had a positive employment effect on household level. While the impact has not been as significant as it has been at SME level, nevertheless, a large number of part-time employments and jobs have been created within the families. Particularly the part-time employments in households in the four provinces provide income opportunities for the resource-poor and less-skilled population in rural areas. An important poverty alleviation impact of the project can be assumed at this level as well.

Table 16: Employment in households

	Form of employment	No. of households hiring labour		Total employees	
		2009	2012	2009	2012
Sample group	Full-time employment	19	7	61	23
	Part-time employment	17	62	129	288
	Family workers without pay	4	143	7	363
Control group	Full-time employment	6	1	26	1
	Part-time employment	7	35	320	90
	Family workers without pay	1	62	2	139

Source: Aggregated data of HRPC and RUDEC results

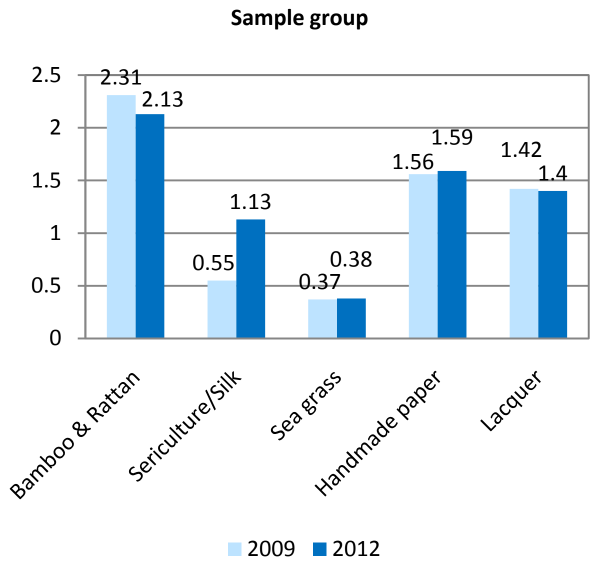
6. NATURAL CAPITAL

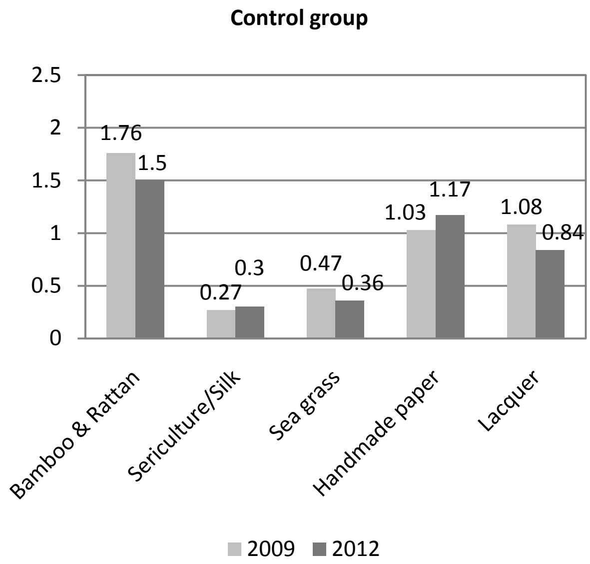
6.1 Natural resources

There is hardly any increase in the average cultivation area planted per household in the bamboo & rattan, sea grass, handmade paper and lacquer value chains. The sample group is developing similarly to the control group and the average area for the cultivation of bamboo & rattan even went down a bit in the sample group.

A strong difference has only be observed in the sericulture/silk value chain, where the average cultivation area per household doubled from 0.55 ha/household to 1.13 ha/household in the sample group, while the control group remained more or less at the same level. There was a strong investment in new mulberry plantations which cannot be observed in other value chains.

Figure 21: Average area per household by VC (in ha)

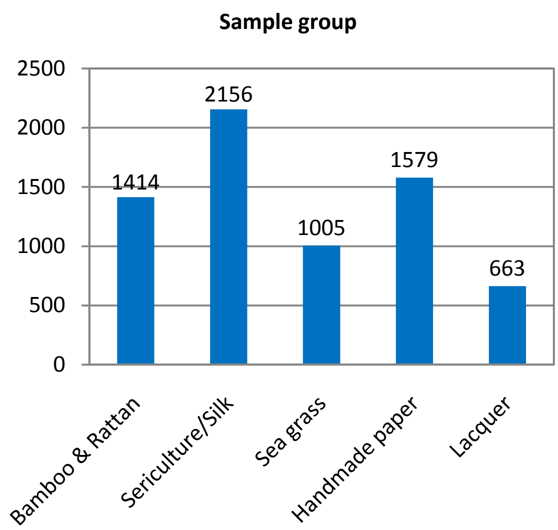


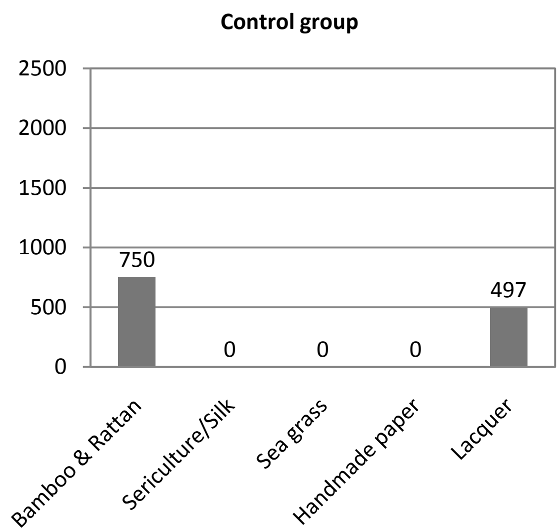


While the programme support has not brought about a major increase in areas under cultivation/harvesting per household (except in sericulture), there has been a significant increase in the plantation of new trees. Bamboo & rattan households planted on average 1,414 bamboo & rattan seedlings per household, which is nearly two times more than in the control group. For the 104 bamboo & rattan households surveyed in the sample group, this makes a total of 147,056 new plants. Plantations were done based on different models such as intensive cultivation of rattan or planting of rattan seedlings in fences etc.

In sericulture, sea grass and handmade paper, the sample group planted a large number of high-quality and new hybrid variety seedlings as well (average of 2,156 mulberry trees per farmer, 1005 sea grass seedlings per farmer, 1,579 trees for handmade paper production per farmer), while no new planting activities were observed in the control group at all. Only in the lacquer value chain, the control group planted a similar number of seedlings, though still less than the sample group.

Figure 22: Number of seedlings planted by VC





For the bamboo & rattan and lacquer tree farmers, the new plantings are long-term investments which will allow harvesting for a period of 20-30 years. The planting activities created a stable source of income from which the households and communes will be able to benefit for a long time. The relatively high income potential from lacquer collection is shown above and intensive rattan plantations can generate an even higher income. In the example in the text box below, the estimation is that intensive rattan cultivation can generate an income of 87.5 million VND per ha (4,189$).

Household model in planting rattan for raw material

M. Hoang Dinh Duyen, Hamlet 10, Quynh Trang Commune, Quynh Luu District, Nghe An

With 4 sào (1 sào equivalent to 360 sqm) of cropland allocated by the commune, the family only grew peanuts, corns but faced big difficulties: inconvenient and poor road infrastructure forcing them to spend a lot of time and efforts in weeding, fertilizing, harvesting. Their plot is upland and dry with the main irrigation from direct rainfall, therefore peanuts and corns did not give high yields.

When Quynh Trang Commune was supported by the programme "Green Production and Trade" with land planning for rattan cultivation (10 ha), the family indicated a desire to grow rattan and registered to participate in the programme and received strong support: 3,000 rattan seedlings of the variety K83, 125 kg of NPK fertilizer, insecticides to prevent leaf rust. Apart from support of inputs, the household also received technical training for cultivating, caring, harvesting rattan. In addition, the programme sent technical staff to supervise and guide the household.

The household also received active assistance from the communal authority (allocating 2,000 sqm of land) with stable land planning for rattan. The authority supported small holder cultivators in agriculture extension and a partnership with Phuong Anh company to ensure market for the harvested raw rattan.

With the above-mentioned help and the family's own efforts, 2,000 sqm of land has been cultivated with rattan. The trees grow well and the first harvest is expected by the end of 2014. With an estimated price of VND 9,000/kg, the family will earn 12.6 million VND from 4 sào. The rattan yield will increase by 30% in the following years and will be harvested for 20 years. Besides the positive economic impact, Mr. Duyen's household also shows positive changes in terms of mindset and orientation of the production. Previously, the family did not carry out commercial production but focused on subsistence crops. Now they are more market-oriented and aware of business. Previously, their production totally relied on experience and they applied very little of what they learnt. Since their participation in the programme, they have followed technical requirements for new seedlings which resulted in a much better growth of the rattan tree as compared with other households.

The intensive cultivation of bamboo & rattan promoted by the project has generated positive environmental effects, as it reduces the pressure on natural forests. Vietnam's furniture and handicraft sector needs new supply sources in order not to destroy natural resources.

6.2 Increased local availability of seedlings through creation of nurseries

The increased number of lacquer trees planted by farmers is also likely to impact on the income of farmers for a long time as lacquer can contribute substantially to the overall household income as shown above. Within the value chain approach of the programme, not only seedlings were distributed to farmers. Instead, the capacity of selected households was built to become tree nurseries which can produce and sell seedlings. This improves access to inputs for the farmers as further seedlings can be bought.

Household that developed a nursery garden for lacquer trees

Mr. Nguyen Quang Chung, Tho Van Commune, Tam Nong commune, Phu Tho

Lacquer trees cultivated from generation to generation have high economic value. However, seedlings are mainly produced by local people basing on personal experiences which leads to low productivity and a short tree lifespan. Based on demand from local people for seedlings, Mr. Chung decided in 2005 to convert 150 m2 of the vegetable garden into a lacquer tree nursery. As Mr. Chung lacked knowledge of techniques and experiences in selecting the optimal time for nursery development and protection against diseases, pests and bad weather, the mortality rate of seedlings was very high. He indicated that the main challenge of making a successful nursery garden is knowing how to select the right seeds. Usually, seeds from fruitful trees may bring low-productivity trees, thus we should select seeds from less-fruitful trees. Thanks to research and support from the Green Production Programme, his nursery garden prospered and has become the main source for seedlings for households not only in the area but also in other ones. Support from the programme was significant and included the provision of seeds (200,000 VND); making seedling pots (80,000 VND); purchasing bamboo piles and defense proofs (200,000 VND), plastic bags (30,000 bags; fertilizer (50 kgs); technical training, etc. In 2012, the lacquer tree nursery garden of Mr. Chung produced 50,000 seedlings and with a selling price of 500 VND/seedling, he and his family earn 20 million VND per year from the garden. Not only has the nursery garden provided a stable income to his family but it also created a stable source of high quality seedlings for many other lacquer tree farmers in the area.

The same approach is also applied for other value chains, such as handmade paper, sericulture and rattan. The following text box highlights the example of the Nam Duong company in Thanh Hoa which manages a rattan nursery.

New – technique model for developing rattan nursery gardens

Nam Duong Co. Ltd, Ben Sung Town, Nhu Thanh Disrict, Thanh Hoa Province

Nam Duong Co. Ltd was established in 2003 with activities in various fields including construction services, commercial tourism, handicrafts training, rattan seedling provision and handicraft production. The company was supported by the programme with the new rattan seedling K83 (50 kgs), nursery technical trainning and a visit of s model in Thai Binh. From the theoretical trainning and lessons learnt combined with personal expericences, the company found that nursery techniques have a large impact on the quality of the seedling as well as the economic effectiveness. In the past, in the context of small production scale (150 m2), they used to sow seeds directly into the pots, which then helped to shorten the time for nursery as it took 13 months for the seed to grow seedlings for planting. However, this method requires good irrigation systems, and a lot of care. When the programme came, the demand for the seedlings was high, thus the company expanded the area of the nursery garden up to 1.200 m². The company switched to a new method of sowing seeds massively. Although the new method takes a longer time, the quality of seedlings is improved and the labor needed for observing and replacing the dead seedings decreased dramatically.

6.3 Environment protection

The contributions of the programme regarding environment protection at raw material supplier level included:

- Introduction of models for sustainable exploitation of natural forests with bamboo & rattan
- Reduction of pressure on natural resources for bamboo & rattan by introducing intensive cultivation of rattan
- Conservation and extension of lacquer tree plantations
- Introduction of Good Agricultural Practices (GAP) in sericulture and sea grass cultivation.

The programme achieved an important impact on environment protection, as large areas of bamboo & rattan are now under protection in the supported villages. For instance, the Chau Thang commune in Nghe An reports that, with the support of the Joint Programme, 700 ha of natural bamboo forest have been preserved by enhanced awareness on proper bamboo caring, protecting and harvesting; by forest surface cleaning, trimming old and underdeveloped plants; by making fences to protect the bamboo from cattle; by fertilizing; and by cutting bamboo at ground level for better shoot development. The annual production of the whole commune increased to 700-800 tons of bamboo, generating an income of about 6 million VND/household per year for 180 households (about 287 US$). An important success factor was to protect the areas allocated to households so that other households could not illegally harvest the bamboo as common property.

The important contribution of the programme to environment protection is two-fold: On the one hand, there is a large increased area which is now under sustainable exploitation; on the other hand, the project could demonstrate the income increase potential of sustainably preserved natural forest exploitation which serves as a model for other communes.

The high income potential from intensive rattan plantation, estimated at 87.5 million VND per ha (4,189 $) is also a good model for farmers and can reduce the pressure on natural forest exploitation.

Sustainable conservation of bamboo material area

Chau Thang commune, Quy Chau district, Nghe An

Prior to 2003, the commune had no policy for allocation of land and forest. The forest was managed by the state and as the common property of people, it was over-exploited. This led to gradual forest degradation, scarcity of valuable trees and there was only mixed-plant forest. Consequently, in 2003, forest land and other land were allocated to individual households. In the forest area where the giant bamboo grows and develops, local people harvested and used it to make household items (chairs, baskets, house fence ...) and partly dried it to sell it to collectors for handicraft production. However, at that time, people still considered the bamboo as a secondary plant so there was a lack of protection and caring as everyone was free to harvest it. While the area of timber plants was protected and cared, the bamboo area was neglected. Hence, the bamboo production significantly decreased. Some households had a bamboo area but few laborers, so other households exploited it. This caused a reduction of the bamboo area from 1,100 ha in 2003 to 700 ha in 2010. When the programme "Green Production and Trade" was introduced in 2010, it supported the local authority and people in protecting and exploiting the bamboo. In 2011, the project organized two models of bamboo caring and protecting for two households with the area of 3 ha in Xet 2 village. The project supported each household with 2.4 million VND for forest surface clearing, trimming old and underdeveloped plants and making fences and 600 kg of NPK fertilizer. Together with the pilot models for actual observation, the project also organized two training courses on caring, protecting and harvesting bamboo techniques for 60 households. After having the initial result from the pilot model, in 2012, the project expanded to 6 other villages in the commune with a total area of 18 ha for 8 households. The project supported with 225 kg of NPK fertilizer/1ha. In addition, when the households cleared the forest floor and fertilized, project's technicians directly supported and instructed. Based on the project support, local people changed their awareness on bamboo caring, protecting and harvesting. They apply the newly acquired techniques and made fences to protect the bamboo from cattle; they fertilize, harvest and cut bamboo at ground level for better shoot development. These techniques help the bamboo to develop better. Since the bamboo in a household's area is protected, other households cannot harvest it as common property anymore. In addition, dissemination of the successful model prompted many households, who did not received direct support of the project, to learn and apply the new techniques. Therefore, the bamboo area has been stably preserved since 2010 up to now (700 ha). The annual production of the whole commune is about 700 - 800 tons, which brings the amount of 1.05 - 1.2 billion VND to over 180 households in the commune.

At craft producer level in households and SMEs, the aim was to improve the application of environmental regulations, waste reduction etc. "Cleaner production" trainings were done in a large number of households and all the supported SMEs.

As a result, the number of households applying environmental regulations in the sample group rose from only 2 households in 2009 to 118 households in 2012 which is equivalent to 52.0% of all households in the sample group. In the control group, no household indicated in 2009 to apply environmental regulations, while 29 households indicated to have done so in 2012 (39.7% of all households in the sample group).

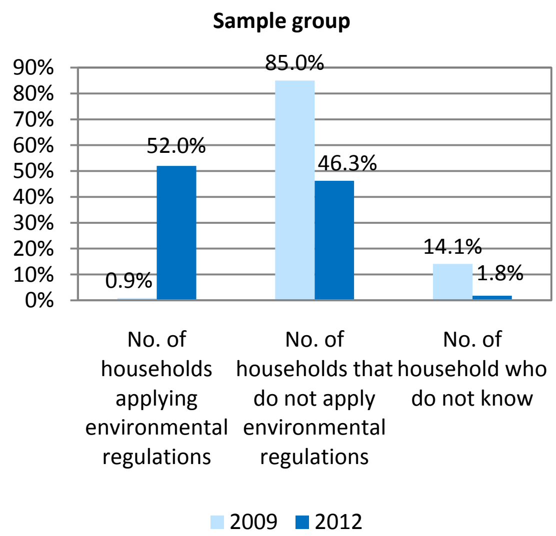
Based on the Cleaner Production Training, households minimize the use of toxic chemicals, use more natural dyes, use by-products more efficiently, are more careful regarding wastewater use etc.

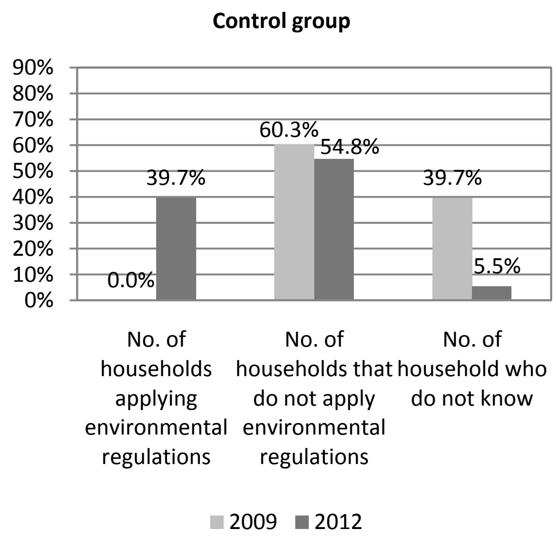
Adopting more environmentally-friendly practices

Ngo Thi Thang, leader of bamboo and rattan weaving group in Go Me hamlet, Lien Son commune, Hoa Binh

"The quality of rattan materials is now better and safer. At present, we use white rattan which is boiled with cooking oil and nontoxic salt. In the past, rattan was soaked boiled in diesel oil, which was really polluting."

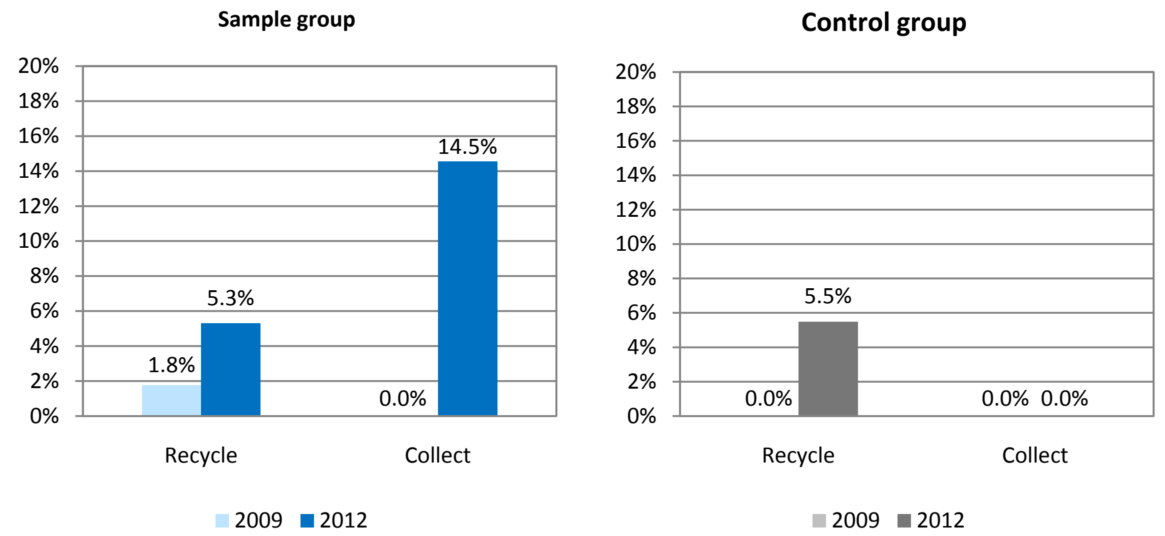
Figure 23: Application of environmental regulations by households





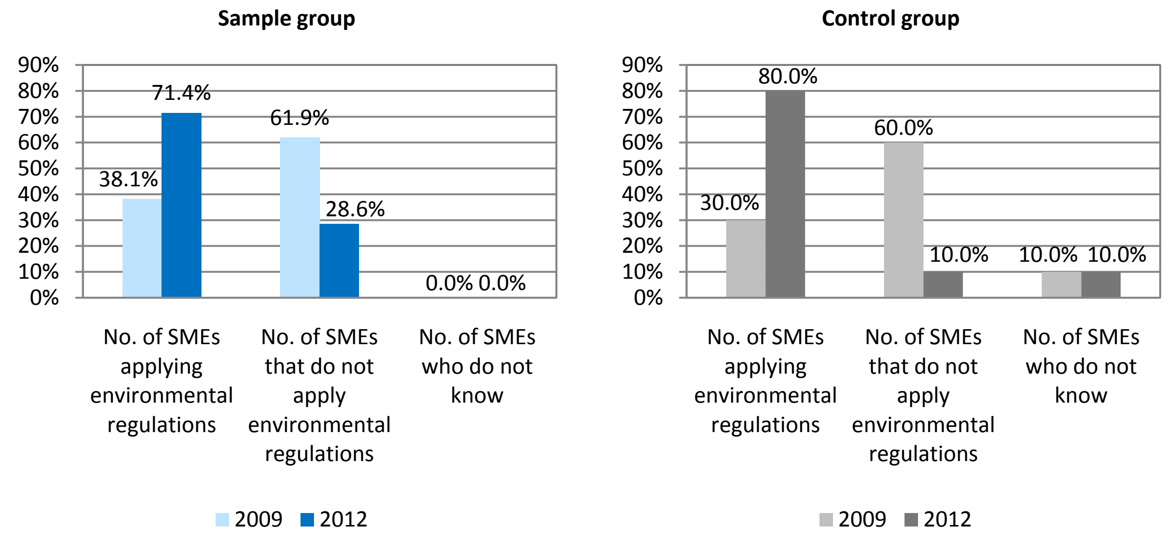
In addition, 20% of the surveyed households in the sample group indicate that they now collect waste or recycle waste, while this percentage was only 2% in 2009 and is only 5.5% in the control group in 2012. Also at SME level, the percentage of companies who either recycle or collect waste doubled, though similar to the control group.

Figure 24: Percentage of households recycling or collecting waste



The percentage of companies applying environmental regulations nearly doubled from 38.1% to 71.4%, though the control group is developing similarly.

Figure 25: Application of environmental regulations by SMEs



There is no statistical effect visible in terms of improvement of water drainage system or wastewater treatment system. For both sample group and control group, the number of companies without drainage or wastewater treatment system even increased from 2009 to 2012.

7. HUMAN CAPITAL

7.1 Knowledge and skills

For both the raw material suppliers and the craft producers, the programme organized technical and business trainings such as:

- Business management/Gender and Business
- Business group formation/Microcredit
- Occupational Safety and Health
- Good Agricultural Practices/Sustainable harvesting of raw material
- Weaving skills of craft producer
- Cleaner Production
- Product design.

A clear training impact is visible in terms of the significant income increase from surveyed products explained above. The in-depth interviews also confirm the application of technical training content and the impact on technical skills.

Knowledge and skills

Ms. Nguyen Thi Hue, a bamboo & rattan weaver in Thai Son hamlet, Thang Binh commune, Thanh Hoa

Ms. Hue is a representative leader in her commune. She said that her weaving skill has improved leading to a higher income. In the past, she earned only 1 million VND/month, but now her income increased to 1.7 million VND.

Ngo Thi Thang, Bamboo and Rattan Weaving Production Facility

Thang said that the project supported them with the planting of rattan for raw material supply, the development of new product designs and by giving them the opportunity to participate in fairs. Thanks to the project, 3 production groups have been established, contributing to the reduction of production costs and the increase of product quantity and incomes of workers. Vocational training courses helped them to earn 1.5-1.8 million VND, an increase of 15% on previous incomes. Thang and group members want to continue to be involved in the project.

However, as the overall income increase achieved by the sample group is not significant compared with the control group, an impact from the business and entrepreneurship trainings at household level is not visible yet. One reason may be that such impact can only be expected after some time, but the feedback given by the interviewees is also ambiguous.

At SME level, training and support was provided on:

- Occupational Safety and Health
- Cleaner Production
- Entrepreneurship, business planning, market linkages
- Product development and quality standards
- Participation in Trade Fairs (Canton Trade Fair, Lifestyle Vietnam, New York International Gift Show, Moscow)
- Trainings on key markets (EU and US), market trends and trade fair participations
- Branding and Fair Trade.

The turnover increase achieved by the sample group SMEs compared to the control group suggests that the capacity building activities undertaken by the programme were successful and that the support indeed made a big difference to the SMEs. Feedback from companies on the training impact is positive; entrepreneurship was stimulated.

Business skills trainings

Ms. Tran Thi Sen, a member of "Northern Truong Son" group in Nga Thai commune, Thanh Hoa

She said, "The project has opened practical classes to help farmers raise awareness about planning and running a business carefully. In fact, sedge growers have recognized the need to establish some business groups. These groups have business plans for short term and long term: To buy materials for farmers, then collect products, create funds to serve for business activities, etc. After a period of time, income and revenues have improved, particularly, the price of raw materials is stable and bargaining power is boosted. However, groups cannot access more funds. Machines have not been provided by the project. At present, they need splitting machines and drying machine to reduce crop losses due to bad weather."

Nguyen Van Phuon, a bamboo and rattan weaver in Go Me, Lien Son commune, Hoa Binh

He has learnt much useful knowledge from the course, but he has no intention to start his own business. He now works for Ms. Vung, receiving materials to make products and selling them for her. He earns 1 million dong per month and this is enough for him.

Market Linkages with China

LV Company (lacquer), Phu Tho province, Mr. Do Dinh Lang, Director

LV has been assisted in trade promotion, market access and field trips to Chinese businesses. In particular, the lacquer processing machine provided by the project is very useful to the business. As a result, the total sales are 8-10% higher than those of the previous year, despite the difficult economy..."

Design Support

LACQUERWORLD CO. LTD, Duong Thi Thanh Thuy, President

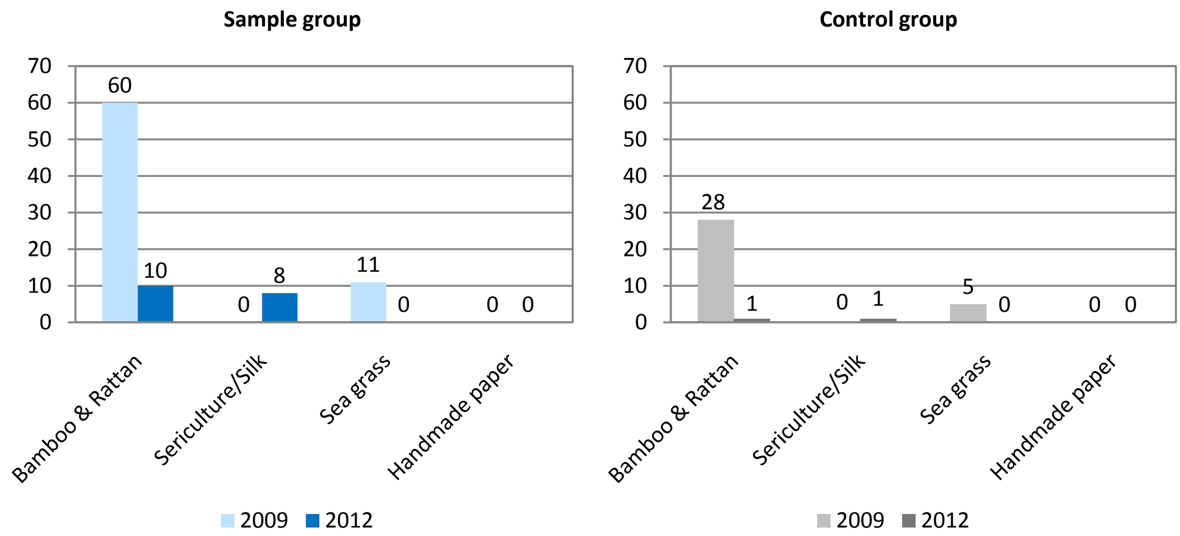
Lacquerworld Company received support from a foreign designer engaged by the programme. "With the support of the programme, we managed to develop a new collection. The new collection is selling very well and we have received over 100,000 $ worth of orders from different countries (including Dubai, Russia, EU)".

7.2 Occupational safety and health

The programme organized a large number of training courses on occupational safety and health. As a result, the number of craft producing households reporting work accidents decreased significantly during the project period.

Moreover, the frequency of accidents was also reduced. While 90% of the households in the sample group reported more than 5 accidents per year in 2009, all of the households did not report more than 5 accidents in 2012. In both cases, the sample group and the control group are showing similarly good results.

Figure 26: Number of households reporting occupational accidents in handicraft production

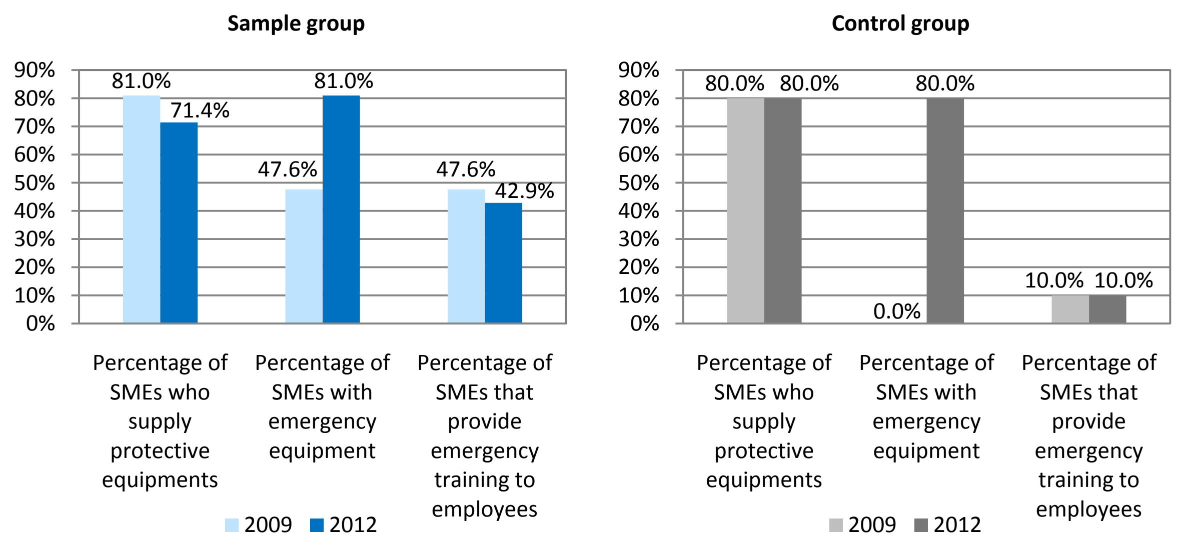


SMEs report a similar development. The number of business reporting accidents went down from 7 to 2 in the sample group and none of them reported more than 5 accidents in 2012. But also here, the development in the control group is similar.

There is also a slight increase in the number of SMEs with an occupational safety policy in the sample group, though this increase is much stronger in the control group.

The percentage of companies which provide protective equipment to their workers did not increase in the sample group, even decreased a bit from 81% to 71%. The percentage of SMEs with emergency equipment increased from 48% to 81% in the sample group and the percentage of companies providing emergency training to employees decreased slightly in the sample group (form 48% to 43%).

Figure 27: Protective equipment, emergency equipment and emergency training in SMEs



The in-depth interviews also provide strong evidence from many producer groups supported by the project that they benefitted from work safety trainings and that occupational safety and health improved.

Occupational safety

Ms. Nguyen Thi Huong, a bamboo and rattan weaver in Don Van hamlet, Lien Son commune, Hoa Binh

From the occupational safety course, she has learnt many interesting and useful skills, and she no longer cuts her hands while working. Thanks to the course, she also knows how to prevent accidents for her family members.

Mr. Pha Van Ha, Van Nam hamlet, Dien Van, Nghe An

Received support to make bamboo toothpicks: "Useful knowledge from business and occupational safety courses plays an principal role in our upgrading process. We also organize small-scale training courses for our workers on occupational safety, fire protection, machine maintenance, etc…"

Ms. Vu Thi Nguyet, a bamboo and rattan weaver in hamlet 5, Thang Binh commune, Thanh Hoa

"Thanks to the classes on improving skills and working posture, I became familiar with some new methods, and I feel less back pain."

Nguyen Thi Hue, a bamboo/rattan weaver in Thai Son hamlet, Thang Binh commune, Thanh Hoa:

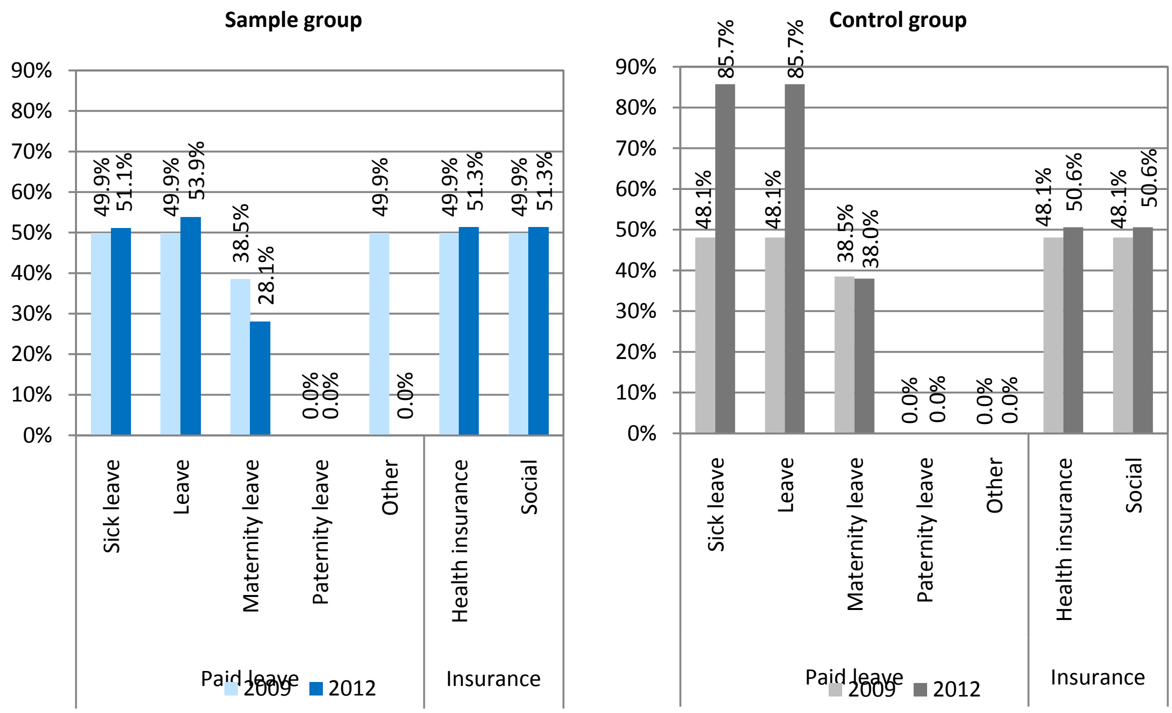
Ms. Hue is a representative leader for her commune. She said that her weaving skill has improved leading to a higher income. In the past, she earned only 1 million VND per month, but now her income is 1.7 million VND (she was a weaver before the project was launched in the commune). Thanks to the course, she changed her working position to work more comfortable. Light conditions were improved to avoid harm to the eyes. The gender and business class also allows her deeper understanding in the role of women in household business.

8. SOCIAL CAPITAL

8.1 Social benefits

The surveyed SMEs supported by the project did not improve employee benefits. The number of workers benefitting from sick leave, leave, maternity leave, health insurance or other benefits did not increase. The control group shows better results, but these are due to individual enterprises which have introduced improved social benefits.

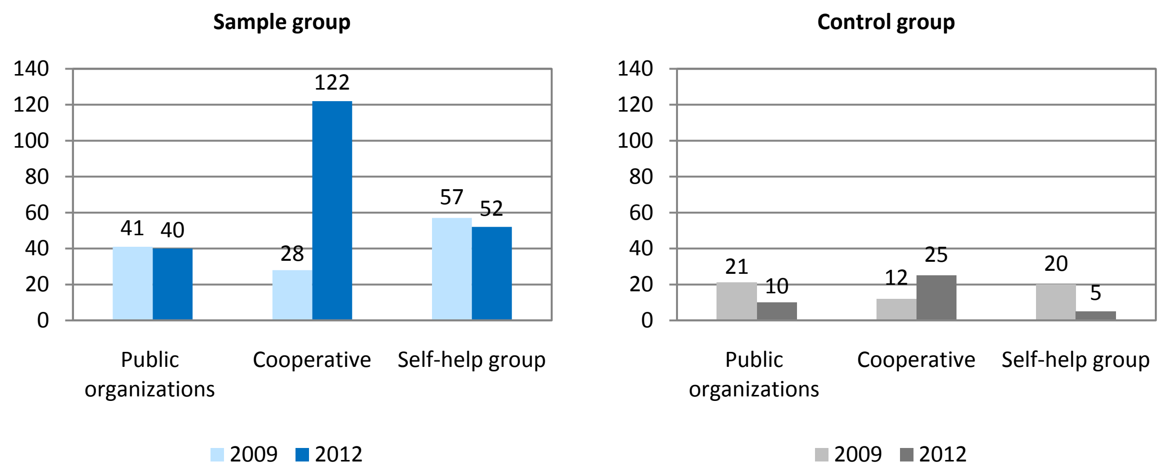
Figure 28: Benefits of full-time employees in SMEs



8.2 Participation in networks and organizations

The number of households supported by the programme which are members of cooperatives almost quadrupled during the programme duration. This appears to be a direct result of the business group formation support under the programme.

Figure 29: Number of households participating in networks and organizations



Several networking events for handicraft producers were organized in Hanoi and in the provinces, focussing on marketing, business planning, and SME financing issues. One of such events was instrumental to illustrate the importance of design for entrepreneurship development, the philosophy of design as a discipline of problem-solving, and how design can operate as a powerful tool to promote sustainable development.

8.3 Labour union membership

Labour union membership did not change. Half of the 21 surveyed SMEs in the sample group in 2009 and 2012 and 80% of the SMEs in the control group in 2009 and 2012 did not have a labor union or other union membership.

8.4 Value Chain Linkages

The programme supported the improvement of horizontal and vertical business linkages among value chain actors. These linkages include group formation among farmers and craft-producing households (including the formation of cooperatives and the promotion of cooperation between companies willing to co-invest in the plantation of bamboo & rattan raw material at farmer-level) and outsourcing of craft production to joint programme beneficiary household handicraft producers.

Model for linking farmers in developing rattan

Interest group of planting rattan in Cau Dat hamlet, Hai Long commune, Nhu Thanh District, Thanh Hoa province

The local people are very familiar with the cultivation of rattan, but mainly over-exploited the natural resources. Thus, when the programme started in 2010 there were many difficulties and challenges regarding the process of planting and growing rattan tree. Building on the technical training provided and support provided in terms of seedlings as well as hands-on training provided by Nam Duong Co. Ltd, it was deemed necessary to create stronger linkages between farmers, enterprises and authorities, etc. Hence, 13 households decided to create an interest group for growing rattan in Cau Dat hamlet, Hai Long commune, Nhu Thanh District, Thanh Hoa province. The group acts as a bridge between rattan households and Nam Duong Co. in receiving the seedlings; and group members support each other on techniques and labour as well as selling their products. As a result, rattan in the area grows quickly with the potential to not only protect other crops (as rattan acts as a fence) but also help local people to have a stable income (as rattan will be harvested for 15- 20 years) then contribute to poverty reduction.

9. PHYSICAL CAPITAL

The programme supported a number of producer groups and SMEs with new equipment and machinery, such as bamboo splitting machines, weaving looms, dyeing equipment, lacquer processing machine etc.

Beneficiaries report to have achieved an increased productivity due to the equipment provided by the programme, which seems to be an important factor for income increases at processing level. New weaving looms provided by the programme allowed weavers to diversify their product range and enhance productivity.

New looms enhance productivity

Vong Ngan Cooperative, Ms. Bui Lan Phuong, Vice-President

"The project organized training classes for residents to improve their knowledge and skills about product development. In particular, thanks to 40 new weaving looms, the products made by the cooperative are now more diversified. Support to participate in trade fairs make these products popular." In fact, the looms provided by the programme are of high quality and are very suitable for the weaving method of cooperative. Since then, the productivity of the cooperative increased significantly and women have good conditions to create more new products based on traditional patterns of Muong ethnic group. The signed orders are delivered to customers on time which creates jobs for many new members of cooperative.

Improved technologies

Can Lieu Production Group, Ms. Dang Thi Lieu

Lieu said, "Thanks to the splitting machines from the project, productivity is clearly improved. This machine can be applied to many tasks, so the price of the products is not too expensive. In the past, my facility could not buy rattan raw material, but now we buy 20-30 tons of rattan to split and sell to domestic enterprises. Also, the group was assisted in developing new products and these products are selling well in the domestic market. Thanks to the project, the average income has increased from 50,000 VND to 65,000 VND per person per day."

With the support of the splitting machine, a rattan splitting group was established which created more works for members. Based on local raw material, rattan splitting products are sold inside and outside the province. After advanced vocational training, the productivity is increased and the cost of production is reduced so the profits of group are higher.

Ngoc Canh Company, Ms. Nguyen Thi Ngoc, Director

For Ngoc Canh, receiving machines from the project has had a great impact. The productivity is now 20 times higher than it was with just manual methods. The workers are now happier and with higher incomes. Thanks to the addition of machines, the number of businesses has increased by 10-12% in comparison to the total last year.

However, there were also indications that not all machines matched with the demand of the beneficiaries. Some equipment delivered was not appropriate for the needs of the craftsmen.

10. ENABLING ENVIRONMENT

10.1 Commune development

The programme supported the commune authorities' capacities on Local Economic Development (LED) and provided particular trainings on LED. These programme activities strengthened the ability of commune authorities to provide better framework conditions for economic growth, who subsequently played a very active role in developing large-scale communal development plans.

The communes Lang Thanh and Dien Kim in Nghe An province and Tam Nong in Phu Tho province are good examples for communes playing an active planning and coordination role to ensure a higher value of the raw material used for plantations and the revitalisation of traditional production.

Communal planning of a 106 ha rattan material area

Lang Thanh commune, Yen Thanh district, Nghe An

Lang Thanh is a northern mountainous commune of Yen Thanh district with the natural area of nearly 5,000 ha of which 2,300 ha is forest area. This provides a significant opportunity for the commune to develop a forest-based economy. In the commune, bitter rattan has been grown and harvested since a long time. Before 2010, the commune had 1.5 ha of bitter rattan which was grown as hedges and mixed with forest plants. The bitter rattan was mostly used to make baskets and did not bring much economic value to growers since it was rarely used for handicraft making due to its hard stem and short internodes.

Understanding the development potential of local rattan, the programme provided several practical supports to the growers in 2010: Survey of the rattan material area; Provision of 33,400 rattan seedlings of K83 variety and 1,310 seedlings of acacia for shading and supporting pillars; Provision of fertilizer for intensive farming. Besides the material support, the programme also provided training on rattan growing and caring techniques for 22 households. In addition, in order to promote the whole value chain, the project also supported two vocational training classes on rattan weaving (1 basic class and 1 advanced class) for 60 workers (women, disadvantaged people).

The activities resulted in: (i) New plantation of 2.3 ha K83 rattan including 0.5 ha of intensive rattan cultivation, and the remaining 1.8 ha of rattan mixed-cultivation in forest. All rattan area has developed rather well and by the end of 2014 it is expected to be harvested. (ii) Sixty persons participated in training courses. They have acquired weaving techniques and work now for Ngoc Canh Company with an average income of 850,000 VND/worker/month. (iii) The programme helped local people and officers to have positive changes in their view on economic development. The Lang Thanh People's Committee developed a plan for a 106 ha rattan material area which has been approved by the commune Party's Resolution and the commune's socio-economic development and social security scheme for the period of 2010-2015. In order to develop a sustainable rattan value chain, great effort of the local authority and support of partners for connecting growers with craftsmen is required.

The development of lacquer in Tam Nong District

Mr Nguyen Chien Thang, Chairman of Fatherland Front Committee of Tam Nong District, Phu Tho

Before 2004, lacquer trees were not very popular in the area. With a total area of 109 ha, local people did not pay sufficient attention to this type of tree, and the local authority did not have a clear direction and policy to develop lacquer. After 2004, the price of lacquer sap rose dramatically as a result of rising demand for lacquer in China. Realizing the high economic potential of the lacquer tree, Tam Nong People’s Committee made a plan to spread the area of the tree up to 490 ha located mainly in 4 selected communes (Tho Van, Di Nau, Van Long, Xuan Quang). From 2010, the Green Production programme provided training to the local households on planting and caring for lacquer trees. Key staff, including the leaders of department also received training. The programme also supported the local people with seedlings, produced locally through newly established nurseries, and with fertilizer, etc. Thanks to the support from the programme, the lacquer trees have grown well and are properly cared for. Encouraged by this, Tam Nong has registered a Tam Nong lacquer, which is expected to strenghten the reputation and sales potential for lacquer from Tam Nong district.

Sericulture development in Dien Kim Commune

Dien Kim Commune, Dien Chau District, Nghe An

Dien Kim Commune is located in a coastal alluvial plain which is very suitable for developing sericulture. Local people have a long tradition of growing mulberry, rearing silkworm and reeling silk. Before 2000, most of the households in the commune were involved in this traditional production. However, local sericulture practice has increasingly been diminished in the recent years. The commune's mulberry area totaled 150 ha in the year 2000. The cocoon output of 120 tons had dropped drastically to only 24 tons in 2010 (80 ha sericulture area). One of the main reasons for the reduction was the old local mulberry variety (Ha Bac variety). It was cultivated for a long time, became too old and as a result gave low leaf yields. In addition, silkworm diseases spread frequently leading to economic loss of the producers. Many households abandoned this traditional craft and switched to other activities such as trading or becoming workers in enterprises. The mulberry area of the commune shrank and was gradually replaced by other crops such as sweet potatoes or peanuts and industrial crops (indigo, eucalyptus …) or was simply left neglected without any care.

To overcome these difficulties, the programme has assisted people in Dien Kim Commune to preserve/restore and develop the traditional crafts. Support activities conducted by the programme included the provision of the new mulberry variety (VH13) with high yield to replace the old local variety; support in setting up a local nursery in order to supply, free of charge, the new variety to households that wish to grow it; provided hybrid silkworm eggs (yellow silkworm) to project households for their own hatching. Additionally, the programme supported equipment and tools for sericulture such as insecticide sprayers, disinfectant sprayers, silkworm baskets; free supply of disinfectants and disease prevention medicines. The programme also organised training workshops to provide technical guidelines for seeding of new variety (VH13), mulberry cultivating, caring and harvesting, techniques in silkworm breeding, care and disease prevention; training about market, production and business accounting.

Encouraged by the support of the programme, the project coordination unit of Dien Kim Commune frequently gives direction to implement land planning for intensive mulberry cultivating and silkworm raising areas and urges local people to merge land and restore old mulberry fields. Each year, the commune puts sericulture development targets in the resolution of the communal People's Council for implementation. After more than 2 years of the programme support, Dien Kim commune already replaced 8 ha of old variety by the new VH13 variety. The new variety has given harvest with a 1.5 times higher yield than the old variety, higher leaf quality (richer resin, bigger and thicker leaves), thus helping to reduce harvesting time and labor. In addition, thanks to silkworm technical training, the silkworm mortality rate in household production decreased noticeably (from 40% in 2010 to 20% in 2012), and cocoon yield grew by 20% per brood on average.

Due to the restoration and development of the local sericulture, its annual production revenues reaches 1.5 billion VND and provides employment opportunities for idle laborers of over 200 households (nearly 400 laborers), which is especially helpful for poor families and women.

10.2 Access to local training capacities

Local trainers and service providers are prioritized for the delivery of training to companies and households, thereby building local capacities, creating favorable conditions for embedding training programmes and continuing its delivery beyond the life of the programme. There are good indications that local service providers will continue to use the training material provided.

The programme built up the capacity of a local trainer network for the EMPRETEC entrepreneurship training approach of UNCTAD. The network of trainers was used to train management staff of participating SMEs and is able to conduct further trainings for Vietnamese companies in future.

The EMPRETEC training which is focused on behavior change of entrepreneurs received very good feedback from participating companies and the newly qualified trainers conducted further first training courses on a fee basis.

Based on the introduction of "EMPRETEC" programme, VIETRADE recently agreed with UNCTAD to set up an EMPRETEC training centre in Vietnam which shall be used under VIETRADE for future entrepreneurship training. To this purpose, the EMPRETEC Viet Nam webpage has been integrated into the official website of Vietrade, and entrepreneurs are actively interacting through Facebook and a quarterly Newletter.

EMPRETEC entrepreneurship trainings

Duc Phong Company, Mr. Thai Dai Phong, Director

Phong said, "The company gets much support from the project, such as material sources, product design, customers, business training, product quality enhancement and bamboo processing machines. Among supporting programs for business, the most effective program for my company is the training program for entrepreneurs to help them access markets. This is a practical program to bring the best impact and promote capacity to access markets." The company has adopted this program and the total sales have increased from 7-10% per year. Despite the economic recession, this result proves the practical impact of the program, which not only benefits the company with the market access method in the short term, but also in the long term.

10.3 Establishment of a local Trade Fair

The project contributed significantly to the development of the national handicraft trade fair LifeStyle Vietnam. The fair which is organised by VIETCRAFT, the Vietnam Handicraft Exporters Association, and already the first edition which took place in April 2010 was supported by the programme. In particular, the organiser received substantial support to establish the fair, promote the fair among the international buyer community and expand its network.

The 4th edition of LifeStyle Vietnam which was held from April 18-21, 2013 in Hochiminh City counted 314 exhibitors from Vietnam, Cambodia, Indonesia, Laos, Pakistan and Thailand and 1,472 foreign trade fair visitors from 36 countries and territories: Japan, USA, United Kingdom, Germany, France, Italy, Spain, Netherlands, Denmark, Chile, Brazil, Argentina, South Africa, India, Korea, Taiwan, China, Hong Kong etc. Countries with the largest number of trade fair visitors were Japan (393), EU (362) and the USA (193).

Figure 30: International visitors at LifeStyle Vietnam

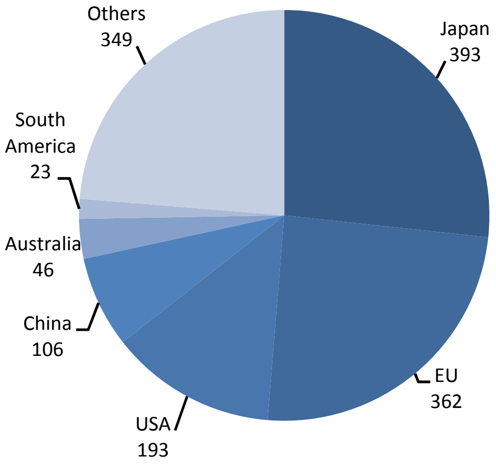
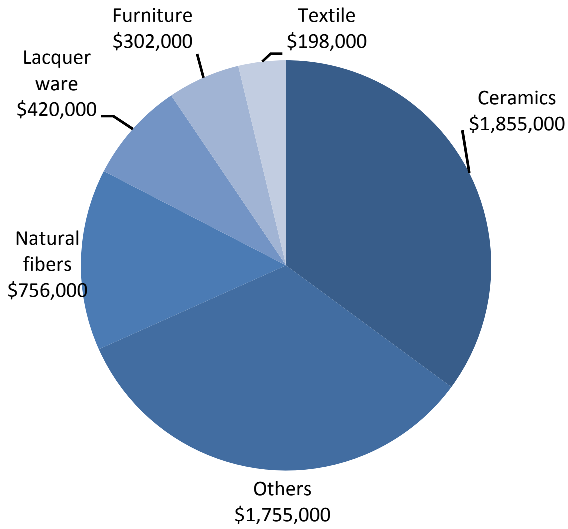


Figure 31: Value of orders at LifeStyle Vietnam



According to a survey undertaken by the trade fair organizer, about half of the exhibitors rated the trade fair results as being good. In total, 1,059 contracts and MOUs were signed at the fair with a value of 5,295,000 $.

With the start-up support to LifeStyle Vietnam, the programme contributed substantially to establishing an international platform for business matchmaking for the handicraft sector in Vietnam. The fair potentially impacts the whole handicraft sector and has the potential to be run sustainably.

Table 17: Assessment of fair results by the exhibitors

	Number of votes	Percentage
Very good	25	11%
Good	96	42%
Rather good	73	32%
Normal	35	15%
Bad	0	0

(Source: VIETCRAFT, LifeStyle Vietnam 2013 – Report)

10.4 Improved service provision by the sector association VIETCRAFT

VIETCRAFT was supported to enhance its service provision for craft exporting companies in Vietnam. An on-line information system has been developed and put into operation on the domain www.vietcraftservices.com since January 2013. It helps to facilitate better business opportunities between international buyers and Vietnamese exporters of home decor and gift sector. Besides news and events, there are 4 major sections to be covered by this system, namely company profile, company audit; market intelligence and sourcing.

Almost 200 profiles of handicraft companies have been gathered by VIETCRAFT. It is expected that 1,000 company profiles will be updated by VIETCRAFT by mid 2013. The online company profile is an easy tool for buyers to identify potential suppliers through a wide range of sorting criteria e.g. range of products, scale of company, geographical location, etc. In addition, information about the auditing requirement from key buyers in the EU and USA has been collected and is made available on-line to Vietnamese exporters. In addition, VIETCRAFT improved its market intelligence information. A fee will be charged for some of the market intelligence, for instance, the list of important buyers by countries and information about their interest. Finally, with regard to the increasing demand from buyers, an online sourcing function is being developed.

10.5 Improved framework conditions at provincial level

Provincial advisory boards were established in Nghe An and Thanh Hoa provinces. The mandate of the Provincial Advisory Boards, which will continue to exist beyond the duration of the programme, is to foster interdepartmental collaboration to support the creation of income and employment opportunities for poor rural households engaged in craft-related value chains, such as bamboo, rattan and mulberry. In addition, the boards are responsible for the creation of favorable conditions for the successful implementation of relevant projects and for the provision of policy recommendations and guidance for local economic development.

Lessons learned from the programme encouraged provincial advisory boards already to mobilize sources of provincial funding for up-scaling and replication of programme activities. Following the decision to establish the board in Nghe An province, the provincial authorities developed a decision from the Provincial People’s Committee to develop the bamboo/rattan and sericulture value chains. Objectives include the creation of 5,000 permanent and 8,000 part-time jobs by 2015 and 8,000 permanent and 30,000 part-time jobs by 2020. The decision furthermore aims to generate income of 3.5 million VND/month for regular employees and 2.5 million VND/month for casual labor in 2020.

APPENDICES

Appendix I: Aggregated data of the farmer and craft producers survey

Income develoment

The average income and income structure of the household Sample group in 2009 and 2012

Categories	Bamboo & Rattan				Sericulture				Sea grass				Handmade paper				Lacquer				Average			
	2009		2012		2009		2012		2009		2012		2009		2012		2009		2012		2009		2012	
	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%
Total (VND million/household)	30,2	100%	54,7	100%	26,9	100%	73,9	100%	20,6	100%	47,8	100%	17,1	100%	56,2	100%	34,7	100%	59,1	100%	27,7	100%	58,4	100%
1. Cultivation	6,8	22,5%	10,0	18,3%	5,9	21,9%	10,8	14,6%	3,6	17,5%	9,6	20,1%	4,3	25,1%	8,9	15,8%	5,2	15,0%	4,3	7,3%	5,8	21,0%	9,4	16,1%
2. Livestock	5,3	17,5%	8,2	15,0%	3,0	11,2%	8,0	10,8%	2,0	9,7%	8,5	17,8%	5,1	29,8%	10,1	18,0%	6,5	18,7%	15,1	25,5%	4,5	16,2%	9,1	15,6%
3. Fisheries	0,2	0,7%	0,2	0,4%	0,0	0,0%	0,0	0,0%	0,5	2,4%	0,0	0,0%	0,4	2,3%	0,0	0,0%	4,1	11,8%	0,8	1,4%	0,6	2,2%	0,2	0,3%
4. Forestry	1,0	3,3%	1,7	3,1%	0,1	0,4%	0,2	0,3%	0,0	0,0%	0,0	0,0%	0,6	3,5%	8,3	14,8%	0,3	0,9%	0,6	1,0%	0,6	2,2%	1,6	2,7%
5. Salt cultivation	0,4	1,3%	0,3	0,5%	0,0	0,0%	0,0	0,0%	0,0	0,0%	0,0	0,0%	0,0	0,0%	0,0	0,0%	_	_	_	_	0,2	0,7%	0,1	0,2%
6. Services	0,4	1,3%	2,2	4,0%	3,7	13,8%	10,8	14,6%	0,2	1,0%	4,7	9,8%	0,2	1,2%	2,5	4,4%	0,2	0,6%	5,5	9,3%	1,0	3,6%	4,7	8,0%
7. Surveyed product	3,7	12,3%	4,0	7,3%	4,5	16,7%	19,6	26,5%	6,3	30,6%	6,8	14,2%	0,1	0,6%	0,5	0,9%	10,5	30,3%	20,5	34,7%	4,7	17,0%	9,2	15,8%
8. Other industries	4,1	13,6%	8,3	15,2%	1,8	6,7%	1,9	2,6%	4,2	20,4%	8,8	18,4%	0,4	2,3%	0,8	1,4%	0,3	0,9%	0,2	0,3%	2,9	10,5%	5,5	9,4%
9. Other incomes	8,2	27,2%	19,7	36,0%	8,2	30,5%	22,6	30,6%	3,7	18,0%	9,5	19,9%	6,0	35,1%	25,2	44,8%	7,7	22,2%	12,1	20,5%	7,3	26,4%	18,6	31,8%
No. household	242		242		109		109		68		68		44		44		60		60		523		523	

The average income and income structure of the household Control group in 2009 and 2012

Categories	Bamboo & Rattan				Sericulture				Sea grass				Handmade paper				Lacquer				Average			
	2009		2012		2009		2012		2009		2012		2009		2012		2009		2012		2009		2012	
	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%
Total (VND million/household)	26,6	100%	58,3	100%	24,6	100%	64,6	100%	17,7	100%	31,7	100%	7,9	100%	57,7	100%	29,2	100%	73,6	100%	22,5	100%	52,4	100%
1. Cultivation	6,0	22,6%	6,5	11,1%	5,2	21,1%	10,2	15,8%	2,0	11,3%	2,7	8,5%	2,0	25,3%	5,1	8,8%	4,8	16,6%	4,2	5,7%	4,3	19,1%	5,7	10,9%
2. Livestock	2,4	9,0%	4,3	7,4%	3,0	12,2%	8,0	12,4%	0,9	5,1%	3,7	11,7%	1,4	17,7%	6,2	10,7%	3,2	10,9%	10,6	14,4%	2,1	9,3%	5,4	10,3%
3. Fisheries	0,0	0,0%	0,1	0,2%	0	0,0%	0,3	0,5%	0,0	0,0%	0,2	0,6%	0,0	0,0%	0,0	0,0%	2,7	9,1%	2,4	3,2%	0,3	1,3%	0,3	0,6%
4. Forestry	0,6	2,3%	3,3	5,7%	0	0,0%	0,0	0,0%	0,0	0,0%	0,0	0,0%	0,7	8,9%	8,9	15,4%	0,0	0,0%	0,2	0,2%	0,2	0,8%	1,7	3,2%
5. Salt cultivation	1,2	4,5%	0,6	1,0%	0	0,0%	0,0	0,0%	0,0	0,0%	0,0	0,0%	0,0	0,0%	0,0	0,0%	_	_	_	_	0,4	1,8%	0,2	0,4%
6. Services	2,2	8,3%	1,8	3,1%	2,4	9,8%	13,4	20,7%	0,6	3,4%	3,0	9,5%	0,1	1,3%	5,5	9,5%	4,7	16,0%	2,0	2,7%	1,8	8,0%	4,5	8,6%
7. Surveyed product	3,4	12,8%	0,6	1,0%	0,6	2,4%	5,3	8,2%	6,0	33,9%	5,6	17,7%	0,0	0,0%	0,0	0,0%	6,2	21,3%	26,5	36,0%	3,8	16,9%	5,1	9,7%
8. Other industries	5,5	20,7%	12,7	21,8%	1,3	5,3%	1,7	2,6%	6,5	36,7%	4,8	15,1%	0,0	0,0%	0,5	0,9%	0,0	0,0%	0,0	0,0%	4,4	19,6%	7,6	14,5%
9. Other incomes	5,2	19,5%	28,4	48,7%	12,5	50,8%	25,8	39,9%	1,5	8,5%	11,7	36,9%	3,7	46,8%	31,5	54,6%	7,7	26,2%	27,8	37,8%	5,5	24,4%	22,7	43,3%
No. household	69		69		34		34		59		59		9		9		15		15		186		186	

The average income and income structure of the household Sample group at Thanh Hoa province in 2009 and 2012

Categories	Bamboo & Rattan				Sericulture				Sea grass				Handmade paper				Lacquer				Average			
	2009		2012		2009		2012		2009		2012		2009		2012		2009		2012		2009		2012	
	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%
Total (VND million/household)	26,6	100%	45,1	100%	38,3	100%	120,9	100%	20,6	100%	47,8	100%	_	_	_	_	_	_	_	_	26,8	100%	62,9	100%
1. Cultivation	7,5	28,3%	12,3	27,3%	5,6	14,6%	14,9	12,3%	3,6	17,5%	9,5	19,9%	_	_	_	_	_	_	_	_	5,6	20,9%	11,7	18,6%
2. Livestock	2,8	10,5%	5,1	11,3%	2,8	7,3%	9,6	7,9%	2,0	9,7%	8,5	17,8%	_	_	_	_	_	_	_	_	2,5	9,3%	7,4	11,8%
3. Fisheries	0,3	1,1%	0,1	0,2%	0,0	0,0%	0,0	0,0%	0,5	2,4%	0,0	0,0%	_	_	_	_	_	_	_	_	0,3	1,1%	0,1	0,2%
4. Forestry	2,0	7,5%	1,5	3,3%	0,0	0,0%	0,0	0,0%	0,0	0,0%	0,0	0,0%	_	_	_	_	_	_	_	_	0,8	3,0%	0,6	1,0%
5. Salt cultivation	0,0	0,0%	0,0	0,0%	0,0	0,0%	0,0	0,0%	0,0	0,0%	0,0	0,0%	_	_	_	_	_	_	_	_	0,0	0,0%	0,0	0,0%
6. Services	0,3	1,1%	0,0	0,0%	8,8	23,0%	22,7	18,8%	0,2	1,0%	4,7	9,8%	_	_	_	_	_	_	_	_	2,1	7,8%	8,6	13,7%
7. Surveyed product	3,9	14,7%	3,4	7,5%	11,4	28,8%	45,7	37,8%	6,3	30,6%	6,8	14,2%	_	_	_	_	_	_	_	_	6,5	24,3%	14,1	22,4%
8. Other industries	2,6	9,8%	3,4	7,5%	2,3	6,0%	0,9	0,7%	4,2	20,4%	8,8	18,4%	_	_	_	_	_	_	_	_	3,2	11,9%	5,0	7,9%
9. Other incomes	7,2	27,1%	14,8	32,8%	7,4	19,0%	27,3	22,6%	3,7	18,0%	9,5	19,9%	_	_	_	_	_	_	_	_	5,9	22,0%	15,5	24,6%
No. household	66		66		38		38		68		68		0		0		0		0		172		172	

The average income and incom structure of the household Sample group at Nghe An province in 2009 and 2012

Categories	Bamboo & Rattan				Sericulture				Sea grass				Handmade paper				Lacquer				Average			
	2009		2012		2009		2012		2009		2012		2009		2012		2009		2012		2009		2012	
	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%
Total (VND million/household)	19,8	100%	62,2	100%	23,5	100%	51,0	100%	_	_	_	_	_	_	_	_	_	_	_	_	21,4	100%	57,5	100%
1. Cultivation	5,0	25,3%	8,6	13,8%	6,3	26,8%	8,0	15,7%	_	_	_	_	_	_	_	_	_	_	_	_	5,5	25,7%	8,4	14,6%
2. Livestock	2,9	14,6%	8,4	13,5%	3,5	14,9%	6,6	12,9%	_	_	_	_	_	_	_	_	_	_	_	_	3,2	15,0%	7,6	13,2%
3. Fisheries	0,0	0,0%	0,2	0,3%	0,0	0,0%	0,0	0,0%	_	_	_	_	_	_	_	_	_	_	_	_	0,0	0,0%	0,1	0,2%
4. Forestry	1,4	7,1%	1,5	2,4%	0,3	1,3%	0,0	0,0%	_	_	_	_	_	_	_	_	_	_	_	_	0,9	4,2%	0,9	1,6%
5. Salt cultivation	1,6	8,1%	1,1	1,8%	0,0	0,0%	0,0	0,0%	_	_	_	_	_	_	_	_	_	_	_	_	0,9	4,2%	0,6	1,0%
6. Services	0,2	1,0%	0,2	0,3%	1,3	5,5%	6,1	12,0%	_	_	_	_	_	_	_	_	_	_	_	_	0,7	3,3%	2,7	4,7%
7. Surveyed product	0,5	2,5%	0,8	1,3%	0,1	0,4%	4,9	9,6%	_	_	_	_	_	_	_	_	_	_	_	_	0,3	1%	2,6	5%
8. Other industries	1,1	5,6%	1,7	2,7%	1,9	8,1%	2,6	5,1%	_	_	_	_	_	_	_	_	_	_	_	_	1,5	7,0%	2,1	3,7%
9. Other incomes	7,1	35,9%	39,7	63,8%	10,1	43,0%	22,8	44,7%	_	_	_	_	_	_	_	_	_	_	_	_	8,4	39,3%	32,6	56,7%
No. household	59		59		43		43														102		102	

The average income and income structure of the household Sample group at Hoa Binh provine in 2009 and 2012

Categories	Bamboo & Rattan				Sericulture				Sea grass				Handmade paper				Lacquer				Average			
	2009		2012		2009		2012		2009		2012		2009		2012		2009		2012		2009		2012	
	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%
Total (VND million/household)	49,7	100%	71,2	100%	15,5	100%	33,0	100%	_	_	_	_	17,1	100%	56,2	100%	_	_	_	_	33,4	100%	60,5	100%
1. Cultivation	11,6	23,3%	14,0	19,7%	5,0	32,3%	10,7	32,4%	_	_	_	_	4,3	25,1%	8,8	15,7%	_	_	_	_	8,1	24,3%	11,7	19,3%
2. Livestock	11,6	23,3%	12,9	18,1%	1,5	9,7%	8,9	27,0%	_	_	_	_	5,1	29,8%	10,1	18,0%	_	_	_	_	7,9	23,7%	11,3	18,7%
3. Fisheries	0,0	0,0%	0,0	0,0%	0,0	0,0%	0,2	0,6%	_	_	_	_	0,3	1,8%	0,0	0,0%	_	_	_	_	0,1	0,3%	0,0	0,0%
4. Forestry	0,7	1,4%	3,4	4,8%	0,0	0,0%	1,3	3,9%	_	_	_	_	0,6	3,5%	8,3	14,8%	_	_	_	_	0,6	1,8%	4,8	7,9%
5. Salt cultivation	0,0	0,0%	0,0	0,0%	0,0	0,0%	0,0	0,0%	_	_	_	_	0,0	0,0%	0,0	0,0%	_	_	_	_	0,0	0,0%	0,0	0,0%
6. Services	0,6	1,2%	1,6	2,2%	0,7	4,5%	0,0	0,0%	_	_	_	_	0,2	1,2%	2,5	4,4%	_	_	_	_	0,5	1,5%	1,7	2,8%
7. Surveyed product	6,7	13,5%	7,3	10,3%	3,1	20,0%	7,8	23,6%	_	_	_	_	0,1	0,6%	0,5	0,9%	_	_	_	_	3,9	11,7%	5,0	8,3%
8. Other industries	7,3	14,7%	20,9	29,4%	1,2	7,7%	2,9	8,8%	_	_	_	_	0,4	2,3%	0,8	1,4%	_	_	_	_	4,0	12,0%	11,3	18,7%
9. Other incomes	11,2	22,5%	10,9	15,3%	4,1	26,5%	1,4	4,2%	_	_	_	_	6,0	35,1%	25,2	44,8%	_	_	_	_	8,4	25,1%	14,5	24,0%
No. household	64		64		18		18						44		44						126		126	

The average income and income structure of the household Sample group at Phu Tho province in 2009 and 2012

Categories	Bamboo & Rattan				Sericulture				Sea grass				Handmade paper				Lacquer				Average			
	2009		2012		2009		2012		2009		2012		2009		2012		2009		2012		2009		2012	
	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%
Total (VND million/household)	22,5	100%	38,1	100%	20,7	100%	67,5	100%	_	100%	_	100%	_	100%	_	100%	34,7	100%	59,1	100%	28,3	100%	50,7	100%
1. Cultivation	2,3	10,2%	3,9	10,2%	6,5	31,4%	7,9	11,7%	_	_	_	_	_	_	_	_	5,2	14,9%	4,3	7,3%	4,0	14,1%	4,4	8,7%
2. Livestock	3,6	16,0%	6,3	16,5%	3,6	17,6%	6,2	9,2%	_	_	_	_	_	_	_	_	6,5	18,7%	15,1	25,5%	5,0	17,7%	10,6	20,9%
3. Fisheries	0,3	1,3%	0,5	1,3%	0,0	0,0%	0,0	0,0%	_	_	_	_	_	_	_	_	4,1	11,7%	0,8	1,4%	2,1	7,4%	0,6	1,2%
4. Forestry	0,0	0,0%	0,0	0,0%	0,0	0,0%	0,0	0,0%	_	_	_	_	_	_	_	_	0,3	0,8%	0,6	1,1%	0,1	0,4%	0,3	0,6%
5. Salt cultivation	0,0	0,0%	0,0	0,0%	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	0,0	0,0%	0,0	0,0%
6. Services	0,4	1,8%	2,2	5,8%	0,0	0,0%	5,4	8,0%	_	_	_	_	_	_	_	_	0,2	0,6%	5,5	9,3%	0,3	1,1%	4,0	7,9%
7. Surveyed product	3,4	15,1%	4,3	11,3%	0,2	1,1%	5,3	7,8%	_	_	_	_	_	_	_	_	10,5	30,1%	20,5	34,6%	6,6	23,3%	12,3	24,3%
8. Other industries	5,5	24,4%	6,4	16,8%	1,0	4,8%	0,0	0,0%	_	_	_	_	_	_	_	_	0,3	1,0%	0,2	0,3%	2,6	9,2%	2,8	5,5%
9. Other incomes	7,0	31,0%	14,4	37,8%	9,4	45,1%	42,8	63,3%	_	_	_	_	_	_	_	_	7,7	22,2%	12,1	20,5%	7,5	26,5%	15,6	30,8%
No. household	53		53		10		10										60		60		123		123	

The average income and income structure of female program beneficiaries in 2009 and 2012

Categories	Bamboo & Rattan				Sericulture				Sea-Grasss				Handmade paper				Lacquer				Average			
	2009		2012		2009		2012		2009		2012		2009		2012		2009		2012		2009		2012	
	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%
Total (VND million/household)	30,1	100%	46,0	100%	21,5	100%	52,7	100%	17,1	100%	40,5	100%	16,7	100%	54,2	100%	35,2	100%	61,1	100%	26,5	100%	49,3	100%
1. Cultivation	5,8	19,3%	8,5	18,5%	6,1	28,4%	9,0	17,1%	3,6	21,1%	9,8	24,2%	4,4	26,3%	9,2	17,0%	4,3	12,3%	4,1	6,7%	5,4	20,4%	8,2	16,6%
2. Livestock	5,7	18,9%	7,3	15,9%	2,9	13,5%	7,4	14,0%	0,2	1,2%	3,4	8,4%	5,4	32,3%	9,2	17,0%	5,8	16,5%	14,4	23,5%	4,7	17,7%	7,9	16,0%
3. Fisheries	0,0	0,0%	0,1	0,2%	0,0	0,0%	0,1	0,2%	0,1	0,6%	0,0	0,0%	0,2	1,2%	0,0	0,0%	5,7	16,2%	1,0	1,6%	0,6	2,3%	0,1	0,2%
4. Forestry	0,5	1,7%	1,3	2,8%	0,1	0,5%	0,4	0,8%	0,0	0,0%	0,0	0,0%	0,4	2,4%	8,1	14,9%	0,3	0,7%	0,3	0,5%	0,4	1,5%	1,6	3,2%
5. Salt cultivation	0,5	1,7%	0,3	0,7%	0,0	0,0%	0,0	0,0%	0,0	0,0%	0,0	0,0%	0,0	0,0%	0,0	0,0%	0,0	0,0%	0,0	0,0%	0,2	0,8%	0,2	0,4%
6. Services	0,4	1,3%	0,6	1,3%	0,9	4,2%	6,0	11,4%	0,3	1,8%	0,8	2,0%	0,3	1,8%	2,5	4,6%	0,1	0,2%	6,9	11,3%	0,5	1,9%	2,5	5,1%
7. Surveyed product	4,7	15,6%	5,1	11,1%	1,4	6,5%	7,4	14,0%	7,4	43,3%	8,3	20,5%	0,1	0,6%	0,5	0,9%	9,3	26,5%	18,3	29,9%	4,2	15,8%	6,7	13,6%
8. Other industries	5,1	16,9%	10,3	22,4%	1,5	7,0%	2,4	4,6%	2,4	14,0%	5,9	14,6%	0,3	1,8%	0,8	1,5%	0,0	0,0%	0,3	0,5%	3,1	11,7%	6,3	12,8%
9. Other incomes	7,5	24,9%	12,8	27,8%	8,5	39,5%	20,3	38,5%	3,1	18,1%	12,2	30,1%	5,7	34,1%	23,9	44,1%	9,7	27,6%	15,9	26,0%	7,3	27,5%	15,7	31,8%
No. household	189		189		71		71		29		29		40		40		39		39		368		368	

The average income and income structure of male program beneficiaries in 2009 and 2012

Categories	Bamboo & Rattan				Sericulture				Sea-Grasss				Handmade paper				Lacquer				Average			
	2009		2012		2009		2012		2009		2012		2009		2012		2009		2012		2009		2012	
	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%
Total (VND million/household)	30,23	100%	85,5	100%	37,41	100%	113,4	100%	23,15	100%	52,8	100%	20,9	_	76,3	_	33,9	100%	55,4	100%	30,5	100%	79,9	100%
1. Cultivation	10,68		15,5		5,39		14,2		3,71		9,3		3,8		5,5		6,7		4,6		6,9		11,9	
2. Livestock	3,95		11,8		3,07		9,0		3,42		11,4		3,0		18,5		7,8		16,3		4,1		11,9	
3. Fisheries	0,67		0,7		0,00		0,0		0,80		0,1		0,0		0,0		1,0		0,6		0,6		0,3	
4. Forestry	3,08		3,2		0,00		0,0		0,00		0,0		2,5		10,5		0,3		1,2		1,1		1,5	
5. Salt cultivation	0,13		0,1		0,00		0,0		0,00		0,0		_		_		_		_		0,0		0,0	
6. Services	0,10		7,9		8,76		19,8		0,00		7,6		0,0		2,7		0,5		3,0		2,2		9,9	
7. Surveyed product	0,22		0,1		10,28		42,5		5,54		5,8		0,0		0,0		12,6		24,5		5,7		15,2	
8. Other industries	0,44		1,5		2,46		0,8		5,59		9,2		2,2		1,1		1,0		0,0		2,3		3,1	
9. Other incomes	10,97		44,7		7,40		27,1		4,10		9,4		9,5		38,0		4,0		5,1		7,4		25,9	
No. household	53		53		38		38		39		39		4		4		21		21		155		155	

The average income and income structure of Thai ethnic Sample group in 2009 and 2012

Categories	Bamboo & Rattan				Sericulture				Sea-Grasss				Handmade paper				Lacquer				Average			
	2009		2012		2009		2012		2009		2012		2009		2012		2009		2012		2009		2012	
	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%
Total (VND million/household)	23,0	100%	75,9	100%	22,3	100%	21,3	100%	_	_	_	_	_	_	_	_	_	_	_	_	22,6	100%	52,7	100%
1. Cultivation	8,0	34,6%	10,7	14,1%	7,6	34,1%	7,1	33,3%	_	_	_	_	_	_	_	_	_	_	_	_	7,7	34,1%	9,8	18,6%
2. Livestock	3,3	14,3%	4,4	5,8%	3,8	17,0%	3,7	17,4%	_	_	_	_	_	_	_	_	_	_	_	_	3,6	15,9%	6,0	11,4%
3. Fisheries	0,2	0,8%	0,2	0,3%	0,0	0,0%	0,0	0,0%	_	_	_	_	_	_	_	_	_	_	_	_	0,1	0,4%	0,2	0,4%
4. Forestry	6,2	26,8%	5,5	7,2%	0,3	1,3%	0,3	1,4%	_	_	_	_	_	_	_	_	_	_	_	_	2,4	10,6%	1,9	3,6%
5. Salt cultivation	_	_	_	_	0,0	0,0	0,0	0,0	_	_	_	_	_	_	_	_	_	_	_	_	0,0	0,0%	0,0	0,0%
6. Services	0,0	0,0%	13,6	18,0%	1,3	5,8%	0,2	1,0%	_	_	_	_	_	_	_	_	_	_	_	_	0,8	3,5%	5,0	9,5%
7. Surveyed product	0,0	0,0%	0,0	0,0%	0,1	0,4%	0,8	3,8%	_	_	_	_	_	_	_	_	_	_	_	_	0,1	0,4%	2,2	4,2%
8. Other industries	0,0	0,0%	0,0	0,0%	2,5	11,2%	2,9	13,6%	_	_	_	_	_	_	_	_	_	_	_	_	1,7	7,5%	2,6	4,9%
9. Other incomes	5,4	23,6%	41,5	54,6%	6,7	30,0%	6,3	29,6%	_	_	_	_	_	_	_	_	_	_	_	_	6,2	27,4%	25,1	47,6%
No. household	22		22		41		41														63		63	

The average income and income structure of Muong ethnic Sample group in 2009 and 2012

Categories	Bamboo & Rattan				Sericulture				Sea-Grasss				Handmade paper				Lacquer				Average			
	2009		2012		2009		2012		2009		2012		2009		2012		2009		2012		2009		2012	
	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%
Total (VND million/household)	32,2	100%	73,1	100%	19,13	100%	45,5	100%	_	_	_	_	17,1	100%	56,2	100%	_	100%		1,00	22,9	100%	61,3	100%
1. Cultivation	6,3	19,6%	17,2	23,5%	5,00	26,1%	13,7	30,2%					4,3	25,1%	8,9	15,8%	_	_	_	_	5,1	22,3%	12,4	20,2
2. Livestock	6,1	18,9%	13,1	17,9%	1,02	5,3%	11,1	24,3%					5,1	29,8%	10,1	18,0%	_	_	_	_	5,0	21,8%	11,3	18,4
3. Fisheries	0,1	0,3%	0,1	0,1%	0,00	0,0%	0,0	0,0%					0,3	1,8%	0,0	0,0%	_	_	_	_	0,1	0,4%	0,0	0,0
4. Forestry	1,6	5,0%	3,1	4,2%	0,00	0,0%	2,3	5,0%					0,6	3,5%	8,3	14,8%	_	_	_	_	0,9	3,9%	5,7	9,3
5. Salt cultivation	0,0	0,0%	0,0	0,0%	0,00	0,0%	0,0	0,0%					0,0	0,0%	0,0	0,0%	_	_	_	_	0,0	0,0%	0,0	0,0
6. Services	0,6	1,9%	1,5	2,1%	1,33	7,0%	0,0	0,0%					0,2	1,2%	2,5	4,4%	_	_	_	_	0,5	2,2%	1,9	3,1
7. Surveyed product	5,5	17,1%	6,6	9,0%	6,24	32,6%	15,6	34,3%					0,1	0,6%	0,5	0,9%	_	_	_	_	2,7	11,8%	4,3	7,0
8. Other industries	2,9	9,0%	18,2	24,9%	0,00	0,0%	0,1	0,3%					0,4	2,3%	0,8	1,4%	_	_	_	_	1,3	5,7%	7,2	11,7
9. Other incomes	9,2	28,6%	13,4	18,3%	5,53	28,9%	2,7	5,9%					6,0	35,1%	25,2	44,8%	_	_	_	_	7,1	31,0%	18,4	30,0
No. household	31		31		9		9						44		44						84		84	

Poverty alleviation

The household below the national poverty line in 2009 and 2012

Categories	Bamboo & Rattan		Sericulture		Sea grass		Handmade paper		Lacquer		Average	
	2009	2012	2009	2012	2009	2012	2009	2012	2009	2012	2009	2012
	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value
Sample group: No. of households living below the national poverty line	44	40	15	15	17	6	12	4	3	2	88	65
Percentage of households living below the national poverty line	18,2%	16,5%	13,8%	13,8%	25,0%	8,8%	27,3%	9,1%	5,0%	3,3%	16,8%	12,4%
Total: No. of sample group	242	242	109	109	68	68	44	44	60	60	523	523
Control group: No. of households living below the national poverty line	21	13	3	7	16	17	3	1	2	0	45	38
Percentage of households living below the national poverty line	30,4%	18,8%	8,8%	20,6%	27,1%	28,8%	33,3%	11,1%	13,3%	0,0%	24,2%	20,4%
Total: No. of control group	69	69	34	34	59	59	9	9	15	15	186	186

The household below the national poverty line at province in 2009 and 2012

Categories	Thanh Hóa		Hòa Bình		Phú Thọ		Nghệ An		Total	
	2009	2012	2009	2012	2009	2012	2009	2012	2009	2012
	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value
Sample group: No. of housholds living below the national poverty line	39	24	25	4	11	10	21	31	96	69
Percentage of housholds living below the national poverty line	22,7%	14,0%	19,8%	3,2%	8,9%	8,1%	20,6%	30,4%	18,4%	13,2%
Total: No. of sample group	172	172	126	126	123	123	102	102	523	523
Control group: No. of housholds living below the national poverty line	21	17	4	2	4	5	6	6	35	30
Percentage of housholds living below the national poverty line	21,9%	17,7%	13,8%	6,9%	10,3%	12,8%	27,3%	27,3%	18,8%	16,1%
Total: No. of control group	96	96	29	29	39	39	22	22	186	186

Food safety

Food safety of the household Sample group in 2009 and 2012

Categories	Classified based on the use (% household)											
	Sufficient				Insufficient				Sometime insufficient			
	2009		2012		2009		2012		2009		2012	
	No.	(%)	No.	%	No.	(%)	No.	%	No.	(%)	No.	%
1. Bamboo & Rattan	198	82,2%	211	87,2%	14	5,8%	19	7,9%	29	12,0%	12	5,0%
2. Silk, brocade	90	82,6%	98	89,9%	3	2,8%	3	2,8%	16	14,7%	8	7,3%
3. Sea grass	56	82,4%	55	80,9%	0	0,0%	9	13,2%	12	17,6%	4	5,9%
4. Handmade paper	31	70,5%	37	84,1%	10	22,7%	5	11,4%	3	6,8%	2	4,5%
5. Lacquer	54	90,0%	51	85,0%	5	8,3%	9	15,0%	1	1,7%	0	0,0%
Average	429	82,2%	452	86,4%	32	6,1%	45	8,6%	61	11,7%	26	5,0%

Food safety of the household Control group in 2009 and 2012

Categories	Classified based on the use (% household)											
	Sufficient				Insufficient				Sometime insufficient			
	2009		2012		2009		2012		2009		2012	
	No.	(%)	No.	%	No.	(%)	No.	%	No.	(%)	No.	%
1. Bamboo & Rattan	61	88,4%	62	89,9%	2	2,9%	3	4,3%	6	8,7%	4	5,8%
2. Silk, brocade	28	82,4%	27	79,4%	1	2,9%	5	14,7%	5	14,7%	2	5,9%
3. Sea grass	51	86,4%	33	55,9%	1	1,7%	14	23,7%	7	11,9%	12	20,3%
4. Handmade paper	6	66,7%	8	88,9%	1	11,1%	0	0,0%	2	22,2%	1	11,1%
5. Lacquer	14	93,3%	13	86,7%	0	0,0%	2	13,3%	1	6,7%	0	0,0%
Average	160	86,0%	143	76,9%	5	2,7%	24	12,9	21	11,3%	19	10,2%

Employment

The status employment of the household Sample group in 2009 and 2012

Categories	Form of employment	No. of household hiring labour		Employed					
				Total (people)		Male (%)		Female (%)	
		2009	2012	2009	2012	2009	2012	2009	2012
Average	Full-time employment	19	7	61	23				
	Part-time employment	17	62	129	288				
	Family workers without pay	4	143	7	363				

The status employment of the household Control group in 2009 and 2012

Categories	Form of employment	No. of household hiring labour		Employed					
				Total (people)		Male (%)		Female (%)	
		2009	2012	2009	2012	2009	2012	2009	2012
Average	Full-time employment	6	1	26	1				
	Part-time employment	7	35	320	90				
	Family workers without pay	1	62	2	139				

Saving and loans

Savings and loans of the household Sample group in 2009 and 2012

Value chain	Bank account								Households who borrowed money			
	Account owners				Account owners with savings in bank							
	Craft producers 2009	Raw material prod. 2009	Craft producers 2012	Raw material prod. 2012	Craft producers 2009	Raw material prod. 2009	Craft producers 2012	Raw material prod. 2012	Craft producers 2009	Raw material prod. 2009	Craft producers 2012	Raw material prod. 2012
Average	6	9	16	51	3	7	3	17	180	242	138	199
Total	15		67		10		20		422		337	

The saving and loans of the household Control group in 2009 and 2012

Value chain	Bank account											
	Account owners				Account owners with savings in bank				Households who borrowed money			
	Craft producers 2009	Raw material prod. 2009	Craft producers 2012	Raw material prod. 2012	Craft producers 2009	Raw material prod. 2009	Craft producers 2012	Raw material prod. 2012	Craft producers 2009	Raw material prod. 2009	Craft producers 2012	Raw material prod. 2012
Average	4	7	10	16	1	2	1	4	52	93	20	84
Total	11		26		3		5		145		104	

Participation in networks and organisations

The percentage of the household Sample group that participate in organizations in 2009 and 2012

Name of organisations which households join	Average			
	Craft producers 2009	Raw material prod. 2009	Craft producers 2012	Raw material prod. 2012
The public organizations	41	0	40	0
Cooperative	28	0	73	49
Self-help group	43	14	50	2

The percentage of the household Control group that participate in organizations in 2009 and 2012

Name of organisations which households join	Average			
	Craft producers 2009	Raw material prod. 2009	Craft producers 2012	Raw material prod. 2012
The public organizations	21	0	10	0
Cooperative	12	0	8	17
Self-help group	18	2	4	1

Appendix II: Main Indicators for raw material growers

Income development

The average income and income structure of the household Sample group in 2009 and 2012

Categories	Bamboo & Rattan				Sericulture				Sea grass				Handmade paper				Lacquer				Average			
	2009		2012		2009		2012		2009		2012		2009		2012		2009		2012		2009		2012	
	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%
Total (VND thousand/ household)	27,2	100,0%	71,1	100,0%	20,4	100,0%	73,3	100,0%	16,9	100,0%	45,3	100,0%	18,4	100,0%	53,6	100,0%	34,7	100,0%	59,1	100,0%	25,1	100,0%	64,8	100,0%
1. Cultivation	11,0	40,4%	12,1	17,0%	5,3	25,9%	7,7	10,5%	3,8	22,5%	3,1	6,8%	4,4	24,1%	9,2	17,1%	5,2	14,9%	4,3	7,3%	7,0	27,9%	8,2	12,6%
2. Livestock	3,4	12,6%	10,7	15,1%	2,2	10,7%	6,4	8,7%	0,4	2,6%	5,4	11,8%	6,7	36,6%	12,5	23,3%	6,5	18,7%	15,1	25,5%	3,7	14,8%	10,1	15,6%
3. Fisheries	0,4	1,3%	0,4	0,5%	0,0	0,0%	0,041	0,1%	0,1	0,6%	0,1	0,2%	0,4	2,0%	0,0	0,0%	4,1	11,7%	0,8	1,4%	1,0	4,0%	0,3	0,5%
4. Forestry	2,4	9,0%	2,8	3,9%	0,2	0,8%	0,038	0,1%	0,0	0,0%	0,0	0,0%	0,7	4,0%	4,0	7,5%	0,3	0,8%	0,6	1,1%	1,0	4,0%	1,5	2,3%
6. Services	0,5	1,7%	4,8	6,8%	0,7	3,5%	16,1	22,0%	0,0	0,0%	7,3	16,0%	0,0	0,0%	4,1	7,7%	0,2	0,6%	5,5	9,3%	0,4	1,5%	7,9	12,3%
7. Surveyed product	0,1	0,4%	0,1	0,2%	-0,1	-0,3%	9,4	12,8%	4,8	28,5%	8,9	19,7%	0,0	0,0%	0,0	0,0%	10,5	30,1%	20,5	34,6%	2,7	10,6%	7,5	11,5%
8. Craft	0,2	0,6%	0,8	1,2%	1,2	5,8%	1,7	2,3%	5,5	32,5%	3,8	8,4%	0,7	3,8%	1,3	2,5%	0,3	1,0%	0,2	0,3%	1,1	4,3%	1,3	2,0%
9. Other incomes	9,2	34,0%	39,3	55,3%	10,9	53,3%	32,0	43,7%	2,3	13,3%	16,8	37,1%	5,4	29,4%	22,5	41,9%	7,7	22,2%	12,1	20,5%	8,2	32,7%	28,0	43,3%
No. household	104		104		73		73		32		32		27		27		60		60		296		296	

The average income and income structure of the household Control group in 2009 and 2012

Categories	Bamboo & Rattan				Sericulture				Sea grass				Handmade paper				Lacquer				Average			
	2009		2012		2009		2012		2009		2012		2009		2012		2009		2012		2009		2012	
	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%
Total (VND thousand/ household)	28,2	100%	102,6	100,0%	17,0	100,0%	62,9	100,0%	15,1	100%	33,4	100,0%	9,0	100%	51,2	100%	29,2	100%	73,6	100,0%	19	100%	59	100%
1. Cultivation	12,4	44,2%	8,7	8,5%	4,6	27,1%	7,4	11,7%	1,7	11,0%	1,9	5,7%	2,1	23,3%	3,7	7,3%	4,8	16,6%	4,2	5,7%	4,7	24,1%	4,8	8,2%
2. Livestock	3,1	10,9%	6,3	6,2%	2,6	15,2%	8,1	12,9%	0,8	5,3%	3,2	9,6%	1,8	19,6%	5,1	9,9%	3,2	10,9%	10,6	14,4%	2,0	10,3%	6,0	10,3%
3. Fisheries	0,0	0,0%	0,1	0,1%	0,0	0,0%	0,4	0,6%	0,0	0,0%	0,2	0,5%	0,0	0,0%	0,0	0,0%	2,7	9,1%	2,4	3,2%	0,4	1,8%	0,5	0,8%
4. Forestry	2,3	8,0%	12,1	11,8%	0,0	0,0%	0,0	0,0%	0,0	0,0%	0,0	0,0%	1,0	11,1%	1,3	2,5%	0,0	0,0%	0,2	0,2%	0,4	2,2%	2,1	3,6%
6. Services	4,7	16,7%	6,3	6,2%	0,1	0,8%	14,5	23,1%	0,0	0,0%	3,6	10,7%	0,0	0,0%	8,3	16,3%	4,7	16,0%	2,0	2,7%	1,4	7,5%	6,8	11,6%
7. Surveyed product	0,3	1,0%	0,2	0,2%	0,5	2,9%	0,6	0,9%	5,5	36,5%	5,9	17,5%	0,0	0,0%	0,0	0,0%	6,2	21,3%	26,5	36,0%	3,2	16,6%	6,1	10,4%
8. Craft	1,6	5,8%	2,6	2,6%	0,4	2,4%	0,7	1,1%	5,6	37,2%	4,0	12,0%	0,0	0,0%	0,8	1,6%	0,0	0,0%	0,0	0,0%	2,6	13,6%	3,9	6,6%
9. Other incomes	3,8	13,4%	66,1	64,4%	9,3	54,6%	31,3	49,7%	1,5	10,0%	14,7	44,0%	4,2	46,1%	31,9	62,4%	7,7	26,2%	27,8	37,8%	4,8	24,7%	30,1	51,3%
No. household	19		19		28		28		45		45		6		6		15		15		113		113	

The average income and income structure of the household Sample group at Phu tho province in 2009 and 2012

Categories	Bamboo & Rattan				Sericulture				Sea grass				Handmade paper				Lacquer				Average			
	2009		2012		2009		2012		2009		2012		2009		2012		2009		2012		2009		2012	
	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%
Total (VND thousand/ household)	18,6	100%	50,9	100,0%	20,7	100%	67,5	100%	-	-	-	-	-	-	-	-	34,7	100,0%	59,1	100,0%	29,3	100,0%	58,0	100,0%
1. Cultivation	2,5	13,7%	2,6	5,2%	6,5	31,4%	7,9	11,7%	-	-	-	-	-	-	-	-	5,2	14,9%	4,3	7,3%	4,7	16,0%	4,3	7,4%
2. Livestock	2,8	15,0%	7,8	15,4%	3,6	17,6%	6,2	9,2%	-	-	-	-	-	-	-	-	6,5	18,7%	15,1	25,5%	5,3	18,0%	12,4	21,3%
3. Fisheries	0,8	4,2%	1,0	2,0%	0,0	0,0%	0,0	0,0%	-	-	-	-	-	-	-	-	4,1	11,7%	0,8	1,4%	2,8	9,7%	0,8	1,3%
4. Forestry	0,0	0,0%	0,0	0,0%	0,0	0,0%	0,0	0,0%	-	-	-	-	-	-	-	-	0,3	0,8%	0,6	1,1%	0,2	0,6%	0,4	0,7%
6. Services	1,0	5,4%	5,2	10,2%	0,0	0,0%	5,4	8,0%	-	-	-	-	-	-	-	-	0,2	0,6%	5,5	9,3%	0,4	1,3%	5,4	9,3%
7. Surveyed product	0,0	0,2%	0,0	0,0%	0,2	1,1%	5,3	7,8%	-	-	-	-	-	-	-	-	10,5	30,1%	20,5	34,6%	6,9	23,4%	13,9	24,0%
8. Craft	0,0	0,0%	0,0	0,0%	1,0	4,8%	0,0	0,0%	-	-	-	-	-	-	-	-	0,3	1,0%	0,2	0,3%	0,3	1,1%	0,1	0,2%
9. Other incomes	11,4	61,6%	34,2	67,3%	9,4	45,1%	42,8	63,3%	-	-	-	-	-	-	-	-	7,7	22,2%	12,1	20,5%	8,8	29,9%	20,7	35,7%
No. household	22		22		10		10		0		0		0		0		60		60		92		92	

The average income and income structure of the household Sample group at Hoa Binh province in 2009 and 2012

Categories	Bamboo & Rattan				Sericulture				Sea grass				Handmade paper				Lacquer				Average			
	2009		2012		2009		2012		2009		2012		2009		2012		2009		2012		2009		2012	
	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%
Total (VND thousand/ household)	53,9	100%	67,1	100,0%	11,9	100%	20,5	100%	-	-	-	-	18,4	100,0%	53,6	100,0%	-	-	-	-	26,6	100%	51,1	100%
1. Cultivation	36,9	68,4%	10,5	15,6%	4,9	41,2%	7,6	37,0%	-	-	-	-	4,4	24,1%	9,2	17,1%	-	-	-	-	13,1	49,3%	9,2	18,0%
2. Livestock	2,7	5,1%	19,7	29,3%	2,0	16,8%	6,6	32,3%	-	-	-	-	6,7	36,6%	12,5	23,3%	-	-	-	-	4,8	18,0%	13,3	26,1%
3. Fisheries	0,0	0,0%	0,0	0,0%	0,0	0,0%	0,3	1,6%	-	-	-	-	0,4	2,0%	0,0	0,0%	-	-	-	-	0,2	0,8%	0,1	0,1%
4. Forestry	3,5	6,5%	7,5	11,1%	0,0	0,0%	0,3	1,5%	-	-	-	-	0,7	4,0%	4,0	7,5%	-	-	-	-	1,3	5,0%	4,2	8,3%
6. Services	2,1	3,9%	5,7	8,5%	0,0	0,0%	0,0	0,0%	-	-	-	-	0,0	0,0%	4,1	7,7%	-	-	-	-	0,6	2,1%	3,8	7,4%
7. Surveyed product	0,2	0,3%	0,4	0,6%	0,0	0,0%	0,0	0,0%	-	-	-	-	0,0	0,0%	0,0	0,0%	-	-	-	-	0,0	0,2%	0,1	0,2%
8. Craft	0,6	1,0%	3,2	4,8%	2,3	19,6%	5,6	27,5%	-	-	-	-	0,7	3,8%	1,3	2,5%	-	-	-	-	1,0	3,6%	2,6	5,1%
9. Other incomes	7,9	14,7%	20,1	30,0%	2,7	22,4%	0,0	0,0%	-	-	-	-	5,4	29,4%	22,5	41,9%	-	-	-	-	5,6	21,0%	17,7	34,7%
No. household	13		13		9		9		0		0		27		27		0		0	-				

The average income and income structure of the household Sample group at Thanh Hoa province in 2009 and 2012

Categories	Bamboo & Rattan				Sericulture				Sea grass				Handmade paper				Lacquer				Average			
	2009		2012		2009		2012		2009		2012		2009		2012		2009		2012		2009		2012	
	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%
Total (VND thousand/ household)	37,5	100%	97,9	100%	22,1	100%	121,9	100%	16,9	100%	45,3	100%	-	-	-	-	-	-	-	-	24,0	100%	81,8	100%
1. Cultivation	15,5	41,4%	28,7	29,3%	6,0	27,4%	8,1	6,6%	3,8	22,5%	3,1	6,8%	-	-	-	-	-	-	-	-	7,7	31,9%	11,5	14,1%
2. Livestock	4,6	12,2%	12,3	12,5%	1,3	5,8%	6,3	5,2%	0,4	2,6%	5,4	11,8%	-	-	-	-	-	-	-	-	1,8	7,6%	7,5	9,2%
3. Fisheries	0,9	2,5%	0,4	0,4%	0,0	0,0%	0,0	0,0%	0,1	0,6%	0,1	0,2%	-	-	-	-	-	-	-	-	0,3	1,2%	0,2	0,2%
4. Forestry	6,6	17,7%	5,0	5,1%	0,0	0,0%	0,0	0,0%	0,0	0,0%	0,0	0,0%	-	-	-	-	-	-	-	-	1,8	7,6%	1,4	1,7%
6. Services	0,0	0,0%	15,0	15,3%	2,1	9,7%	41,0	33,6%	0,0	0,0%	7,3	16,0%	-	-	-	-	-	-	-	-	0,6	2,6%	19,1	23,3%
7. Surveyed product	0,0	0,0%	0,0	0,0%	-0,3		21,6	17,7%	4,8	28,5%	8,9	19,7%	-	-	-	-	-	-	-	-	2,0	8,4%	10,1	12,4%
8. Craft	0,0	0,0%	0,0	0,0%	0,0	0,0%	0,0	0,0%	5,5	32,5%	3,8	8,4%	-	-	-	-	-	-	-	-	2,4	10,0%	1,7	2,0%
9. Other incomes	9,8	26,2%	36,6	37,4%	12,9	58,6%	45,0	36,9%	2,3	13,3%	16,8	37,1%	-	-	-	-	-	-	-	-	7,4	30,8%	30,4	37,1%
No. household	20		20		21		21		32		32		0		0		0		0	-				

The average income and income structure of the household Sample group at Nghe An province in 2009 and 2012

Categories	Bamboo & Rattan				Sericulture				Sea grass				Handmade paper				Lacquer				Average			
	2009		2012		2009		2012		2009		2012		2009		2012		2009		2012		2009		2012	
	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%
Total (VND thousand/ household)	19,7	100%	70,2	100%	21,4	100%	58,6	100%	-	-	-	-	-	-	-	-	-	-	-	-	20,4	100%	65,6	100%
1. Cultivation	6,0	30,5%	10,0	14,3%	4,5	21,0%	7,3	12,5%	-	-	-	-	-	-	-	-	-	-	-	-	5,4	26,5%	9,0	13,7%
2. Livestock	3,4	17,3%	9,0	12,8%	2,3	11,0%	6,5	11,0%	-	-	-	-	-	-	-	-	-	-	-	-	3,0	14,6%	8,0	12,2%
3. Fisheries	0,0	0,2%	0,2	0,2%	0,0	0,0%	0,0	0,0%	-	-	-	-	-	-	-	-	-	-	-	-	0,0	0,1%	0,1	0,2%
4. Forestry	1,5	7,7%	1,8	2,6%	0,4	1,7%	0,0	0,0%	-	-	-	-	-	-	-	-	-	-	-	-	1,1	5,2%	1,1	1,7%
6. Services	0,0	0,0%	0,2	0,3%	0,2	1,0%	7,9	13,5%	-	-	-	-	-	-	-	-	-	-	-	-	0,1	0,4%	3,3	5,1%
7. Surveyed product	0,2	0,9%	0,2	0,2%	0,0	0,0%	5,4	9,3%	-	-	-	-	-	-	-	-	-	-	-	-	0,1	0,5%	2,3	3,5%
8. Craft	0,2	1,0%	0,9	1,3%	1,7	7,9%	2,2	3,7%	-	-	-	-	-	-	-	-	-	-	-	-	0,8	3,9%	1,4	2,2%
9. Other incomes	8,3	42,3%	47,8	68,1%	12,2	57,3%	29,3	50,0%	-	-	-	-	-	-	-	-	-	-	-	-	9,9	48,6%	40,4	61,6%
No. household	49		49		33		33		0		0		0		0		0		0	-				

The average income and income structure of female program beneficiaries in 2009 and 2012

Categories	Bamboo & Rattan				Sericulture				Sea grass				Handmade paper				Lacquer				Average			
	2009		2012		2009		2012		2009		2012		2009		2012		2009		2012		2009		2012	
	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%
Total (VND thousand/ household)	23,6	100%	54,5	100,0%	19,9	100%	59,2	100%	20,14	100%	43,70	100%	17,9	100,0%	49,7	100,0%	35,17	100%	61,10	100%	24,1	100%	55,9	100%
1. Cultivation	10,9	46,0%	8,4	15,4%	5,1	25,8%	7,8	13,2%	6,52	32,4%	5,08	11,6%	4,5	25,3%	9,8	19,7%	4,33	12,3%	4,11	6,7%	6,7	27,7%	7,2	12,9%
2. Livestock	2,8	11,8%	9,2	16,9%	2,4	11,9%	7,0	11,7%	0,33	1,7%	4,93	11,3%	7,4	41,1%	11,4	23,0%	5,79	16,5%	14,38	23,5%	3,8	15,6%	9,7	17,3%
3. Fisheries	0,04	0,2%	0,1	0,1%	0,0	0,0%	0,1	0,1%	0,17	0,8%	0,00	0,0%	0,4	2,4%	0,0	0,0%	5,69	16,2%	0,97	1,6%	1,3	5,5%	0,3	0,5%
4. Forestry	1,7	7,0%	2,3	4,2%	0,2	1,2%	0,1	0,1%	0,00	0,0%	0,00	0,0%	0,4	2,4%	2,9	5,8%	0,26	0,7%	0,33	0,5%	0,7	2,8%	1,1	2,0%
6. Services	0,8	3,4%	1,5	2,8%	0,1	0,7%	8,3	14,0%	0,00	0,0%	0,88	2,0%	0,0	0,0%	4,4	8,8%	0,08	0,2%	6,88	11,3%	0,3	1,2%	5,0	8,9%
7. Surveyed product	0,2	0,7%	0,3	0,5%	0,2	1,0%	6,3	10,6%	5,84	29,0%	9,39	21,5%	0,0	0,0%		0,0%	9,31	26,5%	18,27	29,9%	2,5	10,5%	6,5	11,6%
8. Craft	0,1	0,6%	0,3	0,6%	1,6	8,0%	2,3	3,8%	4,30	21,3%	2,08	4,8%	0,5	2,5%	1,4	2,8%	0,00	0,0%	0,29	0,5%	0,8	3,5%	1,1	2,0%
9. Other incomes	7,2	30,4%	32,4	59,5%	10,3	51,5%	27,5	46,4%	2,99	14,8%	21,35	48,9%	4,7	26,2%	19,8	39,8%	9,71	27,6%	15,87	26,0%	8,0	33,2%	25,0	44,7%
No. household	53		53		51		51		12		12		23		23		39		39		178		178	

The average income and income structure of male program beneficiaries in 2009 and 2012

Categories	Bamboo & Rattan				Sericulture				Sea grass				Handmade paper				Lacquer				Average			
	2009		2012		2009		2012		2009		2012		2009		2012		2009		2012		2009		2012	
	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%
Total (VND thousand/ household)	30,9	100%	88,3	100,0%	21,2	100%	106,1	100%	14,98	100%	46,34	100%	20,9	100,0%	76,3	100,0%	33,89	100%	55,38	100%	26,6	100%	78,3	100%
1. Cultivation	11,1	35,9%	16,0	18,1%	5,6	26,4%	7,3	6,9%	2,18	14,6%	1,86	4,0%	3,8	17,9%	5,5	7,3%	6,74	19,9%	4,65	8,4%	7,5	28,3%	9,6	12,3%
2. Livestock	4,1	13,2%	12,3	13,9%	1,7	8,2%	5,1	4,8%	0,50	3,4%	5,63	12,1%	3,0	14,4%	18,5	24,3%	7,78	23,0%	16,34	29,5%	3,7	13,8%	10,8	13,7%
3. Fisheries	0,7	2,3%	0,7	0,8%	0,0	0,0%	0,0	0,0%	0,05	0,3%	0,14	0,3%	0,0	0,0%	0,0	0,0%	1,05	3,1%	0,56	1,0%	0,5	1,9%	0,4	0,5%
4. Forestry	3,2	10,5%	3,3	3,7%	0,0	0,0%	0,0	0,0%	0,00	0,0%	0,00	0,0%	2,5	12,0%	10,5	13,8%	0,29	0,8%	1,20	2,2%	1,5	5,8%	2,0	2,5%
6. Services	0,1	0,5%	8,2	9,3%	2,0	9,7%	34,2	32,2%	0,00	0,0%	11,08	23,9%	0,0	0,0%	2,7	3,5%	0,48	1,4%	3,00	5,4%	0,5	2,0%	12,4	15,9%
7. Surveyed product	0,1	0,3%	0,0	0,0%	-0,8	-3,6%	16,6	15,6%	4,22	28,1%	8,68	18,7%	0,0	0,0%		0,0%	12,60	37,2%	24,55	44,3%	2,8	10,7%	8,9	11,4%
8. Craft	0,2	0,6%	1,4	1,6%	0,3	1,3%	0,3	0,3%	6,22	41,5%	4,86	10,5%	2,2	10,3%	1,1	1,4%	0,95	2,8%	0,00	0,0%	1,4	5,4%	1,5	1,9%
9. Other incomes	11,4	36,9%	46,5	52,7%	12,3	58,1%	42,7	40,2%	1,81	12,1%	14,09	30,4%	9,5	45,5%	38,0	49,7%	4,00	11,8%	5,09	9,2%	8,6	32,2%	32,6	41,7%
No. household	51		51		22		22		20		20		4		4		21		21					

The average income and income structure of Thai ethnic Sample group in 2009 and 2012

Categories	Bamboo & Rattan				Sericulture				Sea grass				Handmade paper				Lacquer				Average			
	2009		2012		2009		2012		2009		2012		2009		2012		2009		2012		2009		2012	
	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%
Total (VND thousand/ household)	23,0	100%	75,9	100,0%	19,8	100%	45,0	100%	-	-	-	-	-	-	-	-	-	-	-	-	21,1	100%	57,8	100%
1. Cultivation	8,0	34,6%	10,7	14,1%	6,1	31,1%	9,1	20,3%	-	-	-	-	-	-	-	-	-	-	-	-	6,9	32,7%	9,8	16,9%
2. Livestock	3,3	14,3%	4,4	5,8%	2,7	13,7%	6,9	15,3%	-	-	-	-	-	-	-	-	-	-	-	-	2,9	13,9%	5,8	10,1%
3. Fisheries	0,2	0,8%	0,2	0,3%	0,0	0,0%	0,1	0,2%	-	-	-	-	-	-	-	-	-	-	-	-	0,1	0,4%	0,2	0,3%
4. Forestry	6,2	26,8%	5,5	7,2%	0,4	2,0%	0,1	0,2%	-	-	-	-	-	-	-	-	-	-	-	-	2,8	13,2%	2,3	4,0%
6. Services	0,0	0,0%	13,6	18,0%	0,2	1,1%	0,4	0,9%	-	-	-	-	-	-	-	-	-	-	-	-	0,1	0,6%	5,9	10,2%
7. Surveyed product	0,0	0,0%	0,0	0,0%	0,0	0,0%	3,4	7,6%	-	-	-	-	-	-	-	-	-	-	-	-	0,0	0,0%	2,0	3,5%
8. Craft	0,0	0,0%	0,0	0,0%	2,5	12,6%	3,9	8,7%	-	-	-	-	-	-	-	-	-	-	-	-	1,5	6,9%	2,3	4,0%
9. Other incomes	5,4	23,6%	41,5	54,6%	7,8	39,5%	21,0	46,8%	-	-	-	-	-	-	-	-	-	-	-	-	6,8	32,3%	29,5	51,1%
No. household	22		22		31		31		-	-	-	-	-	-	-	-	-	-	-	-	53		53,0	

The average income and income structure of Muong ethnic Sample group in 2009 and 2012

Categories	Bamboo & Rattan				Sericulture				Sea grass				Handmade paper				Lacquer				Average			
	2009		2012		2009		2012		2009		2012		2009		2012		2009		2012		2009		2012	
	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%
Total (VND thousand/ household)	25,5	100%	85,1	100,0%	-	-	-	-	-	-	-	-	18,4	100,0%	53,6	100,0%	-	-	-	-	20,30	100,0%	62,13	100,0%
1. Cultivation	9,9	39,0%	22,5	26,4%	-	-	-	-	-	-	-	-	4,4	24,1%	9,2	17,1%	-	-	-	-	5,91	29,1%	12,75	20,5%
2. Livestock	3,2	12,4%	24,3	28,6%	-	-	-	-	-	-	-	-	6,7	36,6%	12,5	23,3%	-	-	-	-	5,76	28,4%	15,69	25,3%
3. Fisheries	0,2	0,8%	0,3	0,4%	-	-	-	-	-	-	-	-	0,4	2,0%	0,0	0,0%	-	-	-	-	0,32	1,6%	0,09	0,1%
4. Forestry	4,9	19,2%	9,3	10,9%	-	-	-	-	-	-	-	-	0,7	4,0%	4,0	7,5%	-	-	-	-	1,85	9,1%	5,44	8,8%
6. Services	2,0	7,9%	2,4	2,8%	-	-	-	-	-	-	-	-	0,0	0,0%	4,1	7,7%	-	-	-	-	0,54	2,7%	3,67	5,9%
7. Surveyed product	0,0	0,0%	0,6	0,7%	-	-	-	-	-	-	-	-	0,0	0,0%			-	-	-	-	0,00	0,0%	0,15	0,2%
8. Craft	0,0	0,0%	2,4	2,8%	-	-	-	-	-	-	-	-	0,7	3,8%	1,3	2,5%	-	-	-	-	0,52	2,5%	1,62	2,6%
9. Other incomes	5,3	20,9%	23,4	27,5%	-	-	-	-	-	-	-	-	5,4	29,4%	22,5	41,9%	-	-	-	-	5,39	26,5%	22,72	36,6%
No. household	10		10		-	-	-	-	-	-	-	-	27		27		-	-	-	-				

Food safety

Food safety of the household Sample group in 2009 and 2012

Categories	Classified based on the use (% household)											
	Sufficient				Insufficient				Sometime insufficient			
	2009		2012		2009		2012		2009		2012	
	No.	(%)	No.	%	No.	(%)	No.	%	No.	(%)	No.	%
1. Bamboo & Rattan	87	83,7%	73	70,2%	6	5,8%	19	18,3%	10	9,6%	12	11,5%
2. Silk, brocade	59	80,8%	67	91,8%	3	4,1%	2	2,7%	11	15,1%	4	5,5%
3. Seagrass	30	93,8%	20	62,5%	0	0,0%	9	28,1%	2	6,3%	3	9,4%
4. Handmade paper	15	55,6%	20	74,1%	10	37,0%	5	18,5%	2	7,4%	2	7,4%
5. Lacquer	54	90,0%	51	85,0%	5	8,3%	9	15,0%	1	1,7%	0	0,0%
Average	245	83,9%	231	79,4%	24	8,1%	44	14,9%	26	8,8%	21	7,1%

Food safety of the household Control group in 2009 and 2012

Categories	Classified based on the use (% household)											
	Sufficient				Insufficient				Sometime insufficient			
	2009		2012		2009		2012		2009		2012	
	No.	(%)	No.	%	No.	(%)	No.	%	No.	(%)	No.	%
1. Bamboo & Rattan	17	89,5%	14	73,7%	2	73,7%	3	15,8%	0	0,0%	2	10,5%
2. Silk, brocade	23	82,1%	22	78,6%	1	78,6%	5	17,9%	4	14,3%	1	3,6%
3. Seagrass	40	88,9%	23	51,1%	1	51,1%	14	31,1%	4	8,9%	8	17,8%
4. Handmade paper	3	50,0%	5	83,3%	1	83,3%	0	0,0%	2	33,3%	1	16,7%
5. Lacquer	14	93,3%	13	86,7%	0	86,7%	2	13,3%	1	6,7%	0	0,0%
Average	97	86,8%	77	71,2%	5	72,1%	24	21,2%	11	9,7%	12	10,6%

Poverty alleviation

The household below the national poverty line in 2009 and 2012

Categories	Bamboo & Rattan		Sericulture		Sea grass		Handmade paper		Lacquer		Total	
	2009	2012	2009	2012	2009	2012	2009	2012	2009	2012	2009	2012
	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value
Sample group: No. of households living below the national poverty line	29	29	15	19	13	10	9	6	3	2	69	66
Total: No. of sample group	104	104	73	73	32	32	27	27	60	60	296	296
Percentage of households living below the national poverty line	27,88%	27,88%	20,55%	26,03%	40,63%	31,25%	33,33%	22,22%	5,00%	3,33%	23,31%	22,30%
Control group: No. of households living below the national poverty line	4	6	3	8	18	20	3	1	2	0	30	35
Total: No. of control group	19	19	28	28	45	45	6	6	15	15	113	113
Percentage of households living below the national poverty line	21,05%	31,58%	10,71%	28,57%	40,00%	44,44%	50,00%	16,67%	13,33%	0,00%	26,5%	31,0%

Percentage % = No of the poor by value chains / Total households (control/sample) by value chains

The household below the national poverty line at province in 2009 and 2012

Categories	Thanh Hóa		Hòa Bình		Phú Thọ		Nghệ An		Total	
	2009	2012	2009	2012	2009	2012	2009	2012	2009	2012
	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value
Sample group: No. of housholds living below the national poverty line	18	11	17	10	10	10	24	35	69	66
Total: No.of sample group	73	73	49	49	92	92	82	82	296	296
Percentage of housholds living below the national poverty line	24,66%	15,07%	34,69%	20,41%	10,87%	10,87%	29,27%	42,68%	23,31%	22,30%
Control group: No. of housholds living below the national poverty line	18	20	4	3	4	6	4	6	30	35
Total: No.of control group	52	52	16	16	33	33	12	12	113	113
Percentage of housholds living below the national poverty line	34,62%	38,46%	25,00%	18,75%	12,12%	18,18%	33,33%	50,00%	26,55%	30,97%

Percentage % = No of the poor by provinces / Total households (control/sample) by provinces

Saving and loans

The saving and loans of the household Sample group in 2009 and 2012

No.	Value chain	Bank account							
		Account owners				Account owners with savings in bank			
		2009	%	2012	%	2009	%	2012	%
1	**Bamboo & Rattan**	4	3,7%	27	26,7%	2	1,9%	3	3,0%
2	**Silk, brocade**	2	2,7%	9	12,0%	1	1,4%	6	8,0%
3	**Sea grass**	2	5,9%	3	9,4%	0	0,0%	0	0,0%
4	**Handmade paper**	0	0,0%	5	18,5%	0	0,0%	3	11,1%
5	**Lacquer**	1	1,7%	7	11,7%	4	6,7%	5	8,3%
	Average	9	2,9%	51	17,4%	7	2,3%	17	5,7%

The saving and loans of the household Control group in 2009 and 2012

No.	Value chain	Bank account							
		Account owners				Account owners with savings in bank			
		2009	%	2012	%	2009	%	2012	%
1	**Bamboo & Rattan**	2	10,5%	5	26,3%	1	5,3%	2	10,5%
2	**Silk, brocade**	0	0,0%	2	7,1%	0	0,0%	1	3,6%
3	**Sea grass**	3	6,5%	7	15,6%	0	0,0%	0	0,0%
4	**Handmade paper**	0	0,0%	1	16,7%	0	0,0%	1	16,7%
5	**Lacquer**	2	13,3%	1	6,7%	1	6,7%	0	0,0%
	Average	7	6,1%	16	14,2%	2	1,8%	4	3,5%

Loans by value chain

The households have loans in 2009 and 2012

Catagories	**Bamboo & Rattan**				**Silk**				**Sea grass**				**Handmade paper**				**Lacquer**				**Average**			
	2009	%	2012	%	2009	%	2012	%	2009	%	2012	%	2009	%	2012	%	2009	%	2012	%	2009	%	2012	%
Households who borrowed money - Sample group	88	84,6	72	69,2	61	83,6	62	84,9	28	87,5	23	71,9	22	81,5	8	29,6	43	71,7	34	56,7	242	81,8	199	67,2
Households who borrowed money - Control group	17	89,5	15	78,9	21	75	19	67,9	39	86,7	40	88,9	5	83,3	1	16,7	11	73,3	9	60	93	82,3	84	74,3

Number of seedlings planted +Area

Categories	**Bamboo & Rattan**		**Silk**		**Sea grass**		**Handmade paper**		**Lacquer**		**Average**	
	2009	2012	2009	2012	2009	2012	2009	2012	2009	2012	2009	2012
Average area per household sample group (ha)	2,31	2,13	0,55	1,13	0,37	0,38	1,56	1,59	1,42	1,4	1,42	1,5
Average area per household control group (ha)	1,76	1,5	0,27	0,3	0,47	0,36	1,03	1,17	1,08	0,84	0,75	0,64
Number of seedlings planted 2010-2012 sample group		1413,6		2155,5		1005		1579		662,7		1332
Number of seedlings planted 2010-2012 control group		750		0						496,7		497,2

Employment

The status employment of the household Sample group in 2009 and 2012

Categories	Form of employment	No. of household hiring labour		Employed					
				Total		Male %		Female %	
		2009	2012	2009	2012	2009	2012	2009	2012
Bamboo & Rattan	Full-time employment	8	0	27	0	-	0,0%	-	0,0%
	Part-time employment	2	8	13	35	-	42,9%	-	57,1%
	Family workers without pay	0	13	0	39	-	53,8%	-	46,2%
Silk, brocade	Full-time employment	1	2	5	4	-	0,0%	-	100,0%
	Part-time employment	1	15	4	127	-	4,7%	-	95,3%
	Family workers without pay	1	25	2	66	-	40,9%	-	59,1%
Sea grass	Full-time employment	0	0	0	0	-	0,0%	-	0,0%
	Part-time employment	0	16	0	47	-	46,8%	-	53,2%
	Family workers without pay	0	29	0	68	-	51,5%	-	48,5%
Handmade paper	Full-time employment	0	1	0	12	-	0,0%	-	100,0%
	Part-time employment	1	1	1	8	-	0,0%	-	100,0%
	Family workers without pay	1	7	2	26	-	53,8%	-	46,2%
Lacquer	Full-time employment	1	0	2	0	--	0,0%	-	0,0%
	Part-time employment	3	10	7	21	-	38,1%	-	61,9%
	Family workers without pay	0	58	0	136	-	48,5%	-	51,5%
Average/Total	Full-time employment	10	3	34	16	-	0,0%	-	100,0%
	Part-time employment	7	50	25	238	-	29,3%	-	69,7%
	Family workers without pay	2	132	4	335	-	48,5%	-	51,5%

The status employment of the household Control group in 2009 and 2012

Categories	Form of employment	No. of household hiring labour		Employed					
				Total		Male %		Female %	
		2009	2012	2009	2012	2009	2012	2009	2012
Bamboo & Rattan	Full-time employment	4	0	22	0	-	.	-	.
	Part-time employment	1	1	5	15	-	33,3%	-	66,7%
	Family workers without pay	0	0	0	0	-	.	-	.
Silk, brocade	Full-time employment	0	0	0	0	-	.	-	.
	Part-time employment	2	1	3	1	-	0,0%	-	100,0%
	Family workers without pay	0	2	0	5	-	40,0%	-	60,0%
Sea grass	Full-time employment	0	0	0	0	-	.	-	.
	Part-time employment	0	27	0	58	-	37,9%	-	62,1%
	Family workers without pay	0	43	0	95	-	46,3%	-	54,7%
Handmade paper	Full-time employment	0	0	0	0	-	.	-	.
	Part-time employment	0	0	0	0	-	.	-	.
	Family workers without pay	0	3	0	8	-	50,0%	-	50,0%
Lacquer	Full-time employment	1	0	3	0	-	.	-	.
	Part-time employment	2	2	8	6	-	33,3%	-	66,7%
	Family workers without pay	0	13	0	29	-	41,4%	-	55,2%
Average	Full-time employment	5	0	25	0	-	.	-	.
	Part-time employment	5	31	16	80	-	36,3%	-	63,7%
	Family workers without pay	0	61	0	137	-	45,2%	-	54,8%

The percentage of the household Sample group that participate in organizations in 2009 and 2012

Name of organisations which households join	Trade Sector											
	Bamboo & Rattan		Silk		Sea grass		Handmade paper		Lacquer		Average	
	2009	2012	2009	2012	2009	2012	2009	2012	2009	2012	2009	2012
Total of surveyed household	1	17		28		6	13	1		2	14	54
Chamber of commerce; local or national	0	0	0	0	0	0	0	0	0	1	0	1
Mass organization	0	0	0	0	0	0	0	0	0	0	0	0
Cooperative	0	15	0	28	0	6	0	0	0	0	0	49
Self-help group	1	1	0	0	0	0	13	1	0	0	14	2
other	0	4	0	0	0	0	0	0	0	1	0	5
No Join in any organization	103	87	73	45	32	26	14	26	60	58	282	242

The percentage of the household Control group that participate in organizations in 2009 and 2012

Name of organisations which households join	Trade Sector											
	Bamboo & Rattan		Silk		Sea grass		Handmade paper		Lacquer		Average	
	2009	2012	2009	2012	2009	2012	2009	2012	2009	2012	2009	2012
Total of surveyed household	0	5	0	2	0	14	2	0	0	0	2	21
Chamber of commerce; local or national	0	0	0	0	0	0	0	0	0	0	0	0
Mass organization	0	0	0	0	0	0	0	0	0	0	0	0
Cooperative	0	1	0	2	0	14	0	0	0	0	0	17
Self-help group	0	1	0	0	0	0	2	0	0	0	2	1
other	0	4	0	0	0	0	0	0	0	0	0	4
No Join in any organization	19	14	28	26	45	31	4	6	15	15	111	92

Appendix III: Main Indicators for craft producing households

Income development

The average income and income structure of the household Sample group in 2009 and 2012

Categories	Bamboo & Rattan				Sericulture				Sea grass				Handmade paper				Average			
	2009		2012		2009		2012		2009		2012		2009		2012		2009		2012	
	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%
Total (VND million/household)	32,4	100%	42,3	100%	40,7	100%	75,0	100%	23,8	100%	50,1	100%	15,1	100%	60,4	100%	31,1	100%	50,1	100%
1. Cultivation	3,7	11,5%	8,4	19,9%	7,0	17,2%	17,2	22,9%	3,5	14,8%	15,2	30%	4,1	27,5%	8,3	13,7%	4,2	13,6%	10,9	21,7%
2. Livestock	6,8	20,9%	6,4	15,0%	4,5	11,0%	11,1	14,8%	3,5	14,5%	11,2	22%	2,6	17,3%	6,3	10,5%	5,6	17,9%	7,9	15,7%
3. Fisheries	0,0	0,0%	0,1	0,1%	0,0	0,0%	0,0	0,0%	0,8	3,5%	0,0	0%	0,0	0,2%	0,0	0,0%	0,1	0,4%	0,0	0,1%
4. Forestry	0,0	0,0%	0,9	2,1%	0,0	0,0%	0,6	0,8%	0,0	0,0%	0,0	0%	0,4	2,9%	15,2	25,1%	0,0	0,1%	1,8	3,5%
5. Salt cultivation	0,7	2,1%	0,5	1,1%	0,0	0,0%	0,0	0,0%	0,0	0,0%	0,0	0%	0,0	0,0%	0,0	0,0%	0,4	1,3%	0,3	0,6%
6. Services	0,3	0,9%	0,2	0,4%	9,7	23,8%	0,0	0,0%	0,3	1,2%	2,4	5%	0,6	3,9%	0,0	0,0%	1,8	5,8%	0,5	1,0%
7. Surveyed product	6,4	19,8%	6,9	16,4%	13,8	34,0%	40,4	53,9%	7,7	32,4%	5,0	10%	0,2	1,6%	1,2	1,9%	7,3	23,6%	11,5	23,0%
8. Other industries	7,1	21,9%	14,0	33,1%	3,1	7,7%	2,2	2,9%	3,1	13,0%	13,2	26%	0,0	0,0%	0,0	0,0%	5,3	17,1%	11,0	21,9%
9. Other incomes	7,4	23,0%	5,0	11,9%	2,6	6,3%	3,6	4,8%	4,9	20,6%	3,1	6%	7,0	46,5%	29,4	48,7%	6,2	20,1%	6,3	12,6%
No. Household	138		138		36		36		36		36		17		17		227		227	

The average income and income structure of the household Control group in 2009 and 2012

Categories	Bamboo & Rattan				Sericulture				Sea grass				Handmade paper				Average			
	2009		2012		2009		2012		2009		2012		2009		2012		2009		2012	
	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%
Total (VND million/household)	26,0	100%	41,5	100%	60,3	100%	72,6	100%	26,0	100%	26,1	100%	5,6	100%	70,83	100%	28,0	100%	42,3	100%
1. Cultivation	3,5	13,3%	5,6	13,6%	7,9	13,1%	23,3	32,1%	3,1	12,1%	5,4	20,8%	1,8	32,9%	7,8	11,0%	3,7	13,2%	7,1	17%
2. Livestock	2,2	8,7%	3,5	8,5%	5,1	8,4%	7,4	10,2%	1,1	4,1%	5,2	20,0%	0,7	13,4%	8,4	11,9%	2,2	7,8%	4,4	10%
3. Fisheries	0,0	0,0%	0,1	0,3%	0,0	0,0%	0,0	0,0%	0,2	0,8%	0,0	0,0%	0,1	1,4%	0,0	0,0%	0,0	0,2%	0,1	0%
4. Forestry	0,0	0,0%	0,0	0,0%	0,0	0,0%	0,0	0,0%	0,0	0,0%	0,0	0,0%	0,0	0,0%	24,0	33,9%	0,0	0,0%	1,0	2%
5. Salt cultivation	1,7	6,4%	0,8	2,0%	0,0	0,0%	0,0	0,0%	0,0	0,0%	0,0	0,0%	0,0	0,0%	0,0	0,0%	1,1	4,1%	0,6	1%
6. Services	1,3	5,0%	0,1	0,2%	13,3	22,1%	8,3	11,5%	2,6	9,9%	1,1	4,4%	0,3	4,5%	0,0	0,0%	2,5	8,9%	1,0	2%
7. Surveyed product	4,6	17,6%	0,7	1,6%	1,0	1,7%	27,0	37,2%	7,7	29,7%	4,8	18,3%	0,0	0,0%	0,00	0,0%	4,7	16,8%	3,6	9%
8. Other industries	7,0	26,7%	16,5	39,9%	5,7	9,4%	6,5	9,0%	9,6	36,8%	7,3	28,1%	0,0	0,0%	0,0	0,0%	7,1	25,2%	13,3	31%
9. Other incomes	5,8	22,4%	14,1	33,9%	27,3	45,3%	0,0	0,0%	1,7	6,6%	2,2	8,5%	2,7	47,8%	30,7	43,3%	6,7	23,8%	11,3	27%
No. household	50		50		6		6		14		14		3		3		73		73	

The average income and income structure of the household Sample group at Thanh Hoa province in 2009 and 2012

Categories	Bamboo & Rattan				Sericulture				Sea grass				Handmade paper				Average			
	2009		2012		2009		2012		2009		2012		2009		2012		2009		2012	
	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%
Total (VND million/household)	21,9	100%	22,1	100%	58,2	100%	119,6	100%	23,8	100%	50,1	100%	_	_	_	_	28,8	100%	49,0	100%
1. Cultivation	4,0	18,3%	5,1	23,2%	5,0	8,6%	23,2	19,4%	3,5	14,8%	15,2	30,3%	_	_	_	_	4,0	13,9%	11,9	24,2%
2. Livestock	2,0	8,9%	1,9	8,6%	4,7	8,0%	13,6	11,4%	3,5	14,5%	11,2	22,4%	_	_	_	_	3,0	10,3%	7,3	14,9%
3. Fisheries	0,0	0,0%	0,0	0,0%	0,0	0,0%	0,0	0,0%	0,8	3,5%	0,0	0,0%	_	_	_	_	0,3	1,1%	0,0	0,0%
4. Forestry	0,0	0,0%	0,0	0,0%	0,0	0,0%	0,0	0,0%	0,0	0,0%	0,0	0,0%	_	_	_	_	0,0	0,0%	0,0	0,0%
5. Salt cultivation	0,0	0,0%	0,0	0,0%	0,0	0,0%	0,0	0,0%	0,0	0,0%	0,0	0,0%	_	_	_	_	0,0	0,0%	0,0	0,0%
6. Services	0,5	2,2%	0,0	0,0%	17,0	29,2%	0,0	0,0%	0,3	1,2%	2,4	4,7%	_	_	_	_	3,2	11,2%	0,9	1,8%
7. Surveyed product	5,6	25,7%	4,9	22,1%	25,8	44,3%	75,4	63,0%	7,7	32,4%	5,0	10,0%	_	_	_	_	9,8	34,1%	17,0	34,8%
8. Other industries	3,7	17,1%	4,9	22,2%	5,1	8,8%	2,1	1,8%	3,1	13,0%	13,2	26,4%	_	_	_	_	3,7	13,0%	7,5	15,2%
9. Other incomes	6,1	27,9%	5,3	23,9%	0,6	1,1%	5,4	4,5%	4,9	20,6%	3,1	6,2%	_	_	_	_	4,7	16,4%	4,5	9,2%
No. household	46		46		17		17		36		36						99		99	

The average income and income structure of the household Sample group at Nghe An province in 2009 and 2012

Categories	Bamboo & Rattan				Sericulture				Sea grass				Handmade paper				Average			
	2009		2012		2009		2012		2009		2012		2009		2012		2009		2012	
	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%
Total (VND million/household)	20,2	100%	23,2	100%	30,4	100%	25,9	100%	_	_	_	_	_	_	_	_	25,3	100%	24,5	100%
1. Cultivation	0,0	0,0%	1,7	7,1%	12,2	40,2%	10,1	39,0%	_	_	_	_	_	_	_	_	6,1	24,1%	5,9	24,0%
2. Livestock	0,6	3,0%	5,6	24,2%	7,3	24,1%	6,8	26,2%	_	_	_	_	_	_	_	_	4,0	15,6%	6,2	25,3%
3. Fisheries	0,0	0,0%	0,0	0,0%	0,0	0,0%	0,0	0,0%	_	_	_	_	_	_	_	_	0,0	0,0%	0,0	0,0%
4. Forestry	0,0	0,0%	0,0	0,0%	0,0	0,0%	0,0	0,0%	_	_	_	_	_	_	_	_	0,0	0,0%	0,0	0,0%
5. Salt cultivation	9,4	46,7%	6,4	27,4%	0,0	0,0%	0,0	0,0%	_	_	_	_	_	_	_	_	4,7	18,7%	3,2	12,9%
6. Services	1,1	5,3%	0,0	0,0%	4,8	15,8%	0,0	0,0%	_	_	_	_	_	_	_	_	2,9	11,6%	0,0	0,0%
7. Surveyed product	1,9	9,6%	3,9	16,8%	0,3	1,1%	3,4	13,2%	_	_	_	_	_	_	_	_	1,1	4%	3,7	15%
8. Other industries	5,7	28,2%	5,7	24,4%	2,6	8,4%	4,1	15,8%	_	_	_	_	_	_	_	_	4,1	16,3%	4,9	19,9%
9. Other incomes	1,5	7,2%	0,0	0,0%	3,2	10,5%	1,5	5,8%	_	_	_	_	_	_	_	_	2,3	9,2%	0,8	3,1%
No. household	10		10		10		10										20		20	

The average income and income structure of the household Sample group at Hoa Binh provine in 2009 and 2012

Categories	Bamboo & Rattan				Sericulture				Sea grass				Handmade paper				Average			
	2009		2012		2009		2012		2009		2012		2009		2012		2009		2012	
	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%
Total (VND million/household)	48,6	100%	72,3	100%	19,1	100%	45,5	100%	_	_	_	_	15,1	100%	60,4	100%	37,8	100%	66,6	100%
1. Cultivation	5,1	10,5%	14,9	20,6%	5,0	26,1%	13,7	30,2%	_	_	_	_	4,1	27,5%	8,3	13,7%	4,9	13,0%	13,3	20,0%
2. Livestock	13,9	28,6%	11,2	15,4%	1,0	5,3%	11,1	24,3%	_	_	_	_	2,6	17,3%	6,3	10,5%	9,9	26,3%	10,1	15,2%
3. Fisheries	0,0	0,0%	0,0	0,0%	0,0	0,0%	0,0	0,0%	_	_	_	_	0,0	0,2%	0,0	0,0%	0,0	0,0%	0,0	0,0%
4. Forestry	0,0	0,0%	2,4	3,3%	0,0	0,0%	2,3	5,0%	_	_	_	_	0,4	2,9%	15,2	25,1%	0,1	0,3%	5,2	7,8%
5. Salt cultivation	0,0	0,0%	0,0	0,0%	0,0	0,0%	0,0	0,0%	_	_	_	_	0,0	0,0%	0,0	0,0%	0,0	0,0%	0,0	0,0%
6. Services	0,2	0,4%	0,5	0,7%	1,3	7,0%	0,0	0,0%	_	_	_	_	0,6	3,9%	0,0	0,0%	0,4	1,1%	0,3	0,5%
7. Surveyed product	8,3	17,2%	9,0	12,5%	6,2	32,6%	15,6	34,3%	_	_	_	_	0,2	1,6%	1,2	1,9%	6,3	16,7%	8,1	12,1%
8. Other industries	9,0	18,5%	25,4	35,1%	0,0	0,0%	0,1	0,3%	_	_	_	_	0,0	0,0%	0,0	0,0%	6,0	15,8%	16,8	25,3%
9. Other incomes	12,1	24,8%	8,6	11,9%	5,5	28,9%	2,7	5,9%	_	_	_	_	7,0	46,5%	29,4	48,7%	10,2	27,0%	12,5	18,8%
No. household	51		51		9		9						17		17		77		77	

The average income and income structure of the household Sample group at Phu Tho province in 2009 and 2012

Categories	Bamboo & Rattan				Sericulture				Sea grass				Handmade paper				Average			
	2009		2012		2009		2012		2009		2012		2009		2012		2009		2012	
	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%
Total (VND million/household)	25,3	100%	29,1	100%	_	_	_	_	_	_	_	_	_	_	_	_	25,3	100%	29,1	100%
1. Cultivation	2,1	8,5%	4,8	16,4%	_	_	_	_	_	_	_	_	_	_	_	_	2,1	8,5%	4,8	16,4%
2. Livestock	4,1	16,3%	5,3	18,4%	_	_	_	_	_	_	_	_	_	_	_	_	4,1	16,3%	5,3	18,4%
3. Fisheries	0,0	0,0%	0,2	0,8%	_	_	_	_	_	_	_	_	_	_	_	_	0,0	0,0%	0,2	0,8%
4. Forestry	0,0	0,0%	0,0	0,0%	_	_	_	_	_	_	_	_	_	_	_	_	0,0	0,0%	0,0	0,0%
5. Salt cultivation	0,0	0,0%	0,0	0,0%	_	_	_	_	_	_	_	_	_	_	_	_	0,0	0,0%	0,0	0,0%
6. Services	0,0	0,0%	0,0	0,0%	_	_	_	_	_	_	_	_	_	_	_	_	0,0	0,0%	0,0	0,0%
7. Surveyed product	5,8	23,0%	7,4	25,6%	_	_	_	_	_	_	_	_	_	_	_	_	5,8	23,0%	7,4	25,6%
8. Other industries	9,4	37,3%	11,0	37,9%	_	_	_	_	_	_	_	_	_	_	_	_	9,4	37,3%	11,0	37,9%
9. Other incomes	3,8	14,9%	0,3	1,0%	_	_	_	_	_	_	_	_	_	_	_	_	3,8	14,9%	0,3	1,0%
No. household	31		31														31		31	

The average income and income structure of female program beneficiaries in 2009 and 2012

Categories	Bamboo & Rattan				Sericulture				Sea grass				Handmade paper				Average			
	2009		2012		2009		2012		2009		2012		2009		2012		2009		2012	
	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%
Total (VND million/household)	32,7	100%	42,7	100%	25,5	100%	36,3	100%	14,9	100%	38,3	100%	15,1	100%	60,4	100%	28,8	100%	43,2	100%
1. Cultivation	3,8	11,5%	8,5	19,9%	8,6	33,5%	12,0	33,0%	1,5	10,1%	13,1	34,1%	4,1	27,5%	8,3	13,7%	4,1	14,3%	9,2	21,4%
2. Livestock	6,9	21,0%	6,5	15,1%	4,1	16,1%	8,4	23,1%	0,1	0,4%	2,4	6,1%	2,6	17,3%	6,3	10,5%	5,6	19,4%	6,3	14,5%
3. Fisheries	0,0	0,0%	0,1	0,1%	0,0	0,0%	0,0	0,0%	0,0	0,0%	0,0	0,0%	0,0	0,2%	0,0	0,0%	0,0	0,0%	0,0	0,1%
4. Forestry	0,0	0,0%	0,9	2,1%	0,0	0,0%	1,0	2,8%	0,0	0,0%	0,0	0,0%	0,4	2,9%	15,2	25,1%	0,0	0,1%	2,1	4,9%
5. Salt cultivation	0,6	2,0%	0,4	1,0%	0,0	0,0%	0,0	0,0%	0,0	0,0%	0,0	0,0%	0,0	0,0%	0,0	0,0%	0,5	1,6%	0,3	0,7%
6. Services	0,3	0,9%	0,2	0,4%	3,0	11,8%	0,0	0,0%	0,6	4,0%	0,8	2,1%	0,6	3,9%	0,0	0,0%	0,6	2,2%	0,2	0,5%
7. Surveyed product	6,5	19,7%	7,0	16,3%	4,5	17,5%	10,2	28,2%	8,6	57,7%	7,6	19,9%	0,2	1,6%	1,2	1,9%	5,9	20,4%	6,9	15,9%
8. Other industries	7,1	21,7%	14,2	33,1%	1,3	5,0%	2,7	7,5%	1,0	6,9%	8,6	22,6%	0,0	0,0%	0,0	0,0%	5,3	18,5%	11,2	25,9%
9. Other incomes	7,6	23,1%	5,1	11,9%	4,1	16,0%	2,0	5,4%	3,1	20,9%	5,8	15,2%	7,0	46,5%	29,4	48,7%	6,7	23,4%	7,0	16,2%
No. household	136		136		20		20		17		17		17		17		190		190	

The average income and income structure of male program beneficiaries in 2009 and 2012

Categories	Bamboo & Rattan				Sericulture				Sea grass				Handmade paper				Average			
	2009		2012		2009		2012		2009		2012		2009		2012		2009		2012	
	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%
Total (VND million/household)	13,3	100%	14,8	100%	59,7	100%	123,5	100%	31,8	100%	59,7	100%	_	_	_	_	42,8	100%	84,8	100%
1. Cultivation	0,0	0,0%	4,0	27,1%	5,1	8,5%	23,7	19,2%	5,3	16,7%	17,1	28,7%	_	_	_	_	4,9	11,51%	19,2	22,7%
2. Livestock	0,0	0,0%	0,0	0,0%	5,0	8,3%	14,4	11,7%	6,5	20,5%	17,5	29,4%	_	_	_	_	5,5	12,79%	15,2	18,0%
3. Fisheries	0,0	0,0%	0,0	0,0%	0,0	0,0%	0,0	0,0%	1,6	5,0%	0,0	0,0%	_	_	_	_	0,8	1,89%	0,0	0,0%
4. Forestry	0,0	0,0%	0,0	0,0%	0,0	0,0%	0,0	0,0%	0,0	0,0%	0,0	0,0%	_	_	_	_	0,0	0,00%	0,0	0,0%
5. Salt cultivation	3,5	26,4%	3,0	20,3%	0,0	0,0%	0,0	0,0%	0,0	0,0%	0,0	0,0%	_	_	_	_	0,2	0,44%	0,2	0,2%
6. Services	0,0	0,0%	0,0	0,0%	18,1	30,3%	0,0	0,0%	0,0	0,0%	4,0	6,7%	_	_	_	_	7,8	18,23%	2,0	2,4%
7. Surveyed product	3,3	24,5%	3,8	25,4%	25,5	42,7%	78,2	63,3%	6,9	21,8%	2,8	4,6%	_	_	_	_	14,8	34,46%	35,4	41,8%
8. Other industries	6,5	49,1%	4,0	27,1%	5,4	9,1%	1,5	1,2%	4,9	15,5%	13,8	23,2%	_	_	_	_	5,2	12,20%	8,0	9,4%
9. Other incomes	0,0	0,0%	0,0	0,0%	0,7	1,1%	5,7	4,6%	6,5	20,5%	4,4	7,4%	_	_	_	_	3,6	8,47%	4,7	5,6%
No. household	2		2		16		16		19		19						37		37	

The average income and income structure of Thai ethnic Sample group in 2009 and 2012

Categories	Bamboo & Rattan				Sericulture				Sea grass				Handmade paper				Average			
	2009		2012		2009		2012		2009		2012		2009		2012		2009		2012	
	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%
Total (VND million/household)	_	_	_	_	30,4	100%	25,9	100%	_	_	_	_	_	_	_	_	30,4	100%	25,9	100%
1. Cultivation	_	_	_	_	12,2	40,2%	10,1	39,0%	_	_	_	_	_	_	_	_	12,2	40,2%	10,1	39,0%
2. Livestock	_	_	_	_	7,3	24,1%	6,8	26,2%	_	_	_	_	_	_	_	_	7,3	24,1%	6,8	26,2%
3. Fisheries	_	_	_	_	0,0	0,0%	0,0	0,0%	_	_	_	_	_	_	_	_	0,0	0,0%	0,0	0,0%
4. Forestry	_	_	_	_	0,0	0,0%	0,0	0,0%	_	_	_	_	_	_	_	_	0,0	0,0%	0,0	0,0%
5. Salt cultivation	_	_	_	_	0,0	0,0%	0,0	0,0%	_	_	_	_	_	_	_	_	0,0	0,0%	0,0	0,0%
6. Services	_	_	_	_	4,8	15,8%	0,0	0,0%	_	_	_	_	_	_	_	_	4,8	15,8%	0,0	0,0%
7. Surveyed product	_	_	_	_	0,3	1,1%	3,4	13,2%	_	_	_	_	_	_	_	_	0,3	1,1%	3,4	13,2%
8. Other industries	_	_	_	_	2,6	8,4%	4,1	15,8%	_	_	_	_	_	_	_	_	2,6	8,4%	4,1	15,8%
9. Other incomes	_	_	_	_	3,2	10,5%	1,5	5,8%	_	_	_	_	_	_	_	_	3,2	10,5%	1,5	5,8%
No. household					10		10										10		10	

The average income and income structure of Muong ethnic Sample group in 2009 and 2012

Categories	Bamboo & Rattan				Sericulture				Sea grass				Handmade paper				Average			
	2009		2012		2009		2012		2009		2012		2009		2012		2009		2012	
	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%
Total (VND million/household)	35,5	100%	67,4	100%	19,1	100%	45,5	100%	_	_	_	_	15,1	100%	60,4	100%	25,0	100%	60,7	100%
1. Cultivation	4,5	12,8%	14,7	21,9%	5,0	26,1%	13,7	30,2%	_	_	_	_	4,1	27,5%	8,3	13,7%	4,5	18,0%	12,2	20,1%
2. Livestock	7,5	21,1%	7,7	11,4%	1,0	5,3%	11,1	24,3%	_	_	_	_	2,6	17,3%	6,3	10,5%	4,5	18,0%	7,9	13,0%
3. Fisheries	0,0	0,0%	0,0	0,0%	0,0	0,0%	0,0	0,0%	_	_	_	_	0,0	0,2%	0,0	0,0%	0,0	0,0%	0,0	0,0%
4. Forestry	0,0	0,0%	0,1	0,2%	0,0	0,0%	2,3	5,0%	_	_	_	_	0,4	2,9%	15,2	25,1%	0,2	0,6%	6,0	9,8%
5. Salt cultivation	0,0	0,0%	0,0	0,0%	0,0	0,0%	0,0	0,0%	_	_	_	_	0,0	0,0%	0,0	0,0%	0,0	0,0%	0,0	0,0%
6. Services	0,0	0,0%	1,1	1,7%	1,3	7,0%	0,0	0,0%	_	_	_	_	0,6	3,9%	0,0	0,0%	0,5	1,9%	0,5	0,8%
7. Surveyed product	8,1	22,7%	9,4	14,0%	6,2	32,6%	15,6	34,3%	_	_	_	_	0,2	1,6%	1,2	1,9%	4,9	19,6%	7,6	12,6%
8. Other industries	4,3	12,3%	25,7	38,1%	0,0	0,0%	0,1	0,3%	_	_	_	_	0,0	0,0%	0,0	0,0%	1,9	7,8%	11,5	19,0%
9. Other incomes	11,0	31,1%	8,6	12,7%	5,5	28,9%	2,7	5,9%	_	_	_	_	7,0	46,5%	29,4	48,7%	8,5	34,1%	15,0	24,7%
No. household	21		21		9		9						17		17		47		47	

Poverty alleviation

The household below the national poverty line in 2009 and 2012

Categories	Bamboo & Rattan		Sericulture		Sea grass		Handmade paper		Average	
	2009	2012	2009	2012	2009	2012	2009	2012	2009	2012
	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value
Sample group: No. of households living below the national poverty line	55	48	16	6	21	2	16	0	108	56
Percentage of households living below the national poverty line	39,86%	34,78%	44,44%	16,67%	58,33%	5,56%	94,12%	0,00%	47,58%	24,67%
Control group: No. of households living below the national poverty line	27	15	1	1	8	6	3	0	39	22
Percentage of households living below the national poverty line	54,00%	30%	16,67%	16,67%	57,14%	42,86%	100%	0,00%	53,42%	30,14%

The household below the national poverty line at province in 2009 and 2012

Categories	Thanh Hóa		Hòa Bình		Phú Thọ		Nghệ An		Total	
	2009	2012	2009	2012	2009	2012	2009	2012	2009	2012
	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value
Sample group: No. of households living below the national poverty line	54	33	30	0	13	9	11	14	108	56
Percentage of households living below the national poverty line	54,55%	33,33%	38,96%	0,00%	41,94%	29,03%	55,00%	70,00%	47,58%	24,67%
No. households	99	99	77	77	31	31	20	20	227	227
Control group: No. of households living below the national poverty line	24	14	4	1	3	1	8	6	39	22
Percentage of households living below the national poverty line	54,55%	31,82%	30,77%	7,69%	50,00%	16,67%	80,00%	60,00%	53,42%	30,14%
No. households	44	44	13	13	6	6	10	10	73	73

Food safety

Food safety of the household Sample group in 2009 and 2012

Categories	Classified based on the use (% household)											
	Sufficient				Insufficient				Sometime insufficient			
	2009		2012		2009		2012		2009		2012	
	No.	(%)	No.	%	No.	(%)	No.	%	No.	(%)	No.	%
1. Bamboo & Rattan	111	80,43%	138	10000,00%	8	5,80%	0	0,00%	19	13,77%	0	0,00%
2. Silk, brocade	31	86,11%	31	86,11%	0	0,00%	1	2,78%	5	13,89%	4	11,11%
3. Sea grass	26	72,22%	35	97,22%	0	0,00%	0	0,00%	10	27,78%	1	2,78%
4. Handmade paper	16	94,12%	17	100,00%	0	0,00%	0	0,00%	1	5,00%	0	0,00%
Average	184	81,06%	221	97,36%	8	3,52%	1	0,44%	35	15,42%	5	2,20%

Food safety of the household Control group in 2009 and 2012

Categories	Classified based on the use (% household)											
	Sufficient				Insufficient				Sometime insufficient			
	2009		2012		2009		2012		2009		2012	
	No.	(%)	No.	%	No.	(%)	No.	%	No.	(%)	No.	%
1. Bamboo & Rattan	44	88,00%	48	96,00%	0	0,00%	0	0,00%	6	12,00%	2	4,00%
2. Silk, brocade	5	83,33%	5	83,33%	0	0,00%	0	0,00%	1	16,67%	1	16,67%
3. Sea grass	11	78,57%	10	71,43%	0	0,00%	0	0,00%	3	21,43%	4	28,57%
4. Handmade paper	3	15,00%	3	100,00%	0	0,00%	0	0,00%	0	0,00%	0	0,00%
Average	63	86,30%	66	90,41%	0	0,00%	0	0	10	13,70%	7	9,59%

Employment

The status of employment of the household Sample group in 2009 and 2012

Categories	Form of employment	No. of household hiring labour		Employed					
				Total (people)		Male (%)		Female (%)	
		2009	2012	2009	2012	2009	2012	2009	2012
Bamboo & Rattan	Full-time employment	2	0	8	0	0,0%	_	100,0%	_
	Part-time employment	1	0	80	0	10,0%	_	90,0%	_
	Family workers without pay	0	0	0	0	_	_	_	_
Silk, brocade	Full-time employment	5	3	15	3	40,0%	100,0%	60,0%	0,0%
	Part-time employment	3	8	8	19	62,5%	5,3%	37,5%	94,7%
	Family workers without pay	2	9	3	25	33,3%	48,0%	66,7%	52,0%
Sea grass	Full-time employment	2	1	4	4	25,0%	50,0%	75,0%	50,0%
	Part-time employment	6	4	16	31	37,5%	83,9%	62,5%	16,1%
	Family workers without pay	0	2	0	3	_	100,0%	_	0,0%
Handmade paper	Full-time employment	0	0	0	0	_	_	_	_
	Part-time employment	0	0	0	0	_	_	_	_
	Family workers without pay	0	0	0	0	_	_	_	_
Average	Full-time employment	9	4	27	7	25,9%	71,4%	74,1%	28,6%
	Part-time employment	10	12	104	50	18,3%	54,0%	81,7%	46,0%
	Family workers without pay	2	11	3	28	33,3%	53,6%	66,7%	46,4%

The status of employment of the household Control group in 2009 and 2012

Categories	Form of employment	No. of household hiring labour		Employed					
				Total (people)		Male (%)		Female (%)	
		2009	2012	2009	2012	2009	2012	2009	2012
Bamboo & Rattan	Full-time employment	0	0	0	0	_	_	_	_
	Part-time employment	1	0	4	0	25,0%	_	75,0%	_
	Family workers without pay	0	0	0	0	_	_	_	_
Silk, brocade	Full-time employment	0	1	0	1	_	0,0%	_	100,0%
	Part-time employment	0	1	0	1	_	100,0%	_	0,0%
	Family workers without pay	0	1	0	2	_	50,0%	_	50,0%
Sea grass	Full-time employment	1	0	1	0	100,0%	_		_
	Part-time employment	1	3	300	9	33,3%	44,4%	66,7%	55,6%
	Family workers without pay	1	0	2	0	50,0%	_	50,0%	_
Handmade paper	Full-time employment	0	0	0	0	_	_	_	_
	Part-time employment	0	0	0	0	_	_	_	_
	Family workers without pay	0	0	0	0	_	_	_	_
Average	Full-time employment	1	1	1	1	100,0%	0,0%	0,0%	100,0%
	Part-time employment	2	4	304	10	33,2%	50,0%	66,8%	50,0%
	Family workers without pay	1	1	2	2	50,0%	50,0%	50,0%	50,0%

Saving and loans

The saving and loans of the household Sample group in 2009 and 2012

No.	Value chain	Bank account							
		Account owners				Account owners with savings in bank			
		2009	%	2012	%	2009	%	2012	%
1	Bam & Rattan	4	2,90%	7	5,07%	2	1,45%	1	0,72%
2	Silk, brocade	1	2,78%	1	2,78%	1	2,78%	1	2,78%
3	Sea grass	1	2,78%	8	22,22%	0	0,00%	1	2,78%
4	Handmade paper	0	0,00%	0	0,00%	0	0,00%	0	0,00%
	Average	6	2,64%	16	7,05%	3	1,32%	3	1,32%

The saving and loans of the household Control group in 2009 and 2012

No.	Value chain	Bank account							
		Account owners				Account owners with savings in bank			
		2009	%	2012	%	2009	%	2012	%
1	Bam & Rattan	1	2,00%	3	6,00%	0	0,00%	0	0,00%
2	Silk, brocade	0	0,00%	0	0,00%	0	0,00%	0	0,00%
3	Sea grass	3	21,43%	7	50,00%	1	7,14%	1	7,14%
4	Handmade paper	0	0,00%	0	0,00%	0	0,00%	0	0,00%
	Average	4	5,48%	10	13,70%	1	1,37%	1	1,37%

The saving and loans of the household by value chain in 2009 and 2012

Catagories	Bamboo & Rattan				Silk				Sea grass				Handmade paper				Average			
	2009	%	2012	%	2009	%	2012	%	2009	%	2012	%	2009	%	2012	%	2009	%	2012	%
Households who borrowed money - Sample group	105	76%	82	59%	29	81%	26	72%	32	89%	16	44%	14	82%	14	82%	180	79%	138	61%
Households who borrowed money - Control group	33	66%	4	8%	5	83%	3	50%	11	79%	10	71%	3	100%	3	100%	52	71%	20	27%

Environment protection

The average quantity of soild waste per household Sample group and waste treatment methods in 2009 and 2012

Catagories	The average quantity of solid waste per household per year (kg/yr)		The percentage of waste treatment methods of household									
			Recycle		Destroy		Throw		Collect		Other	
	2009	2012	2009	2012	2009	2012	2009	2012	2009	2012	2009	2012
Bamboo & Rattan	37,80	4,21	0,00%	7,25%	39,86%	39,86%	0,93%	14,49%	0,00%	23,91%	55,30%	14,49%
Silk	_	_	11,11%	2,78%	16,67%	25,00%	2,78%	0,00%	0,00%	0,00%	0,00%	19,44%
Sea grass	455,31	386,94	0,00%	2,78%	80,56%	77,78%	0,00%	0,00%	0,00%	0,00%	2,78%	5,56%
Handmade paper	1000,00	176,47	0,00%	0,00%	11,76%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Total			4	12	92	92	2	20	0	33	77	9
Percentage	202,13	91,68	1,76%	5,29%	40,53%	40,53%	0,88%	8,81%	0,00%	14,54%	33,92%	3,96%

The average quantity of soild waste per household Control group and waste treatment methods in 2009 and 2012

Catagories	The average quantity of solid waste per household per year (kg/yr)		The percentage of waste treatment methods of household									
			Recycle		Destroy		Throw		Collect		Other	
	2009	2012	2009	2012	2009	2012	2009	2012	2009	2012	2009	2012
Bamboo & Rattan	25,10	1,32	0,00%	8,00%	14,00%	4,00%	2,00%	0,00%	0,00%	0,00%	11,10%	88,00%
Silk	_	_	_	0,00%	__	0,00%	_	0,00%	_	0,00%	_	0,00%
Sea grass	377,86	660,00	0,00%	0,00%	42,86%	64,29%	0,00%	0,00%	0,00%	0,00%	35,71%	14,29%
Handmade paper	0	0,00	_	_	_	_	_	_	_	_	_	_
Total			0	4	13	11	1	0	0	0	11	2
Percentage	9768,66%	13889,55%	0,00%	5,48%	17,81%	15,07%	1,37%	0,00%	0,00%	0,00%	15,07%	2,74%

Application of environmental regulation by households

Application of environmental regulation of the household Sample group in 2009 and 2012

Catagories	Number of households applying environmental regulations		Number of households that do not apply environmental regulations		Number of household who do not know	
	2009	2012	2009	2012	2009	2012
Bamboo & Rattan	0	65	107	69	31	4
Silk	0	16	36	20	0	0
Sea grass	2	36	33	0	1	0
Handmade paper	0	1	17	16	0	0
Total	2	118	193	105	32	4
Percentage	0,88%	51,98%	85,02%	46,26%	14,10%	1,76%

Application of environmental regulation of the household Control group in 2009 and 2012

Catagories	Number of households applying environmental regulations		Number of households that do not apply environmental regulations		Number of household who do not know	
	2009	2012	2009	2012	2009	2012
Bamboo & Rattan	0	17	22	31	28	2
Silk	0	0	6	6	0	0
Sea grass	0	12	13	0	1	2
Handmade paper	0	0	3	3	0	0
Total	0	29	44	40	29	4
Percentage	0,00%	39,73%	60,27%	54,79%	39,73%	5,48%

Occupational safety and health

Occupational accidents in handicraft production in households in 2009 and 2012

category	Accident in producing				The frequency of accident per year (%)					
	Number of households		Percentage (%)		1-5 times		6-10 times		>10 times	
	2009	2012	2009	2012	2009	2012	2009	2012	2009	2012
Bamboo & Rattan	60	10	43,48%	7,25%	6,25%	100,00%	16,35%	0,00%	77,40%	0,00%
Silk	0	8	0,00%	22,22%	_	1,00%	_	0,00%	_	0,00%
Sea grass	11	0	30,56%	0,00%	90,91%	_	0,09%	_	0,00%	_
Handmade paper	0	0	0,00%	0,00%	_	_	_	_	_	_
Total	71	18	31,28%	7,93%	10,50%	100%	15,98%	0,00%	73,52%	0,00%

Occupational accidents in handicraft production in household in 2009 and 2012

category	Accident in producing				The frequency of accident per year (%)					
	Number of households		Percentage (%)		1-5 times		6-10 times		>10 times	
	2009	2012	2009	2012	2009	2012	2009	2012	2009	2012
Bamboo & Rattan	28	1	56,00%	2,00%	3,08%	100,00%	51,54%	0,00%	45,38%	0,00%
Silk	0	1	0,00%	16,67%	_	1,00%	_	0,00%	_	0,00%
Sea grass	5	0	36%	0,00%	100,00%	_	0,00%	_	0,00%	_
Handmade paper	0	0	0,00%	0,00%	_	_	_	_	_	_
Total	33	2	45,21%	2,74%	6,67%	100%	49,63%	0,00%	43,70%	0,00%

Participation in networks and organisations

The percentage of the household Sample group that participate in organizations in 2009 and 2012

Name of organisations which households join	Trade Sector																			
	Bamboo & Rattan				Silk				Sea grass				Handmade paper				Average			
	2009	%	2012	%	2009	%	2012	%	2009	%	2012	%	2009	%	2012	%	2009	%	2012	%
Total of surveyed household	138	100%	138	100%	36	100%	36	100%	36	100%	36	100%	17	100%	17	100%	227	100%	227	100%
International or Local Commercial Chamber	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%
Handicraft union	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%
The public organizations	28	20,3%	5	3,6%	0	0,0%	0	0,0%	13	36,1%	32	88,9%	0	0,0%	3	17,6%	41	18,1%	40	17,6%
Cooperative	10	7,2%	63	45,7%	18	50,0%	9	25,0%	0	0,0%	1	2,8%	0	0,0%	0	0,0%	28	12,3%	73	32,2%
Self-help group	40	29,0%	49	35,5%	1	2,8%	0	0,0%	0	0,0%	1	2,8%	2	11,8%	0	0,0%	43	18,9%	50	22,0%
other	34	24,6%	18	13,0%	0	0,0%	0	0,0%	4	11,1%	0	0,0%	0	0,0%	0	0,0%	38	16,7%	18	7,9%
No Join in any organization	26	18,8%	8	5,8%	17	47,2%	27	75,0%	19	52,8%	2	5,6%	15	88,2%	14	82,4%	77	34%	51	22,5%

The percentage of the household Control group that participate in organizations in 2009 and 2012

Name of organisations which households join	Trade Sector																			
	Bamboo & Rattan				Silk				Sea grass				Handmade paper				Average			
	2009	%	2012	%	2009	%	2012	%	2009	%	2012	%	2009	%	2012	%	2009	%	2012	%
Total of surveyed household	50	100%	50	100%	6	100%	6	100%	14	100%	14	100%	3	100%	3	100%	73	100%	73	100%
International or Local Commercial Chamber	0	0,0%	0	0,0%	0	0,0%	0	0,0%	1	7,1%	0	0,0%	0	0,0%	0	0%	1	1,4%	0	0,0%
Handicraft union	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0%	0	0,0%	0	0,0%
The public organizations	14	28,0%	0	0,0%	0	0,0%	0	0,0%	7	50,0%	10	71,4%	0	0,0%	0	0%	21	28,8%	10	13,7%
Cooperative	8	16,0%	7	14,0%	4	66,7%	1	16,7%	0	0,0%	0	0,0%	0	0,0%	0	0%	12	16,4%	8	11,0%
Self-help group	18	36,0%	3	6,0%	0	0,0%	0	0,0%	0	0,0%	1	7,1%	0	0,0%	0	0%	18	24,7%	4	5,5%
Other	6	12,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0%	6	8,2%	0	0,0%
No Join in any organization	4	8,0%	41	82,0%	2	33,3%	5	83,3%	6	42,9%	2	14,3%	3	100%	3	100%	15	21%	51	69,9%

Appendix IV: Main Indicators for SMEs

Turnover of SMEs

Turnover development of SMEs by value chain

Categories	Bamboo & Rattan				Silk				Seagrass				Handmade paper				Lacquer				Average			
	2009	%	2012	%	2009	%	2012	%	2009	%	2012	%	2009	%	2012	%	2009	%	2012	%	2009	%	2012	%
Average turnover sample group (VND million)	28905	69,8%	72506	84,2%	7158	51,7%	14373	85,7%	8500	9,7%	12600	18,9%	40	100%	202,2	100%	19208	80,6%	32057	86,9%	18037	37,9%	36901	62,7%
No. SMEs	8				6				1				1				5				21			
Average turnover control group (VND million)	12479	30,2%	13600	15,8%	6700	48,3%	2400	14,3%	79113	90,3%	54000	81,1%	_		_		4632	19,4%	4828	13,1%	29537	62,1%	21968	37,3%
No. SMEs	3				1				3				0				3				10			

Turnover development of SMEs by province

VND (million)	Thanh Hoa				Hoa Binh				Phu Tho				Nghe An				Total			
	2009	%	2012	%	2009	%	2012	%	2009	%	2012	%	2009	%	2012	%	2009	%	2012	%
Average turnover sample group	5489	5,34%	10452	22,0%	645	100%	1088	100%	1100	100%	2291	100%	6873	100%	8543	100%	3680	3,6%	5534	13,0%
No. SMEs	2				2				4				4				12			
Average turnover control group	97345	94,7%	37000	78,0%	_		_		_		_		_		_		97345	96,4%	37000	87,0%
No. SMEs	2				0				0				0				2			

Employment in SMEs

The status employment of the SMEs Sample group in 2009 and 2012

Category	Form of	Average employee/business		Male		Female	
		2009	2012	2009	2012	2009	2012
Bamboo & Rattan	Full-time employees	69,38	108,63	16,63	31,38	52,75	77,25
	Part-time employees	208,50	725,13	38,33	97,50	239,67	627,63
	Family work without paid	2,13	0,50	1,25	0,25	0,88	0,25
Silk	Full-time employees	28,67	43,67	8,67	5,50	20,00	38,17
	Part-time employees	69,17	101,67	2,17	8,33	67,00	93,33
	Family work without paid	0,17	0,00	0,00	0,00	0,17	0,00
Sea grass	Full-time employees	50,00	25,00	8,00	2,00	42,00	23,00
	Part-time employees	30,00	200,00	5,00	50,00	25,00	150,00
	Family work without paid	4,00	0,00	2,00	0,00	2,00	0,00
Handmade paper	Full-time employees	15,00	15,00	0,00	2,00	15,00	13,00
	Part-time employees	0,00	5,00	0,00	2,00	0,00	3,00
	Family work without paid	0,00	0,00	0,00	0,00	0,00	0,00
Lacquer	Full-time employees	96,80	132,20	26,60	47,00	70,20	85,20
	Part-time employees	200,00	234,00	60,00	70,00	140,00	164,00
	Family work without paid	1,60	1,40	1,40	1,00	0,20	0,40
Average	Full-time employees	41,16	87,24	10,52	24,90	30,65	62,33
	Part-time employees	91,87	370,76	74,29	58,67	17,58	312,10
	Family work without paid	0,97	0,19	0,52	0,33	0,45	0,19

The status employment of the SMEs Control group in 2009 and 2012

Category	Form of	Average employee/business		Male		Female	
		2009	2012	2009	2012	2009	2012
Bamboo & Rattan	Full-time employees	60,00	118,33	41,00	45,33	19,00	73,00
	Part-time employees	4300,00	2700,00	3700,00	716,67	600,00	1983,33
	Family work without paid	0,00	0,00	0,00	0,00	0,00	0,00
Silk	Full-time employees	1,00	5,00	0,00	2,00	1,00	3,00
	Part-time employees	0,00	0,00	0,00	0,00	0,00	0,00
	Family work without paid	3,00	0,00	1,00	0,00	2,00	0,00
Sea grass	Full-time employees	80,00	45,33	54,00	11,67	26,00	33,67
	Part-time employees	12000,00	1500,00	9500,00	266,67	2500,00	1233,33
	Family work without paid	4,00	0,00	2,00	0,00	2,00	0,00
Handmade paper	Full-time employees		0,00		0,00		0,00
	Part-time employees		0,00		0,00		0,00
	Family work without paid		0,00		0,00		0,00
Lacquer	Full-time employees	11,67	10,00	8,00	6,00	3,67	4,00
	Part-time employees	1,67	21,67	1,67	17,67	0,00	2,40
	Family work without paid	0,00	0,00	0,00	0,00	0,00	0,00
Average	Full-time employees	152,67	52,60	103,00	19,10	49,67	33,50
	Part-time employees	16301,67	1266,50	13201,67	300,30	3100,00	965,72
	Family work without paid	7,00	0,00	3,00	0,00	4,00	0,00

Environment protection

Solid waste treatment of SMEs - Sample Group

Categories	Total average/ business (kg/year)		The percentage of business using treatment methods									
			Recycle		Destroy		Throw		Collect		Other	
	2009	2012	2009	2012	2009	2012	2009	2012	2009	2012	2009	2012
Bamboo & Rattan	2498	3006	12,50%	0,125	37,50%	37,50%	0,00%	12,50%	12,50%	37,50%	0,00%	0,00%
Silk	2065	2367	16,67%	0	16,67%	16,67%	33,33%	16,67%	0,00%	33,33%	0,00%	0,00%
Sea grass	60	100	0,00%	0	100,00%	100,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Lacquer	844	440	0,00%	0	60,00%	20,00%	0,00%	20,00%	20,00%	40,00%	0,00%	0,00%
Handmade paper	70	80	0,00%	0	100,00%	100,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Total			2	1	9	7	2	3	2	7	0	0
Percentage	1748,68	1934,76	9,52%	4,76%	42,86%	33,33%	9,52%	14,29%	9,52%	33,33%	0,00%	0,00%

Solid waste treatment of SMEs - Control Group

Categories	Total average/ business (kg/year)		The percentage of business using treatment methods									
			Recycle		Destroy		Throw		Collect		Other	
	2009	2012	2009	2012	2009	2012	2009	2012	2009	2012	2009	2012
Bamboo & Rattan	666,67	1666,66667	0,00%	0,00%	33,33%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	33,33%
Silk	0	0	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Sea grass	4133,33	7666,66667	33,33%	0,00%	33,33%	66,67%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Lacquer	0	1100	0,00%	0,00%	0,00%	0,00%	0,00%	33,33%	0,00%	66,67%	0,00%	0,00%
Handmade paper	_	_	_	_	_	_	_	_	_	_	_	_
Total			1	0	2	2	0	1	0	2	0	1
Percentage	1440	3130	10,00%	0,00%	20,00%	20,00%	0,00%	10,00%	0,00%	20,00%	0,00%	10,00%

Application of environmental regulations by SMEs - Sample group

Category	Number of SMEs applying environmental regulations		Number of SMEs not applying environmental regulations		Number of SMEs who do not know	
	2009	2012	2009	2012	2009	2012
Bamboo & Rattan	5	8	3	0	0	0
Silk, Brocade	1	2	5	4	0	0
Seagrass	0	0	1	1	0	0
Handmade paper	0	1	1	0	0	0
Lacquer	2	4	3	1	0	0
Total	8	15	13	6	0	0

Application of environmental regulations by SMEs - Control group

Category	Number of SMEs applying environmental regulations		Number of SMEs not applying environmental regulations		Number of SMEs who do not know	
	2009	2012	2009	2012	2009	2012
Bamboo & Rattan	1	3	2	0	0	0
Silk, Brocade	0	0	0	0	1	1
Sea grass	1	2	2	1	0	0
Handmade paper	_	0	_	0	_	0
Lacquer	1	3	2	0	0	0
Total	3	8	6	1	1	1

Drainage system and wastewater treatment of SMEs - Sample group

Categories	Drainage						Wastewater treatment system					
	Drainage system						Wastewater treatment				None	
	Privat		Public		Not have		Wastewater		Solid waste			
	2009	2012	2009	2012	2009	2012	2009	2012	2009	2012	2009	2012
Bamboo & Rattan	3	0	2	4	3	4	3	1	2	3	5	5
Silk, Brocade	1	0	3	1	2	5	1	0	1	1	4	5
Sea grass	1	0	0	0	0	1	1	0	1	0	0	1
Handmade paper	0	0	0	0	1	1	0	0	0	0	1	1
Lacquer	2	1	2	3	1	1	3	2	1	3	2	2
Total	7	1	7	8	7	12	8	3	5	7	12	14

Drainage system and wastewater treatment of SMEs - Control group

Categories	Drainage						Wastewater treatment system					
	Drainage system						Wastewater treatment				None	
	Privat		Public		Not have		Wastewater		Solid waste			
	2009	2012	2009	2012	2009	2012	2009	2012	2009	2012	2009	2012
Bamboo & Rattan	1	1	2	2	0	0	1	1	0	0	2	2
Silk, Brocade	1	1	0	0	0	0	0	0	0	0	1	1
Seagrass	0	0	3	2	0	1	1	0	1	0	2	3
Handmade paper	_	_	_	_	_	_	_	_	_	_	_	_
Lacquer	0	0	3	3	0	0	1	0	0	1	2	2
Total	2	2	8	7	0	1	3	1	1	1	7	8

Wastewater treatment methods of SMEs - Sample group

Categories	Total average/ business (m3/year)		The percentage of business using treatment methods									
			Release to drain system		Release to river/ lake		Release to land surface		Treatment		Other	
	2009	2012	2009	2012	2009	2012	2009	2012	2009	2012	2009	2012
Bamboo & Rattan	582,56	121,25	37,50%	0,00%	0,00%	0,00%	12,50%	25,00%	25,00%	37,50%	0,00%	0,00%
Silk	615,67	666,67	50,00%	0,00%	0,00%	0,00%	16,67%	66,67%	0,00%	0,00%	16,67%	100,00%
Sea grass	_	0,00	_	0,00%	_	0,00%	_	0,00%	_	0,00%	_	0,00%
Lacquer	477,33	194,00	80,00%	20,00%	20,00%	40,00%	0,00%	0,00%	0,00%	40,00%	0,00%	0,00%
Handmade paper	60,00	70,00	0,00%	0,00%	0,00%	0,00%	100,00%	100,00%	0,00%	0,00%	0,00%	0,00%
Total			10	1	1	2	3	7	2	5	1	6
Percentage			47,62%	4,76%	4,76%	9,52%	14,29%	33,33%	9,52%	23,81%	4,76%	28,57%

Wastewater treatment methods of SMEs - Control group

Categories	Total average/ business (m3/year)		The percentage of business using treatment methods									
			Release to drain system		Release to river/ lake		Release to land surface		Treatment		Other	
	2009	2012	2009	2012	2009	2012	2009	2012	2009	2012	2009	2012
Bamboo & Rattan	380,00	123,33	66,67%	33,33%	0,00%	0,00%	0,00%	33,33%	0,00%	33,33%	33,33%	0,00%
Silk	5520,00	3000,00	100,00%	0,00%	0,00%	100,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Sea grass	1080,00	400,00	100,00%	33,33%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Lacquer	623,33	573,33	100,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	66,67%	0,00%	100,00%
Handmade paper	_	_	_		_		_		_		_	
Total			9	2	0	1	0	1	0	3	1	3
Percentage			90,00%	20,00%	0,00%	10,00%	0,00%	10,00%	0,00%	30,00%	10,00%	30,00%

Occupational safety and health

Occupational accidents in production and business SMEs - Sample group

Category	Accident in producing				The frequency of accident per year (%)					
	Number of business		Percentage (%)		1-5 times		6-10 times		>10 times	
	2009	2012	2009	2012	2009	2012	2009	2012	2009	2012
Bamboo & Rattan	3	0	37,50%	0,00%	33,33%	0,00%	0,00%	0,00%	66,67%	0,00%
Silk, brocade	1	1	16,67%	16,67%	100,00%	100,00%	0,00%	0,00%	0,00%	0,00%
Sea grass	1	0	100%	0,00%	100,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Handmade paper	0	0	0%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Lacquer	2	1	40,00%	20,00%	100,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Average	7	2	33,33%	9,52%	75,00%	100%	0,00%	0,00%	25,00%	0,00%

Occupational accidents in production and business SMEs - Control group

Category	Accident in producing				The frequency of accident per year (%)					
	Number of business		Percentage (%)		1-5 times		6-10 times		>10 times	
	2009	2012	2009	2012	2009	2012	2009	2012	2009	2012
Bamboo & Rattan	1	0	33,33%	0,00%	0,00%	_	0,00%	_	100,00%	_
Silk, brocade	1	0	100,00%	0,00%	100,00%	_	0,00%	_	0,00%	_
Sea grass	0	0	0,00%	0,00%	0,00%	_	0,00%	_	0,00%	_
Handmade paper	_	0	_	0,00%	_	_	_	_	_	_
Lacquer	2	0	66,67%	0,00%	100,00%	_	0,00%	_	0,00%	_
Average	4	0	40,00%	0,00%	83,33%	_	0,00%	_	16,67%	_

Occupational safety policy SMEs - Sample group

Category	SMEs without an occupational policy				SMEs with occupational policy			
	No of companies		Percent (%)		No of companies		Percent (%)	
	2009	2012	2009	2012	2009	2012	2009	2012
Bamboo & Rattan	4	1	50,00%	12,50%	4	7	50,00%	87,50%
Silk, Brocade	3	3	50,00%	16,67%	3	3	50,00%	50,00%
Sea grass	0	1	0,00%	100,00%	1	0	100,00%	0,00%
Handmade paper	1	1	100,00%	100,00%	0	0	0,00%	0,00%
Lacquer	2	2	40,00%	40,00%	3	3	60,00%	60,00%
Total	10	8	47,62%	38,10%	11	13	52,38%	61,90%

Occupational safety policy SMEs - Control group

Category	SMEs without an occupational policy				SMEs with occupational policy			
	No of companies		Percent (%)		No of companies		Percent (%)	
	2009	2012	2009	2012	2009	2012	2009	2012
Bamboo & Rattan	2	0	66,67%	0,00%	1	3	33,33%	100,00%
Silk, Brocade	1	1	100,00%	100,00%	0	0	0,00%	0,00%
Sea grass	2	1	66,67%	33,33%	1	2	33,33%	66,67%
Handmade paper	_	0	_	0,00%	_	0	_	0,00%
Lacquer	2	0	66,67%	0,00%	1	3	33,33%	100,00%
Total	7	2	70,00%	20,00%	3	8	30,00%	80,00%

Information and training on occupation safety for workers SMEs - Sample group

Categories	Information and training on occupational safety													
	Brief introduction at work process		Provide information sheet		Information about occupational safety		Have training course		Colleagues introduce OHS to new employees		No information or course		Other	
	2009	2012	2009	2012	2009	2012	2009	2012	2009	2012	2009	2012	2009	2012
Bamboo & Rattan	5	6	2	2	6	8	6	5	1	0	0	0	1	0
Silk, Brocade	4	4	2	5	2	6	1	2	0	0	2	0	0	0
Sea grass	1	0	0	1	1	1	0	0	0	0	0	0	0	0
Handmade paper	1	1	0	0	0	1	0	1	0	0	0	0	0	0
Lacquer	5	3	2	4	5	4	2	3	1	1	0	0	0	0
Total	16	14	6	12	14	20	9	11	2	1	2	0	1	0

Information and training on occupation safety for workers SMEs - Control group

Categories	Information and training on occupational safety													
	Brief introduction at work process		Provide information sheet		Information about occupational safety		Have training course		Colleagues introduce OHS to new employees		No information or course		Other	
	2009	2012	2009	2012	2009	2012	2009	2012	2009	2012	2009	2012	2009	2012
Bamboo & Rattan	2	2	2	1	1	3	0	1	0	0	0	0	0	0
Silk, Brocade	1	1	0	0	1	0	1	0	0	0	0	0	0	0
Sea grass	3	2	1	2	3	3	1	1	0	0	0	0	0	0
Handmade paper	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Lacquer	3	2	1	0	3	3	0	0	0	0	0	0	0	0
Total	9	7	4	3	8	9	2	2	0	0	0	0	0	0

Provision of protective equipment, emergency equipment and emergency training in SMEs - Sample group

Category	Percentage of SMEs who supply protective equipments		Percentage of SMEs with emergency equipment		Percentage of SMEs that provide emergency training to employees	
	2009	2012	2009	2012	2009	2012
Bamboo & Rattan	100,00%	75,00%	75,00%	100,00%	75,00%	62,50%
Silk, Brocade	50,00%	66,67%	16,67%	66,67%	16,67%	16,67%
Sea grass	100,00%	100,00%	0,00%	100,00%	0,00%	0,00%
Handmade paper	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Lacquer	100,00%	80,00%	60,00%	80,00%	60,00%	60,00%
Total	80,95%	71,43%	47,62%	80,95%	47,62%	42,86%

Provision of protective equipment, emergency equipment and emergency training in SMEs - Control group

Category	Percentage of SMEs who supply protective equipments		Percentage of SMEs with emergency equipment		Percentage of SMEs that provide emergency training to employees	
	2009	2012	2009	2012	2009	2012
Bamboo & Rattan	100,00%	100,00%	0,00%	100,00%	0,00%	33,33%
Silk, Brocade	100,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Sea grass	33,33%	66,67%	0,00%	66,67%	33,33%	0,00%
Handmade paper	_	0,00%	_	0,00%	_	0,00%
Lacquer	100,00%	100,00%	0,00%	100,00%	0,00%	0,00%
Total	80,00%	80,00%	0,00%	80,00%	10,00%	10,00%

Labour union membership of SMEs

Category	SMEs without labour union / other union - Sample group		SMEs without labour union / other union - Control group	
	2009	2012	2009	2012
Bamboo & Rattan	4	3	3	2
Silk, Brocade	4	4	1	1
Sea grass	0	1	1	3
Handmade paper	1	1	_	_
Lacquer	2	2	3	2
Total	11	11	8	8

Social benefits of SMEs

Employee benefits of SMEs - Sample group

		Benefits														**Total No. employee surveyed SMEs**	
		Paid leave										**Insurance**					
		Sick leave		Leave		Maternity leave		Paternity leave		Other		Health insurance		Social			
	Form	2009	2012	2009	2012	2009	2012	2009	2012	2009	2012	2009	2012	2009	2012	2009	2012
Bamboo & Rattan	Full-time	520	700	520	700	393	495	0	0	520	0	520	670	520	670	555	869
	Part-time	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1668	5801
	Family work without paid		4		4		2					0		0		17	4
Silk	Full-time	35	147	35	147	28	0	0	0	35	0	35	182	35	182	172	262
	Part-time	0	0	0	0	0	0	0	0	0	0	0	0	0	0	150	610
	Family work without paid		0		0		0		0		0	0	0	0	0	1	0
Sea grass	Full-time	0	25	0	25	0	0	0	0	0	0	0	25	0	25	50	25
	Part-time	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30	200
	Family work without paid		0		0		0		0		0	2	0	2	0	4	0
Handmade Paper	Full-time	0	15	0	15	0	0	0	0	0	0	0	0	0	0	15	15
	Part-time	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
	Family work without paid		0		0		0		0		0	0	0	0	0	0	0
Lacquer	Full-time	70	50	70	100	70	20	0	0	70	0	70	63	70	63	484	661
	Part-time	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1000	1170
	Family work without paid		3		3		0		0		0	0	3	0	3	8	7
Total	Full-time	625	937	625	987	491	515	0	0	625	0	625	940	625	940	1276	1832
	Part-time	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2848	7786
	Family work without paid	0	7	0	7	0	2	0	0	0	0	2	3	2	3	30	11

Employee benefits of SMEs - Control group

	Form	**Benefits**														**Total No. employee surveyed SMEs**	
		Paid leave										**Insurance**					
		Sick leave		Leave		Maternity leave		Paternity leave		Other		Health insurance		Social			
		2009	2012	2009	2012	2009	2012	2009	2012	2009	2012	2009	2012	2009	2012	2009	2012
Bamboo & Rattan	Full-time	200	320	200	320	160	199	0	0	0	0	200	135	200	135	260	355
	Part-time	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7400	8100
	Family work without paid		0		0		0		0		0	0	0	0	0	2	0
Silk	Full-time	0	5	0	5	0	0	0	0	0	0	0	5	0	5	1	5
	Part-time	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Family work without paid		0		0		0		0		0	0	0	0	0	3	0
Sea grass	Full-time	0	126	0	126	0	1	0	0	0	0	0	126	0	126	120	136
	Part-time	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12150	4500
	Family work without paid		0		0		0		0		0	0	0	0	0	4	0
Handmade Paper	Full-time	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
	Part-time	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
	Family work without paid	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Lacquer	Full-time	0	0	0	0	0	0	0	0	0	0	0	0	0	0	35	30
	Part-time	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	65
	Family work without paid	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	Full-time	200	451	200	451	160	200	0	0	0	0	200	266	200	266	416	526
	Part-time	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19555	12665
	Family work without paid	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0

Appendix V: Significance tests of income development

Significance Test Income Development of Craft Producers

1. Average test between Sample group and Control group in 2009 and 2012
Paired-samples T-test

1.1 Income of Sample group

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Income2009	31.0631	227	26.00017	1.72569
	Income2012	50.0984	227	46.08016	3.05845

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper			
Pair 1	Income2009 - Income2012	-19.03530	44.17291	2.93186	-24.81257	-13.25802	-6.493	226	.000

Conclusion:

The table above is the result of statistical test of hypothesis. The result of this test expressing average income of 227 households has really changed from 2009 to 2012 or not?

Sig = 0.00<0.05 (confidence = 95%), so the average income of households in Sample group in 2012 compared with 2009 have changed and increased.

1.2 Surveyed income of Sample group

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Surveyedincome2009	7.3221	227	11.62753	.77175
	Surveyedincome2012	11.5088	227	24.76063	1.64342

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper			
Pair 1	Surveyedincome2009 - Surveyedincome2012	-4.18667	18.98576	1.26013	-6.66978	-1.70357	-3.322	226	.001

Conclusion:

The table above is the result of test average income from surveyed product of 227 households in Sample group in 2009 and 2012.

Because the Sig=0.001<0.05 so the average income from surveyed product of 227 households in Sample group in 2012 compared with 2009 changed and increased.

1.3 Income of Control group

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Income2009	27.9584	73	25.16237	2.94503
	Income2012	42.3082	73	32.17618	3.76594

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper			
Pair 1	Income2009 - Income2012	-14.34979	38.06019	4.45461	-23.22989	-5.46970	-3.221	72	.002

Conclusion:

The table above is the result of test average income of 73 households in Control group in 2009 and 2012.

Because the Sig=0.002<0.05 so the average income of 227 households in Control group in 2012 compared with 2009 changed and increased.

1.4 Surveyed income of Control group

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Surveyedincome2009	4.6774	73	4.85490	.56822
	Surveyedincome2012	3.6192	73	17.91859	2.09721

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper			
Pair 1	Surveyedincome2009 - Surveyedincome2012	1.05822	18.62705	2.18013	-3.28779	5.40423	.485	72	.629

Conclusion:

The table above is the result of test average income from surveyed product of 73 households in Control group in 2009 and 2012.

Because the Sig=0.629> 0.05 so the average income from surveyed product of 73 households in Control group in 2012 compared with 2009 has changed and increased but this change has no meaning.

2 Test between Sample group and Control group
Average test of two general (Sample group and Control group)
Indepent-samples T – test.

2.1 Income in 2009

Group Statistics

	Group	N	Mean	Std. Deviation	Std. Error Mean
Income2009	Sample group	227	31.0631	26.00017	1.72569
	Control group	73	27.9584	25.16237	2.94503

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Income2009	Equal variances assumed	.195	.659	.894	298	.372	3.10469	3.47144	-3.72696	9.93634
	Equal variances not assumed			.910	125.228	.365	3.10469	3.41339	-3.65071	9.86009

Conclusion:

Because the sig (Levence) = 0.695>0.05 => The variance between of Sample group and Control group is not different.

Using the sig (of t = 0.894) = 0.372>0.05=> No significant difference of average income of households in sample group and Control group in 2009.

2.2 Surveyed income in 2009

Group Statistics

	Group	N	Mean	Std. Deviation	Std. Error Mean
Surveyedincome2009	Sample group	227	7.3221	11.62753	.77175
	Control group	73	4.6774	4.85490	.56822

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Surveyedincome2009	Equal variances assumed	5.754	.017	1.889	298	.060	2.64474	1.39977	-.10995	5.39943
	Equal variances not assumed			2.760	279.563	.006	2.64474	.95837	.75821	4.53127

Conclusion:

Because the sig (Levence) = 0.017<0.05 => The variance between of Sample group and Control group is different.

Using the sig (of t = 2.760) = 0.06>0.05=> No significant difference of average income from surveyed product of households in sample group and Control group in 2009.

2.3 Income in 2012

Group Statistics

	Group	N	Mean	Std. Deviation	Std. Error Mean
Income2012	Sample group	227	50.0984	46.08016	3.05845
	Control group	73	42.3082	32.17618	3.76594

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Income2012	Equal variances assumed	1.336	.249	1.342	298	.181	7.79019	5.80363	-3.63110	19.21149
	Equal variances not assumed			1.606	174.161	.110	7.79019	4.85143	-1.78497	17.36536

Conclusion:

Because the sig (Levence) = 0.249>0.05 => The variance between of Sample group and Control group is not different.

Using the sig (of t = 1.342) = 0.181>0.05=> No significant difference of average income of households in Sample group and Control group in 2012.

2.4 Surveyed income in 2012

Group Statistics

	Group	N	Mean	Std. Deviation	Std. Error Mean
Surveyedincome2012	Sample group	227	11.5088	24.76063	1.64342
	Control group	73	3.6192	17.91859	2.09721

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Surveyedincome2012	Equal variances assumed	4.006	.046	2.517	298	.012	7.88963	3.13401	1.72204	14.05723
	Equal variances not assumed			2.961	167.458	.004	7.88963	2.66442	2.62945	13.14981

Conclusion:

Because the sig (Levence) = 0.046<0.05 => The variance between of Sample group and Control group is different.

Using the sig (of t = 2.961) = 0.04<0.05=> Have significant difference of average income from surveyed product of households in Sample group and Control group in 2012.

Significance Test Income Development of Raw Material Growers/Collectors

3 Average test between Sample group and Control group in 2009 and 2012 Paired-samples T-test

3.1 Income of Sample group

Paired t-test

Variable	Obs	Mean	Std. Dev.
income2009	296	26.92905	30.57703
income2012	296	64.83784	59.36197

Variable	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.Interval]	
inc~2012	296	64.83784	3.450344	59.36197	58.04743	71.62825
inc~2009	296	26.92905	1.777254	30.57703	23.43135	30.42676
diff	296	37.90878	3.3378	57.42569	31.33987	44.4777

mean(diff) = mean(income2012 - income2009) *t = 11.3574*

Ho: mean(diff) = 0 *degrees of freedom = 295*

Ha: mean(diff) < 0 *Ha: mean(diff) != 0* *Ha: mean(diff) > 0*

Pr(T < t) = 1.0000 *Pr(|T| > |t|) = 0.0000* *Pr(T > t) = 0.0000*

Conclusion:

The table above is the result of statistical test of hypothesis. The result of this test expressing average income of 296 households has really changed from 2009 to 2012 or not?

Pr(|T| > |t|) = 0.00<0.05 and Pr(T > t) = 0.0000<0.05 (confidence = 95%), so the average income of households in Sample group in 2012 compared with 2009 have changed and increased.

3.2 Surveyed income of Sample group

Variable	Obs	Mean	Std. Dev.
survey2009	296	2.660473	6.388604
survey2012	296	7.478716	15.25947

Variable	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.Interval]	
sur~2009	296	2.660473	0.37133	6.388604	1.929681	3.391265
sur~2012	296	7.478716	0.886939	15.25947	5.733187	9.224245
diff	296	-4.81824	0.752423	12.94517	-6.29904	-3.33745

mean(diff) = mean(survey2009 - survey2012) *t = -6.4036*

Ho: mean(diff) = 0 *degrees of freedom = 295*

Ha: mean(diff) < 0 *Ha: mean(diff) != 0* *Ha: mean(diff) > 0*

Pr(T < t) = 0.0000 *Pr(|T| > |t|) = 0.0000* *Pr(T > t) = 1.0000*

Conclusion:

The table above is the result of test average income from surveyed product of 296 households in Sample group in 2009 and 2012.

Because the Pr(|T| > |t|) = 0.00 <0.05 Pr(T < t) = 0.0000 <0.05 and so the average income from surveyed product of 296 households in Sample group in 2012 compared with 2009 changed and increased.

3.3 Income of Control group

Variable	Obs	Mean	Std. Dev.
income2009	113	19.57788	24.3052
income2012	113	58.63274	63.51607

Variable	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.Interval]	
inc~2012	113	58.63274	5.975089	63.51607	46.79387	70.47162
inc~2009	113	19.57788	2.286441	24.3052	15.04759	24.10817
diff	113	39.05487	6.03009	64.10074	27.10702	51.00272

mean(diff) = mean(income2012 - income2009) *t = 6.4767*

Ho: mean(diff) = 0 *degrees of freedom = 112*

Ha: mean(diff) < 0 *Ha: mean(diff) != 0* *Ha: mean(diff) > 0*

Pr(T < t) = 1.0000 *Pr(|T| > |t|) = 0.0000* *Pr(T > t) = 0.0000*

Conclusion:

The table above is the result of statistical test of hypothesis. The result of this test expressing average income of 113 households has really changed from 2009 to 2012 or not?

Pr(|T| > |t|) = 0.00<0.05 and Pr(T > t) = 0.0000<0.05 (confidence = 95%), so the average income of households in Sample group in 2012 compared with 2009 have changed and increased.

3.4 Surveyed income of Control group

Variable	Obs	Mean	Std. Dev.
survey2009	113	3.186726	5.689127
survey2012	113	6.030089	14.04478

Variable	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
sur~2009	113	3.186726	0.535188	5.689127	2.126319	4.247132
sur~2012	113	6.030089	1.321222	14.04478	3.412257	8.64792
diff	113	-2.84336	1.178792	12.53073	-5.17899	-0.50774

mean(diff) = mean(survey2009 - survey2012) *t = -2.4121*

Ho: mean(diff) = 0 *degrees of freedom = 112*

Ha: mean(diff) < 0 *Ha: mean(diff) != 0* *Ha: mean(diff) > 0*

Pr(T < t) = 0.0087 *Pr(|T| > |t|) = 0.0175* *Pr(T > t) = 0.9913*

Conclusion:

The table above is the result of test average income from surveyed product of 113 households in Sample group in 2009 and 2012.

Because the Pr (|T| > |t|) = 0.0175 <0.05 Pr(T < t) = 0.0087 <0.05 and so the average income from surveyed product of 113 households in Sample group in 2012 compared with 2009 changed and increased.

4 Test between Sample group and Control group
Average test of two general (Sample group and Control group).
Indepent-samples T – test.

4.1 Income in 2009

Variable	Obs	Mean	Std. Dev.
Sample	296	26.92905	30.57703
Control	113	19.57788	24.3052

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.Interval]	
Sanple	296	26.92905	1.777254	30.57703	23.43135	30.42676
Control	113	19.57788	2.286441	24.3052	15.04759	24.10817
combined	409	24.89804	1.440766	29.13769	22.06579	27.7303
diff		7.351178	3.205357		1.050056	13.6523

diff = mean(1) - mean(2) *t = 2.2934*

Ho: diff = 0 *degrees of freedom = 407*

Ha: diff < 0 *Ha: diff != 0* *Ha: diff > 0*

Pr(T < t) = 0.9888 *Pr(|T| > |t|) = 0.0223* *Pr(T > t) = 0.0112*

Using the Pr(|T| > |t|) = 0.0223 <0.05 and Pr(T > t) = 0.0112 <0.05 => Have significant difference of average income of households in sample group and Control group in 2009 (income of Sample > income of Control).

4.2 Surveyed income in 2009

Variable	Obs	Mean	Std. Dev.
Sample	296	2.660473	6.388604
Control	113	3.186726	5.689127

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.Interval]	
Sanple	296	2.660473	0.37133	6.388604	1.929681	3.391265
Control	113	3.186726	0.535188	5.689127	2.126319	4.247132
combined	409	2.805868	0.306613	6.200859	2.20313	3.408606
diff		-0.52625	0.686037		-1.87487	0.8223657

diff = mean(1) - mean(2) *t = -0.7671*
Ho: diff = 0 *degrees of freedom = 407*
Ha: diff < 0 *Ha: diff != 0* *Ha: diff > 0*
Pr(T < t) = 0.2217 *Pr(|T| > |t|) = 0.4435* *Pr(T > t) = 0.7783*

Using the Pr(|T| > |t|) = 0.4435>0.05 => No significant difference of average survey income of households in sample group and Control group in 2009

4.3 Income in 2012

Variable	Obs	Mean	Std. Dev.
Sample	296	64.83784	59.36197
Control	113	58.63274	63.51607

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.Interval]	
Sample	296	64.83784	3.450344	59.36197	58.04743	71.62825
Control	113	58.63274	5.975089	63.51607	46.79387	70.47162
combined	409	63.12347	2.992675	60.52311	57.24048	69.00646
diff		6.205094	6.6938		-6.95364	19.36383

diff = mean(1) - mean(2) *t = 0.9270*

Ho: diff = 0 *degrees of freedom = 407*

Ha: diff < 0 *Ha: diff != 0* *Ha: diff > 0*

Pr(T < t) = 0.8228 *Pr(|T| > |t|) = 0.3545* *Pr(T > t) = 0.177*

Using the Pr(|T| > |t|) = 0.3545>0.05 => No significant difference of average survey income of households in sample group and Control group in 2012

4.4 Surveyed income in 2012

Variable	Obs	Mean	Std. Dev.
Sample	296	7.478716	15.25947
Control	113	6.030089	14.04478

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.Interval]	
Sample	296	7.478716	0.886939	15.25947	5.733187	9.224245
Control	113	6.030089	1.321222	14.04478	3.412257	8.64792
combined	409	7.078484	0.738283	14.93084	5.627172	8.529797
diff		1.448628	1.651519		-1.79795	4.6952

diff = mean(1) - mean(2) *t = 0.8771*

Ho: diff = 0 *degrees of freedom = 407*

Ha: diff < 0 *Ha: diff != 0* *Ha: diff > 0*

Pr(T < t) = 0.8095 *Pr(|T| > |t|) = 0.3809* *Pr(T > t) = 0.1905*

Using the Pr(|T| > |t|) = 0.3809>0.05 => No significant difference of average survey income of households in sample group and Control group in 2012