Mekong Institute


A Comprehensive Report on SME Cluster Development in CLMV Countries
Mekong Institute

SME Cluster Development in CLMV Countries
(Cambodia, Laos, Myanmar and Vietnam)
Comprehensive Report

April 2013
This publication of Research Working Paper Series is part of the three-year project on “Capacity Development Program for Integrating CLMV Economies into AEC” funded under the New Zealand Aid Programme in the CLMV Countries (Cambodia, Laos, Myanmar and Vietnam). This research has been pursued by the team of Trade and Investment Facilitation Department of Mekong Institute.

The findings, interpretations and conclusions expressed in this report are entirely those of the authors and do not necessarily reflect the views of Mekong Institute or its donors/ sponsors. Mekong Institute does not guarantee the accuracy of the data included in this publication and accepts no responsibility for any consequence of their use.

For further information, please contact the Technical Coordination and Communication Department of Mekong Institute, Khon Kaen, Thailand.

Telephone: +66 43 202411-2
Fax: +66 43 343131
Email: library@mekonginstitute.org
TABLE OF CONTENTS

LIST OF FIGURES ................................................................................................. v
LIST OF TABLES ..................................................................................................... vi
LIST OF ABBREVIATIONS ..................................................................................... vii
ACKNOWLEDGEMENT ........................................................................................... 1
ABSTRACT ............................................................................................................... 2
1. Introduction ........................................................................................................... 4
2. Objective of the study ........................................................................................... 6
   2.1 Research Questions ......................................................................................... 6
   2.2 Scope and Limitations of the Study ................................................................. 6
   2.3 Methodology .................................................................................................. 7
   2.4 Data Collection ............................................................................................... 7
   2.5 Data and Data Analysis .................................................................................. 8
3. Review of Literature on SME clustering ............................................................ 89
4. DESCRIPTION OF THE CLUSTERS UNDER STUDY ................................ 1142
   4.1 History of the clusters ..................................................................................... 1142
   4.2 Current output market and marketability ....................................................... 12
   4.3 Raw material supply to the clusters ............................................................... 1344
   4.4 Production efficiency .................................................................................... 14
   4.5 Market acceptance ......................................................................................... 14
   4.6 Value Chain structure ................................................................................... 15
   4.7 Value Addition and power structure ............................................................. 2120
   4.8 Role of Support Agencies: ............................................................................ 2322
   4.9 Export Consortium: Status ........................................................................... 2725
5. Conclusion and Recommendations: ................................................................. 2927
References ............................................................................................................ 4036
LIST OF FIGURES

Figure 1. Cluster Value Chain Map of Village Handicraft Makers ........................................ 15
Figure 2. Cluster Value Chain Map for Silk: Cambodia ...................................................... 16
Figure 3. Mango Cluster Value Chain .................................................................................. 20
**LIST OF TABLES**

Table 1. SME Cluster under the Study in CLMV ................................................................. 6
Table 2. SME Sectors in the Three Levels ........................................................................ 10
Table 3. Value Addition in Rattan Based Chair ................................................................. 21
Table 4. Value Addition by Each Actor of Rattan ............................................................. 22
# LIST OF ABBREVIATIONS

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AEC</td>
<td>ASEAN Economic Community</td>
</tr>
<tr>
<td>ASEAN</td>
<td>Association of Southeast Asian Nations</td>
</tr>
<tr>
<td>BDS</td>
<td>Business Development Service</td>
</tr>
<tr>
<td>BMOs</td>
<td>Business membership organizations</td>
</tr>
<tr>
<td>BTCA</td>
<td>Bat Trang Ceramics and Pottery Association</td>
</tr>
<tr>
<td>BTEP</td>
<td>Bat Trang Exporting Promotion Center</td>
</tr>
<tr>
<td>CDA</td>
<td>Cluster Development Advisers</td>
</tr>
<tr>
<td>CDE</td>
<td>Cluster development executive</td>
</tr>
<tr>
<td>CEDEP</td>
<td>Cambodia Export Diversification and Expansion Program</td>
</tr>
<tr>
<td>CFC</td>
<td>Common Facility Centre</td>
</tr>
<tr>
<td>CMLV</td>
<td>Cambodia, Myanmar, Laos and Vietnam</td>
</tr>
<tr>
<td>COO</td>
<td>Country of Origin Certificate</td>
</tr>
<tr>
<td>DOF</td>
<td>Department of Fishery</td>
</tr>
<tr>
<td>ERIT</td>
<td>Economic Research Institute for Trade</td>
</tr>
<tr>
<td>GDP</td>
<td>Gross Domestic Product</td>
</tr>
<tr>
<td>GPN</td>
<td>Global Production Network</td>
</tr>
<tr>
<td>GMS</td>
<td>Greater Mekong Sub-region</td>
</tr>
<tr>
<td>GVC</td>
<td>Global Value Chain</td>
</tr>
<tr>
<td>HACCP</td>
<td>Hazard Analysis &amp; Critical Control Points</td>
</tr>
<tr>
<td>IPN</td>
<td>International Production Network</td>
</tr>
<tr>
<td>ISO</td>
<td>International Organization for Standardization</td>
</tr>
<tr>
<td>KSV</td>
<td>Khmer Silk Village</td>
</tr>
<tr>
<td>LWPIA</td>
<td>Lao Wood Processing Industry Association</td>
</tr>
<tr>
<td>LFIA</td>
<td>Lao Furniture Industry Association</td>
</tr>
<tr>
<td>MFF</td>
<td>Myanmar Fruit, Flower</td>
</tr>
<tr>
<td>MFVP</td>
<td>Myanmar Fruits and Vegetables Producers</td>
</tr>
<tr>
<td>MIC</td>
<td>Market Information Center</td>
</tr>
<tr>
<td>MNC</td>
<td>Multinational Corporation</td>
</tr>
<tr>
<td>MPEA</td>
<td>Myanmar Fishery Products Processors &amp; Exporters Association</td>
</tr>
<tr>
<td>MRMG</td>
<td>Mandalay Region Mango Group</td>
</tr>
<tr>
<td>NGO</td>
<td>Non-government Organization</td>
</tr>
<tr>
<td>RAC</td>
<td>Rattan Association of Cambodia</td>
</tr>
<tr>
<td>UAE</td>
<td>United Arab Emirates</td>
</tr>
<tr>
<td>UMFCCI</td>
<td>United Myanmar Fruits Chambers of Commerce and Industries</td>
</tr>
<tr>
<td>UMFFI</td>
<td>The Union of Myanmar Federation of Chambers of Commerce and Industry</td>
</tr>
<tr>
<td>SHG</td>
<td>Self Help Groups</td>
</tr>
<tr>
<td>SME</td>
<td>Small &amp; Medium Enterprise</td>
</tr>
<tr>
<td>SSOP</td>
<td>Sanitation Standard Operating Procedures</td>
</tr>
<tr>
<td>VHM</td>
<td>Village Handicraft Makers</td>
</tr>
<tr>
<td>WFTO</td>
<td>World Fair Trade Organization</td>
</tr>
<tr>
<td>WWF</td>
<td>World Wide Fund for Nature</td>
</tr>
</tbody>
</table>
ACKNOWLEDGEMENT

Mekong Institute would like to acknowledge the support of entire members of the action research team led by Mr Madhuriya Kumar Dutta, Program Manager, Trade and Investment Facilitation and Dr Nittana Southiseng, SME Specialist of Mekong Institute and the technical support of the Principal Researcher Dr Gautam Dutta from Indian Institute of Foreign Trade, India. The report also benefited from the views of participants in the round table meeting SME Cluster Development in CLMV Countries Expert Group Meeting on SME’s Participation in Global and Regional value chain in the Greater Mekong Subregion organized by the Mekong Institute in Khon Kean, Thailand during January 2013.

MI places on record the support received from the officials in relevant government ministries, Cluster actors of eight selected cluster in the CLMV countries who spent their precious time with the action research team responding to queries and having discussions with the team. MI is also thankful to all the national researchers for their contribution in the action research and preparing the national reports.
ABSTRACT

This action research is aimed at identifying potential of and designing strategy for developing dynamic and vibrant SME clusters in Cambodia, Lao PDR, Myanmar and Vietnam (CLMV). It is imperative to mention here that eight clusters, two from each CLMV countries were selected for the purpose of the action research. The clusters thus selected here are rattan and silk clusters in Cambodia, silk and wooden furniture clusters in Lao PDR, mango and fishery clusters in Myanmar and ceramic and tea clusters in Vietnam. It was found during conduction of the research that the concept of clustering and cluster development as a tool for small and medium enterprises (SMEs) development is yet to sink in the Government policy. Though there are some ad-hoc measures made in developing SME clusters in a few countries in different time scale, but devising a comprehensive strategy of cluster development to ensure holistic growth of small and medium enterprises and improving their global competitiveness has not been attempted previously in the CLMV countries. Only in Vietnam where the concept of ‘craft village’ has been adopted with moderate success in some locations, the local producers could derive benefits of collective efficiency. It is important to mention here that under this concept, the lead firms located in ‘craft village’ in Vietnam, make concerted efforts to develop business clusters under inclusive growth approach. For example, the lead firms in the ceramic ‘craft village’ in Vietnam, always search for export orders and execute production activity with collective participation and profit sharing by the members. However, there is lot of scope for enhancing efficacy of the ‘craft villages’ and improving their performance in an integrated, holistic and competitive manner.

The study found that the tea cluster of Vietnam has not made any effort to take benefit of collectivization. It was also found that rattan products manufacturing enterprises in Cambodia are facing challenges both in the internal and external fronts and the former challenges require immediate attention. In order to grab the export market sustainably, the local enterprises should expedite efforts to improve their quality, design, productivity and efficiency. In case of the silk cluster in Cambodia, the nature of problem is somewhat different as farmers’ lack of interest in mulberry cultivation has resulted in shortage of silk supply. Efforts to implement cluster development approach in the silk and wooded furniture sectors have not been pursued seriously in Lao PDR till date. Growth of these two vital economic sectors is primarily driven by large enterprises as a result, the cluster did not grow in size and holistic and inclusive development could not be pursued. These lead companies prefer to work with salaried weavers and farmers and increase their own businesses only. The two select sectors in Myanmar namely mango and fishery are reeling under international marketing in-efficiency. Mango from the Mandalay region in Myanmar is heavily dependent on the cross-border Muse market in China. In the fishery sector, the market is primarily dominated by the middlemen and the fishermen have hardly any idea about market, price, customers etc. and these results in distress selling many a times.

Based on this study, it can be inferred that in general, the select sectors under the study were in their primitive stage of clustering, except the ceramic cluster in Vietnam. The enterprises have no or very little idea about the benefits of cluster development. They basically possess symptoms of a tier-one cluster manifesting weak cluster actors linkages, inefficient networking, low level of social capital, lack of culture of entrepreneurship, inability to upgrade technology, lack of access to finance, lack of joint marketing and export initiative, value chain inefficiency etc. The vicious cycle of poor quality and poor rewards are omnipresent and business is dictated by larger enterprises/companies which have better access to resources and markets.

This study therefore presented a number of suggestions and recommendations to upgrade the clusters to the tier-two level which includes advocacy for deriving benefits of collectivization,
economies of scale and scope, appointing cluster development Advisors (CDAs), developing vision and mission of the clusters, preparing action plans for holistic development, implementation of full phased cluster development programme, formation of common facility centres (CFCs) etc.
1. Introduction

It is a matter of fact that the economic diversity of the countries in the Association of Southeast Asian Nations (ASEAN) is quite noticeable. It is often argued that the economic differences amongst some of the member nations are so wide that the further move toward integration seems difficult unless the situation is addressed right way. In terms of the economic status of the member nations, the ASEAN countries have been segregated in four strataums. There are two high-income countries namely Brunei Darussalam and Singapore having per capita GDP of 51,996 USD and 45,156 USD (2010) respectively. This reflects their income status. In the second level, Malaysia with per capita GDP of 13,214 USD is striving hard to match its rich counterparts. Amongst the five lower middle income countries, Thailand leads with GDP per capita of 7,663 USD (2010) followed by Indonesia 3,880 USD, Philippines 3,560 USD, Vietnam 2,875 USD and Lao People’s Democratic Republic 2,288 USD. In the lower echelon, the two low-income countries namely Cambodia and Myanmar exist with GDP per capita of 1,968 USD and 1,749 USD (2010) respectively.

In the year 2010, the average per capita GDP of the ASEAN countries was 4,748 USD. In comparative terms, the differences become more visible. The per capita income of Singapore in the year 2010, was about 50 times than that of Cambodia, 40 times of the per capita GDP of Lao PDR, more than 35 times than that of Vietnam. These economic differences known as the ‘Development Divide’, has become more prominent and important in the context of the members nations committing themselves in realizing integration of the ASEAN Economic Community (AEC) by 2015. It has therefore, became mandatory to remove this ‘Development Divide’ and accelerate integration of Cambodia, Lao PDR, Myanmar, and Vietnam into AEC 2015.

The future of ASEAN integration is, therefore, somewhat dependent on the ability of the member nations to remove the ‘Development Divide’ which may not be an easy task. This certainly necessitates adoption of policies that promote rapid economic development of the countries and economic convergence thereof. There are sufficient indications that the under-performing countries have already started adopting measures to accelerate their economic progress to match the economic conditions prevailing in the original member countries. Nevertheless, this development processes, has to go a long way and lot of things to be done before the ‘Development Divide’ is narrowed down substantially.

There are instances in many countries in the world wherein, vibrant small and medium enterprise sector contributed significantly in their economic development. The CLMV countries are also trying to follow this path of economic development through development of SME sector. They are trying to ensure that SMEs working in those countries under the aegis of cluster development not only become efficient and competitive but also get linked to the international markets effectively in order to achieve sustainable growth and holistic development. Even with conducive SME policies prevailing in these countries, achieving this task requires a comprehensive effort on the part of all the stakeholders because SMEs, in general, have lot of constraints on their capabilities to compete effectively in the regional and global market.

It is encouraging to note that the regional cooperation in GMS is getting strengthened with the passage of time and it is effectively supporting the participating countries in accessing regional markets without barriers. The SMEs operating in the CLMV countries, therefore, can improve their capabilities by participating in the regional market initially and then compete in the global market later on. Higher level of cooperation in core areas such as transport and trade facilities eventually created an enabling condition for the SMEs in CLMV to participate in the regional
networks. However, such initiatives though necessary but are not sufficient condition for significantly expanding and diversifying SMEs’ portfolio and accessing international product market directly or through global value chain integration. For example, expanding mango export from Mandalay region of Myanmar to Western Europe requires not only reducing physical and non-physical trade barriers within and sub-region but also enhancing their capabilities to become competitive suppliers to global retailers operating in a framework of global value chains (GVCs) and related international production networks (IPNs).

On the other hand, increasing business compulsions are pushing the MNCs to seek benefits derived from dispersal of production blocks geographically. For many MNCs, who have started shifting labor-intensive production activities to the developing countries, GMS sub-region became an attractive destination. Rising labor cost and currency appreciation in many erstwhile attractive locations like China are making MNCs to think of new locations. At this juncture, countries, including CLMV, with weak agglomeration economies are seemingly adjusting their policy frameworks to attract MNCs.

However, sustaining this attractiveness in the long run is a bigger challenge than attracting the MNCs for the first time and participating in global production network. It is important to mention here that low labour cost cannot be the only basis for maintaining a country’s competitive advantage and it becomes difficult to sustain competitiveness unless it yields benefits of agglomeration economies such as emergence of specialized personnel, parts suppliers and technological spillovers. Here comes the significance of developing dynamic and vibrant clusters which are not only competitive but have the ability to enhance productivity, upgrade value chain, even in the face of rising labour cost.

In order to support such efficient clustering phenomena, two types of public policies are important. The first type of policy is basically directed towards developing an enabling business environment such as macroeconomic stability, flexibility of labor markets, provisioning of general infrastructure, free trade and open investment. The second type of policy involves measures to promote agglomeration of specialized personnel, suppliers, and information spillover in specific industries so that clusters become more competitive and stable.1.

One can expect that if SMEs, which constitute a majority of enterprises in CLMV countries, are supported to form clusters and take benefit of cluster development, then they will be able to participate in the global markets more efficiently. Linking SMEs with regional and global production networks is another way of business internationalisation. Whatever is the mode of participation in the regional and global market, directly or through global production networks, it is imperative that SMEs are made competitive through cluster development, value chain upgradation and export development through export consortia.

The above reflections are the result of studying the status of SME clusters, their cohesiveness and linkage with the export network, scope for enhancing competitiveness through value chain integration, working of cluster based export consortia etc. in the CLMV countries. The study revealed the finer aspects of the status of SME agglomeration in CLMV countries and shed light on issues that are required to be taken into consideration for improving competitiveness of the SMEs operating in these countries and linking them in the regional and global markets. As indicated earlier, eight SME clusters, two from each country, were chosen for the purpose of this

study and development of those are considered important for ensuring growth of the national economy.

2. **Objective of the study**

The objectives of the study are as follows;

1. understand the status of cluster actors in select SME clusters in the CLMV.
2. investigate functioning of cluster value chain in each select clusters towards meeting the quality and quantity requirements of the market.
3. explore factors preventing SMEs from forming cohesive and vibrant clusters.
4. understand ways and means of tackling factors that are responsible in constraining competitiveness of the actors and value chain.
5. explore avenues for increasing participation of the cluster actors in formation and development of cohesive, dynamic and vibrant SME clusters and suggest policy measures accordingly.

**2.1 Research Questions**

According to the objectives of this study stated above, two interrelated and complementary goals were kept in mind while designing the study; (i) understanding the potential for developing cohesive, dynamic and vibrant SME clusters in the CLMV countries to facilitate SMEs integration into AEC 2015 and (ii) exploring the scope for improving competitiveness of the cluster actors and value chains. In order to achieve these twin goals, the following research questions were raised;

✓ What are the status of cluster actors and value chains in the select SME clusters in CLMV?
✓ What are the factors that have made both actors and value chains uncompetitive?
✓ What are the obstacles that are coming in the way of forming cohesive and vibrant clusters and how best would it be possible to tackle hurdles that inhibit competitiveness?
✓ How can the participation of cluster actors in the formation of cohesive and vibrant clusters be improved?

**2.2 Scope and Limitations of the Study**

As mentioned earlier, eight SME clusters, two from each country, were selected for the purpose of this study. These clusters are as under;

**Table 1. SME Cluster under the Study in CLMV**

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Country</th>
<th>Clusters under the Study</th>
<th>Geographical Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Cambodia</td>
<td>Rattan cluster</td>
<td>Surrounding areas of Phnom Penh</td>
</tr>
<tr>
<td>2</td>
<td>Cambodia</td>
<td>Silk cluster</td>
<td>In an around Phnom Srok</td>
</tr>
<tr>
<td>3</td>
<td>Lao PDR</td>
<td>Silk and handicraft cluster</td>
<td>Nongbouathong Tai Village, Sikhotabong District Vatchan Village, Sikhottabong District</td>
</tr>
</tbody>
</table>
Cluster actors like raw material suppliers, local traders, enterprises, middlemen connected with the value chains of respective clusters were included under the purview of this study. Therefore, attempts were made to elicit information from all the actors like primary producers, SMEs, middlemen, export companies and support agencies. The collected information was then analyzed in order to draw a meaningful conclusion towards answering the research questions posed in this study.

Considering the short timeframe for field work and intensity of information collection process, the researchers focused their study on a small sample size for each category of actors in the value chains. Here the researchers resorted to direct probing on the issues like raw material sourcing, production process, technology employed, skill set mapping of SMEs and collected opinion of the actors like entrepreneurs, other actors in the supply chain, domain experts, business development service providers (BDSPs), opinion leaders etc.

2.3 Methodology

While trying to find answers to the research questions, it was though prudent to map the clusters’ value chains. The value chain maps revealed information on raw materials supply, products and processes, value chain actors and their functions, flow of products and end markets, business interactions, contractual arrangements, infrastructure and transport facilities, knowledge and skill levels, costs and margins, availability of support services, regulations, etc. Secondary information was also collected and this was used to substantiate findings of the primary research.

It is imperative to mention here that the researchers have used the principles of action research. In action research, a fundamental cycle of activities is specified as taking place on a longitudinal basis which is intimately related to the research questions framed under the study. Each of the activities contribute, if probed properly, to the learning and understanding of the researchers. Therefore, in action research, repetitive cycles of planning, execution, observation and reflection are undertaken to create a knowledge base. The methodology adopted here, therefore, involved spiral of researchers’ self-reflective cycles of planning a change, acting and observing the process with consequences of change, reflecting on these processes and consequences and then re-planning, acting and observing and thereby creating the required knowledge based on enquiries conducted within the framework of research objectives already stated.

2.4 Data Collection

Both primary and secondary sources of information were used for this study. Primary data was collected from the cluster actors like different category of entrepreneurs, suppliers of raw material and machinery, industry associations, NGOs, business development service providers (BDSPs), relevant local government agencies, support institutions and other stakeholders. Secondary
information was collected from official websites, Government agencies, published reports, documents available with NGOs and associations. Before commissioning primary survey, secondary information was studied in detail.

A variety of action research tools were used by the researchers for primary data collection from the select clusters. These are described as under;

1. Questionnaire survey: This short survey was focused on collecting updated and detailed data on certain aspects of the cluster.
2. Interview: Both formal and informal interviews were conducted with the cluster stakeholders for the purpose of obtaining relevant information. Issues raised by enterprises were verified with local authorities and local government agencies and NGOs with expertise in the selected sector through interviews.
3. Focus group discussion: Focus groups were employed to record the answers of a group of cluster actors in certain particular areas of concern. This was used as qualitative data for the final report. Issues raised by the enterprises were verified through the focus group. Possible solutions were also discussed with all the focus groups.

2.5 Data and Data Analysis

Information gathered through the above process were sorted and categorized in accordance with the requirements of the study. The data thus generated was synthesized in the following formats to throw light on the functioning of the clusters.

1. Case study: Information collected from different sources was arranged almost chronologically in the form of story so as to enable learning expectations and depict a real world situation.
2. Cluster value chain mapping – this method of diagrammatic representation was adopted to understand the cluster situation and visually present the trends or patterns of the linkage of the cluster actors. This helped illustrate internal cluster dependencies, intensity of the support environment, number of actors, information sharing etc within a cluster.

Moreover, the study analyzed the collected data and placed them in more meaningful tabular formats, chart, graph etc. followed by detailed analysis.

3. Review of Literature on SME clustering

The rationale for SME cluster development and improving their competitiveness lies in their contribution towards local and national economy. The following areas need to be considered here;

- Concerted effort from all quarters including the Government is needed to create associations of small and medium enterprises, private and public research centres and centres of excellence. The efforts should necessarily be consistent with the overall economic strategy of the territory.
- The association of cluster actors should fundamentally be working on different objectives with common development strategy involving cohesiveness and public/private partnerships.
- The common development agenda should involve all the stakeholders and work towards holistic development of SME clusters with adoption of innovation, technology up-
gradation, benchmarking, value chain integration, leveraging core competencies, replication of ‘best practices’ etc.

- Attainment of international visibility with involvement of critical mass through export consortia and increased participation in the regional and global value chains.

In the first step, literature review and secondary sources of information were collected which helped in creating an understanding base for conducting primary survey. The results of secondary research are presented below.

Cambodia

In Cambodia, SMEs are defined based on both the employment provided and size of assets of firms. The categorization starts from micro enterprises employing less than 10 employees to small enterprises with 11-50 employees, medium enterprises with 51-100 employees and then large enterprises over 100 employees. Correspondingly the asset size also varies from less than US$ 50000 to over US$ 500,000. The mission and vision of SME development with policy prescription were spelt out in Small and Medium Enterprise Development Framework 2005 and National Strategic Development Plan Update 2009-2013. Interestingly, Small and Medium Enterprise Development Framework 2005 clearly recognized the importance of being competitive and hence focused on the use of flexible networks and clustering to overcome the limits of economies of scale by sharing production processes, supply or distribution networks. Under the component ‘SMEs support activities’ the framework envisioned Business Development Service (BDS) strategy to stimulate demand as well as the supply of needed services for access to markets, information flows through market research, technology upgradation through association building and value chain linkages amongst the SMEs. In a sense, this study found from the literature survey that Cambodia placed the clustering activities as the prime promotional strategy for the country’s SMEs and many efforts also made in the past years in this direction. As a result efforts for making industrial zones based on products like garment, footwear and textiles and traditional handicrafts, furniture etc were also made but substantial success are yet to be achieved.

Lao PDR

There is no direct support policy from the government for the SME cluster yet. However, the Lao government began promoting gradual economic liberalization through the introduction of the New Market Mechanism in 1986. This was followed by the Law on Promotion and Management of Foreign Investment and Business Law in July 1994. To promote and provide more incentives to FDI, the Law on Promotion and Management of Foreign Investment was amended in October 2004. In addition, Lao government also began conducting the Business Forum in Laos to facilitate dialogues with the business sector. Government efforts toward SME promotion were expressed in Primary Office Decree No. 42/PM, the goals of which were as follows: a) improve the regulatory environment; b) enhance the competitiveness of establishment; c) expand domestic and international market access; d) improve access to finance; e) encourage the development of business organization; f) enhance entrepreneurial attitudes and characteristics within the society. Literature survey shows that clustering movement has not gained the required momentum in the country through there are presence of few natural cluster like silk and handicraft.

---

2 Phouphet Kyophilavong, SME Development In Lao PDR, 2010, Working Paper, Faculty of Business Administration, National University of Lao PDR.
Myanmar

SMEs are considered as an important element in the national economics and hence given due consideration in developing policy towards this sector. In 1990, Small scale industrial enterprises got the definition and accordingly four criteria such as power (H.P) used (from 3 Horse Power to 25 Horse Power), no of worker (Employ 1 to 50 workers), capital investment (up to 1250 US$) and production value per year (3100 US$) were used to identify the type of firm and to channelize policy level support. The medium scale industrial enterprises would employ 51 to 100 workers, have a capital investment between 1250 US$ to 6000 US$ with a yearly production value between 3100 US$ to 12500 US$ and use up from 25 Horse Power to 50 Horse Power. There was no definition for micro enterprise or service sector enterprises. The latest revision July 2012 saw simplification of definition by omitting the power (H.P) used criteria from definition and significantly extended to cover the services sector enterprises. According to the present data from Industrial Supervision and Inspection Department, 72% of Industries is small size firms, 17% of medium and a small number (11%) of large firms in Myanmar. The number of small enterprises increased in numbers from only 30201 firms in 2000 to 33504 in 2007 and then to 31137 firms in 2012. The medium size of firms were also increased in numbers from only 4185 in 2000 to 6516 in 2007 and then 7287 during 2012. Not much clustering efforts has been seen in the recent past which pave the way for successful clustering of SMEs in the country.

Vietnam

The SME sector in Vietnam is well defined. According to the Decree 56/2009/ND-CP of government, SME sector is divided in to three levels: micro, small and medium enterprises based on criteria like total capital investment (equivalent to the total assets identified in an enterprise’s accounting balance sheet) and employment (the average annual number of workers employed)

Table 2. SME Sectors in the Three Levels

<table>
<thead>
<tr>
<th>Sector</th>
<th>Micro Enterprise</th>
<th>Small-size Enterprise</th>
<th>Medium-size Enterprise</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number of laborers</td>
<td>Total Capital (VND)</td>
<td>Number of laborers</td>
</tr>
<tr>
<td>Agriculture, forestry, fishery</td>
<td>Under 10</td>
<td>Under 20 billion</td>
<td>10 to 200</td>
</tr>
<tr>
<td>Industry and construction</td>
<td>Under 10</td>
<td>Under 20 billion</td>
<td>10 to 200</td>
</tr>
<tr>
<td>Trade and service</td>
<td>Under 10</td>
<td>Under 10 billion</td>
<td>10 to 50</td>
</tr>
</tbody>
</table>

Note: 1USD equal to 21,000VND

One important initiative of cluster formation in SMEs in Vietnam is the most recent “SME Cluster Development” project completed jointly by UNIDO and the Ministry of Planning and Investment (MPI), government of Vietnam under the project title “Assistance to Establish the National and Provincial SME Support Infrastructure”. This project was jointly financed by Finland, Italy and Norway with the objective of development of industrial clusters to boost the competitiveness of Vietnamese industries. The project is currently assisting industries in the textile and garment sector, footwear and leather processing and wood processing and furniture sectors in the areas of Hanoi, Hung Yen, HCMC and Binh Duong to imbibe competitiveness and efficiency. UNIDO began with mapping small and medium enterprise clusters in Viet Nam and
selecting three target clusters with a high development potential. The sectors were selected as these sectors are amongst top five export earners of Viet Nam. The objective behind the developmental effort of SME clusters was to push for sectoral and geographical concentration of enterprises which would produce and sell a range of related and/or complementary products efficiently and effectively in the world market and thereby contribute to the country’s sustainable growth.

4. DESCRIPTION OF THE CLUSTERS UNDER STUDY

4.1 History of the clusters

Cambodia: Both Rattan and Silk cluster are the natural clusters in Cambodia and have pretty old history connected with providing livelihood to a large number people. Cambodia has more than 21 Rattan species, of which more than ten are used for commercial purposes. According to the interviews with key Rattan entrepreneurs, the small scale Rattan enterprises were reeling under lack of technological modernization for a long period of time. WWF, an international agency working for the livelihood improvement programme for the poor, took initiative to improve communities’ livelihood status, sustainable rattan resource management, cleaner production, quality improvement of rattan products of rattan enterprises, productivity improvement and accessing international markets. A few rattan enterprises started to have modern machinery in 1999 but rest remained untouched due the issues of accessibility of new technology. Similarly, the cluster of silk weavers located in Phnom Srok has a pretty old tradition. Sericulture and weaving activities are traditionally women’s work and the knowledge and skills are passed down from mothers to daughters. Silk yarn production and weaving activities were destroyed during the Khmer Rouge period. The weaving activities and sericulture were resumed in the 1980’s. The sector was fully revived after 2002 under the patronage of Cambodian government. Presently about 95 families in Phnom Srok area are connected with weaving as profession.

Lao PDR: The weaving tradition in Lao PDR like Cambodia is ancient with unique features, techniques and patterns which still have demand in the local and international markets. Almost all the weavers in Laos traditionally use natural dye and produce the traditional style of hand woven clothes, home accessories, souvenirs and etc. On the contrary, the furniture cluster of Laos is comparatively new and dominated by small furniture companies who particularly sell products in the domestic market for the local people. However, the furniture sector always had the potential to grow because of huge reservoir of forest resources of the country.

Myanmar: The country is endowed with mango resources because of the congenial tropical and sub-tropical climate of the country. Therefore, mango trees can grow well in various locations and hence there are over 200 kinds of mango species in Myanmar. However, only a few species of mango grown in the major production areas like Yangon, Mandalay, Saging, Bago and Ayeyarwaddy regions are having international acceptance. Fishery and fishing is another intimately connected product with the life style of the average Myanmar population. Fishing, classified into two parts, freshwater fisheries and marine fisheries has been providing lively hood
to a bulk chunk of population living in the areas like delta region and coastal region namely Ayeyarwaddy region, Rakine state and Tanintharyi region

**Vietnam:** The country is famous for both tea cultivation and ceramic production from the ancient period. Like fishing in Myanmar, tea cultivation has been very traditional and intimately connected with the Vietnamese people for thousands of years. Vietnam’s famous tea-growing areas appear in history books, and today cover more than 130,000 hectares in the northern and central midlands and highlands of the country. Simply put, growing and drinking tea is an integral part of the national culture of Vietnam. Vietnam saw its ceramic production in the craft villages undergoing transformation from producing products for own consumption in the ancient days to the recent days when products are produced and exported as per the external demand.

### 4.2 Current output market and marketability

Cambodia has been the exporter of rattan canes without value addition to the countries like Thailand, Vietnam and Hong Kong in the absence of modern facilities for taking up production of value added products in the country. Currently also the situation has not been improved much. Primarily two types of rattan products are being produced and sold in Cambodia: basket and furniture. The majority of rattan products in Cambodia are furniture which accounts approximately for 70 per cent of total rattan products and the rest are baskets. In the absence of product variety as per the international tests, the sector is almost confined to the domestic market apart from sporadic sell to the foreign visitors visiting Cambodia. This study found that the products produced in the silk cluster are also very traditional in nature which includes blankets, scarves, sarong, small scarves, body cleaning cloths as finished product and plain fabrics as semi-finished products. These products are mostly marketed in a) local Khmer market b) high-end tourist market c) Low-end tourist markets. Only some high value products find their route to international niche market where Khmer silk products are in demand because of traditional values. The most common destinations for non-tourist exports are USA, EU (primarily France, Italy, Germany, and Switzerland), Singapore, Japan, and Australia. The product basket includes plain silk fabric, scarves, handbags, cushion covers, and other home accessories. It is a general trend in the cluster that with the increase in tourist arrivals there would be boost in sales of silk fabric. Products such as silk fabrics, scarves, blankets, and body cleaning silk are also directly exported which constitutes to about 80% of the total direct exports sales and balance 20% covered products like shirts, handbags, cushion covers and home accessories.

Rural weavers of Lao PDR, historically, are oriented towards producing traditional products. However, with the passage of time the rural weavers, apart from producing traditional clothes, have increased product portfolio with different items such home decorations and accessories from natural silk yarn for commercial purpose. At the domestic market, silk products are available at local markets for Lao population and tourists. At the regional and international markets, Lao silk handicrafts are in demand and are providing important export earnings and niche market opportunities for Eco-textiles and home decorations. The major markets for Lao silk and handicraft have been the rich countries like EU, Japan, and Singapore where these products are regularly exported. In the wood and furniture sector Lao has long been exporting logs to the different countries. Export values of wood products in the year 2008 stood at US$ 59.3 million and accounted for 5.9% of total export volumes. However, government did not allow exportation of log wood as the country decided not to destroy natural forests resources quickly. However, the country welcome big international companies to invest in the sector and produce furniture with the state of the art technology primarily for export markets. However, the government
ensured that these companies were using the country’s natural resources on a sustainable basis i.e. through adequate re plantation.

The mangoes are very favorite fruit in Myanmar where people like mangoes in different formats like fresh mangoes, green mangoes, salted mangoes, mango pickle, ripe mangoes, mango leather, dry mango and mango juice. Only fresh mangoes are exported to China, Singapore and Malaysia but other value added mangoes are not marketed internationally due to technology backwardness in production and packaging. Salted mangoes, mango leather, dry mangoes and mango juice are consumed locally in off-mango season also. A few enterprises tried to export mango leather to other country markets currently but with limited success. Salted mangoes used to be exported out to China in the past but it is now stopped and hence mostly produced for local consumption. In the fisheries sector Myanmar is blesses with many variety. Myanmar has not only fresh water fish but also marine fish and fishery products. There are also various kinds of fish species and the prices of these species are also different according to the size of fish and species of fish. The most popular exported species are Prawn, Rohu, Hilsa, White Pomfret, Tiger, Pink, Live Eel, Live Crab, Ribbon Fish, Rosy Jew Fish and White. According to the current study for Prawn, the profit may be 30-35% for the wholesalers when marketed locally because their selling price is 30-35% higher than the price of collection.

Bat Trang craft village in Vietnam is very famous for ceramic products. Ceramic Craft Village of Vietnam produces basically three categories of products. One, out-door decoration and appliances like vases, pots, trays, statues, garden decorations, etc. two, in-door decorations and table wares like tea sets, bowls, cups, plates, trays, vases, jars, pots, etc and three, a new products category like clayed dioramas/pictures, do-it-yourself tourism products etc. The craft villages are increasingly becoming destination of increased foreign tourist inflow and hence the products are well accepted in the foreign markets. Apart from direct selling, the bigger companies located in the cluster village, are regularly exporting their products in different countries of the world.

4.3 Raw material supply to the clusters

In Cambodian rattan cluster the harvesters of rattan are the initial actors who pick up rattan from the forest to supplement their income generated from farming activities. They do not have regularity in rattan harvesting and many a time it is need based. Also regularity of planting new plants when plucking the older one is not in the priority list of the harvesters. This put a question mark on making this raw material available for future years. In the silk cluster almost the same story is repeated. Mulberry tree cultivators are switching from growing mulberry trees to cassava plantation for exporting to Thailand and earn more money. Lack of mulberry leaves for raising silkworm coupled with lack of disease control efforts has affected supply of raw silk to the weavers.

In Lao PDR also shortage of domestic silk yarn is a chronic problem of the weavers. Limited area under mulberry cultivation affected the silk worm rearing which in turn affected the production of raw silk. In the wood and furniture cluster of Lao PDR, the government control on deforestation has put an end to the illegal cutting of trees from the forest. The big companies because of their organized ability utilize wood from different sources which are not threatening the deforestation process.
Both the cluster in Myanmar i.e. mango and fishery has no major problems in regards to the supply of either mango or fish. The Mandalay Region has more than 1,000 acres of mango plantation and increasing under the patronage of the association of mango producers.

The study has not reported of any major problem for the ceramic cluster in terms clay availability for the ceramic cluster in Vietnam. However, the tea cluster is suffering from low yield per hectare which may become acute if measures are not taken at the right time.

### 4.4 Production efficiency

Rattan furniture cluster in Cambodia uses either all rattan canes or rattan cane mixed with wood to produce the products. The quality of the finished products suffers because of variety of reasons like inadequate treatment of rattan after taken out of the forest. Then, in the production system, the furniture makers use very old machineries for splitting and sizing machines leading to further quality degradation. Further to it, limited skill of the worker coupled with lack new design make the product not attractive for the foreign markets. Similarly, Cambodian silk weavers’ production efficiency, in general, has suffered due lack of upgraded skill of the weavers and traditional weaving methods. In addition, the weavers consider weaving as secondary activity. They like to consider them as farmer first and then as weavers. Secondly, outdated weaving equipments and low weaving skills of weavers further affected the production efficiency. Comparatively, the weaving efficiency of the Lao weavers is better than the Cambodian weavers but still requires skill up gradation training to hone it further. At present, most tea gardens in Vietnam tea cluster are old and hence with reduced production efficiency. No concerted efforts are seen in the horizon which will put new plantation area in place in a systematic way. At the same time, cultivation techniques are outdated, fertilizer is used inappropriately, and pesticide tends to be over used in some commercial areas, with adverse effects on the environment as well as on the productivity. The simultaneous existence of big and small players in the ceramic craft village of Vietnam has paved the way for the smaller ones to learn from the big brothers who are considerably efficient in terms of production. Since, often the big supply orders are distributed amongst the small ceramic producers and hence the bigger ones voluntarily come forward and share their experiences of productivity enhancement with the smaller ones. In Vietnam the smaller units in the ceramic cluster has a major problem of poor equipments and low technology. This result in high defect ratio accompanied with increase cost of low-value products.

### 4.5 Market acceptance

This study attempted to understand the level of market acceptance of the products originating from the clusters under study. Broadly, there are three types of customers at the local level for the Cambodian rattan cane based products. The owners of restaurants / guest houses / hotels / apartments are the primary purchase of the products for their customers. People living in their own or rented houses also purchase the products for own consumption. Foreigners living in Cambodia also use rattan based furniture. This study revealed that the products have not been able cope up with the expectation of the local as well as international costumers on various counts like design, quality, pricing, finishing, durability, aesthetic look etc. The Cambodian silk products are only highly rated in the international niche market where Khmer silk products are in demand because of traditional values. Comparatively, the silk products from Lao PDR like eco-textiles and home decorations are in demand and providing important export earnings and niche market opportunities. The mango and fishery products of Myanmar are being marketed almost locally. The mango productions are going out to China through Muse border indicating market acceptance of the product abroad. However, not many local entrepreneurs have tried to send mangoes to other
foreign country markets. Myanmar fresh water fish are in great demand and well accepted in many countries. Vietnam Tea has found out its niche country markets and earning foreign exchange for those countries. The Vietnam craft village concept is unique and it works almost in line with the clustering concept. The ceramic cluster is, therefore much more in a good shape to take the benefits of clustering. In fact, this study reveals that the products from this cluster are widely accepted across the countries of the world. So, it can be said that in terms of market acceptance the ceramic products from Vietnam cluster are well ahead than the other clusters covered under this study.

4.6 Value Chain structure

The efficient functioning of the value chain with the active involvement of the different cluster actors is an important component of cluster functioning. This study attempted to understand the value chain of different cluster under the study. They are described as below.

Cambodia: Rattan

The study, on a sample basis chose Prek Thnot District of Kampot province, and then studied the actors along the rattan value chain.

![Cluster Value Chain Map of Village Handicraft Makers (VHM)](image)

Rattan harvesters are the initial actors in the value chain. They are the villagers living in villages near the forest where rattan canes are harvested. Rattan harvesters go into the forest where rattan canes are available and cut rattans from the forest, and remove leaves and leaf sheath. The upper end of rattan canes are then cut off leaving usable rattan canes from 4 to 5 meters in length. Usually a group of harvesters are harvesting and storing rattan canes until a desired amount is reached before selling to local traders / rattan enterprises in Phnom Penh. Rattan harvesting is an income supplementing activity of the local villagers in Prek Thnot. Beside, rice farming and fishing, each rattan harvester spend one day in the forest and bring back from 30 to 50 canes (earning from 12,000 R to 20,000 R for the day). Local traders are actors who collect rattan canes from villages, transport them to members of Rattan Association of Cambodia and / or to export markets. These actors are important as they play all important role of linking the raw material with the producers. Village Handicraft Makers are the central actor in the value chain and add substantial value to the finished product. In Prek Thnot there are 12 village handicraft makers who

---

3 In Prek Thnot villagers harvest and sell only Pdao Chhveang. The price is 400 R per cane.
were trained by Rattan Association of Cambodia funded by WWF. These 12 handicraft makers are still operating and making furniture products such as bookshelves, simple chairs and tables. Village handicraft makers sell their products locally and to market in Kampot province. Other finished good manufactures cum retailers are comparatively modern rattan enterprises who are also the members of Rattan Association of Cambodia. Rattan enterprises in and around Phnom Penh are larger and more modern than those in the provinces. Rattan enterprises purchase rattan canes local traders who collect rattan from several provinces of Cambodia. Another actor like retail rattan shops are family based businesses that sell rattan products produced by rattan enterprises. It is interesting to note that in addition to retail rattan shops, rattan enterprises have their own shops and do retail sale too. This study was interested to understand the power structure in the value chain. This study noted that within the value chain, middle men i.e. the traders have more power than other actors in setting the business trend since they decide where to sell the products and at what price.

**Cambodia: Silk**

The study collected information during field survey to arrive at the Cluster Value Chain Map in order to understand the functioning of the value chain.

*Figure 2. Cluster Value Chain Map for Silk: Cambodia*
There are two value chains observed to be working for silk products in Cambodia. One, for those who use the indigenous silk yarn and another for those who use imported silk yarns from Vietnam and China.

**Value Chain Type 1:** Value chain for silk products made from silk yarns made in the country.

**Value Chain Type 2:** Value chain for silk products made from silk yarns imported from Vietnam or China.

The actors in the above value chains are describes below with their tasks and functioning.

Mulberry growers are the starting actor in the value chain. The study found that, presently farmers are not engaging themselves solely for growing of mulberry trees and selling the leaves to breeders but takes it as supplementary activities. Most of the Silk farmers / breeders plant their own mulberry trees. In case a breeder lacks mulberry leaves to feed their silk worm, s/he will buy mulberry leaves from other breeders who have surplus or have not rearing silkworms for some reasons. Weavers are traditionally mostly ladies. Weaving skills were passed on from mothers to daughters. Some weavers breed their own silkworm and grow their own mulberry trees. Starting from 2002, there were development projects implemented in the areas and the weaving...
communities got trained and their weaving skill was improved a lot. As a result, they are now able to produce products that meet international buyers’ requirements. It is interesting to note that some present weavers were previously working as weaving laborers and in course of time they picked up the skill of weaving. The local trader supplies imported silk yarns to weavers so that weavers can produce products according the orders. What the weavers earn is the wage from the local trader. Local traders are the middle man who plays an import role in the weaver cluster by supplying raw material as well as getting the weaving done by the weavers. Due to the fact that local production of Khmer Golden Silk yarns is very low and could not supply the whole cluster, the local trader also supply the weaving cluster with white silk yarns imported from Vietnam or China through Vietnam along with other necessary weaving implements. The local trader collects silk products from the weaver cluster and sells them to in tourist market in Seam Ream and in Phnom Penh where products are sold to tourists or get exported. Khmer Silk Village (KSV) is the association of the weaver which plays a very important role in the weaving community. KSV trains villagers in mulberry planting, chemical dyeing, natural dyeing, weaving, and design. KSV provides the weaving community linkage to international markets and train them about international requirements. KSV also assists in improving product quality to make sure that products from the weaver cluster meet international buyers’ requirements and specifications. There are other two types of intermediaries which are private firms and NGOs / Association (Social enterprises). Private firms buy silk products directly from the weaving community or from the middlemen. In case of Phnom Srok, silk products from the cluster go to private firms through the middlemen while KSV buys directly from the weavers or hire the weavers to produce the desired products.

Lao: Silk and Wood

The value chain in both the clusters in Lao i.e silk and wood is driven by the large companies. The result is also visible in terms of lack of participation from the small enterprises in different cluster meetings and activities. A central concern in this situation is “unpacking” the relationships between the lead firms and other local actors in the value chain who are already in or waiting for invitation for inclusion. For the relationship unpacking it requires advocacy from any neutral agent who required to be considered by different cluster actors as unbiased and working with a greater objective of cluster development. This is a big gap in the cluster value chain as observed by the study. In this situation, the role of a linkman can be effectively played by a cluster development adviser (CDA). In absence of a CDA this gap is widening. Therefore, this study suggests immediate appointment of a qualified and trained CDA for the concerned two sectors. In the wood cluster the supply chain has been developed and governed by the big companies in the most productive way. In fact, this is the way in which efficient and competitive companies work through vertical integration of major component of the production process. In fact, this provides a wonderful way for the small enterprises in developing linkage with the vertical value chain of the big companies who markets their products worldwide. However, due to lack of cohesiveness between the big and small actors the integration seems to be difficult. Therefore the solution lies only in developing a sound and cohesive cluster in the wooden sectors where both big and small enterprises are complementing to each other’s activities.

Myanmar (Mango and Fishery)

Mango farmers are the central actors for the mango cluster. However, not many of them are engaged in producing the value added products of mango like salted mangoes, mango pickle, dried mangoes, mango leather and mango juice. A smaller group of cluster actors are only the
SME department of Ministry of Agriculture, Food and Agriculture Organization, Ministry of Commerce, United Myanmar Fruits Chambers of Commerce and Industries (UMFCCI). Jointly they are responsible to technology upgradation, channelizing marketing knowhow, arranging loans for farmers, managing development funds from government or from banks. The cooperation and coordination between the supporting cluster actors and the producers would help the mango cluster to improve quality and quantity of the products suitable for regional to international markets. SME department of Ministry of Agriculture, provide technical guidance and latest knowhow of fertilizer, pesticide or fungicides use. There are no separate actors as business support service providers for packaging of raw mango or the processed one. Generally the farmers or the value added product producers are arranging the required facilities for themselves. The figure below shows how cluster actors are connected in the mango cluster.
Figure 3. Mango Cluster Value Chain

The fishery cluster value chain is very long and starts with the fishermen who are engaged in direct catching of the fishes either from fresh water or from the sea water. In fishery sectors, the clustering activities started long back when Myanmar Fisheries Federation (MFF) was established and attempted to bring all the cluster actors working for attainment of a common marketing goal under a common roof. MFF tried to unite various cluster actors like fishermen, retailers, ice providers, fishing boat repairing workshop owners, packaging service providers, fishing equipments and net suppliers etc through business linkage. The MFF also attempted to improve the co operation of the different cluster actors through organizing training workshops. In the fishery value chain the main actor is the fishermen who are dependent on the middlemen namely village wholesalers for selling their products in the domestic markets. For export market, the village wholesalers resell their products again to the urban wholesalers or export agencies operating from Yangon who in turn further process the fish with requisite packaging before sending to the export markets. Some export marketers are directly linked with the core cluster actors i.e. the fishermen.
Vietnam (Tea and Ceramics)

This study found that there are two types of tea plantation in the study area: one, concentrated plantation with industrialized tea planting and nursing and two, individual tea garden own by small tea farmers. The concentrated plantations are more modernised and entire value chain works under vertical system of management. Individual tea gardens are generally small in size, individual ownership; tea plants are cultivated in the hills. These are scattered and typically located in the remote and poor areas. Recently many such small tea plantation came up in Vietnam under ECO tea plantation programme. These tea growers in Vietnam lack training in modern methods of tea culture and harvesting. Pruning and plucking practices need to be significantly altered. They are involved in the practice of pruning the entire tea area annually once instead of maintaining a pruning cycle round the year. For tea processing there are many existing factories owned by individuals. The final products from various processing factories all over regions come to a tea packaging facility. Depending on the requirement of export contracts, dried tea can be packed in bags of 35kg to 50kg or packed in boxes printed with producers ’s brand name and logo. This study found that Vietnam tea is exported not only in bulk (bags) but also in finished well-packaged form. Sometime the design, outlook and brand name of the foreign distributors of finished tea products are also printed in packaged Vietnam tea. For the industrialized big tea producers the entire processes of production and marketing of the products are handled within the company itself. However, for the individual growers wholesaling and exporting are handled by the middlemen.

The cluster in ceramics is working based on the clustering principles of cooperation among small household producers and big merchant producers. In fact, this practice of cooperation formed long time ago. These ceramic product producers are the central actors of the cluster value chain. Many of them have family relation and staying in the craft village generation after generation. Since from the ancient time households living in the craft village had chosen ceramic production as their profession so the production process is also almost standardized. They follow almost similar production steps (from clay towards heating and selling) and produce same type of products. However, in course of time some businesses became more specialized with handling of more specific tasks. These businesses became big and the lead producers in the craft village. Whenever, they get bulk order it is shared also with the small producers. The association between the actors is also not very rigid and every actor has the right to join with others in case of requirements. This study found that the small size producers do not have formal type of marketing outlets. For marketing of the products they depend upon the retailers having retail shops in the central location of the craft village. However, it was observed that most of big members owned production line, kilns and showrooms, and these big families were in the fore front in leading the marketing and exporting activities.

4.7 Value Addition and power structure

Example: Value addition in rattan based chair:

This section looks at how value is added along the value chain. It is understandable that rattan enterprises produce a variety of products; therefore, to simplify the calculation of value addition a specific product ‘chair’ was selected to understand the phenomenon. The breakup of production cost of a chair was collected from local enterprises as given below.

Table 3. Value Addition in Rattan Based Chair
The retail price of this chair was found to be 18.00 US$. Therefore, the producing enterprise added value to the tune of 4.25 US$. In the same way the value addition by the other actors in the value chain are as stated below.

**Table 4. Value Addition by Each Actor of Rattan**

<table>
<thead>
<tr>
<th>Harvester gets by selling his rattan</th>
<th>Collectors gets</th>
<th>Processors / Wholesalers / Retailers gets</th>
<th>Retailers gets</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.5 US$</td>
<td>0.5 US$</td>
<td>4.25 US$</td>
<td>2.00 US$</td>
</tr>
</tbody>
</table>

This study, therefore, indicates that the producers cum retailers are the most powerful actor in the value chain.

**Example: Value Addition in silk**

Contribution of each actor in value chain is an important dimension in understanding its efficiency. Therefore this study tried to understand the value added parameter of each actor along the silk value chain i.e. from the sericulture stage to the silk products stage. For that purpose this study selected few products and explored the value addition parameters in each stage. Each weaving household raises about 10 to 15 raising trays of silkworms (raising trays of 1.2m in diameter).

- For raising 15 trays of silk worms it takes one and half month (technically there are about 25,000 worms)
- (Mulberry leaves required: 350 kg (350 kg x 300 R = 105,000 R) (silk worms are fed 4 times per day).
- Technically, 15 trays of silkworm produce from 2 kg to 3 kg of silk. However, silk farmers interviewed said 15 trays of their silkworms produce about 1.5 kg of silk.
- The prices of the three types of silk were (at the time of interview): Fine silk: 75 US$ / kg, Mixed silk: 45 US$ / kg, Rough Silk: 35 US$ / kg
- Most farmers who rear silkworms have their own mulberry trees on plots of land near their houses or quite a distance from their houses. They use their mulberry leaves to feed their silkworms. In case their mulberry leaves are not enough, they will buy leaves from other farmers who have abundant leaves or do not rear silkworms. The price of mulberry leaves was 300 Riel per kg (7.5 US cent per kg).
Suppose a farmer raises 15 trays of silk worms. He is likely to produce about 1.5 kg of silk in 6 weeks, which sell for 67.5 US$. In addition to this, the farmer could also sell dead larvae which can be served as food. A farmer can get 2 kg of larvae from one tray of silk worms. 1 kg of larvae can be sold for about 3 US$. 15 trays of silk worms would produce about 30 kg of larvae, which is sold for about 90 US$. In all a farmer can make profits from selling mulberry leaves, cocoons and silk yarns

**Value addition in finished products stage for simple blanket made of silk**

Two blankets (size: 1.2m x 2.2m) was taken as unit for this calculation. Raw material requirement for two such blankets consists of 2 Kg of silk. The costing at different stage of production are as listed below.

- Raw material: (1 kg of mixed silk @ 45 $ and another 1 kg of rough silk @ 35 $)
- Degumming and dyeing take one day: labor cost: 5$
- Warp preparation and weaving 2 blankets take 4 days: labor cost: 4x5=20$
- Water / soap / and khbong / labour 1.5$
- Natural dye / Chemical pigment / labour 0.5 $ 0.85 $

Therefore total production cost = cost of silk + degumming cost + Dyeing cost + labour cost: 45 + 35 + 5 + 20 + 1.5 + 1.35 = 107.85 US$

Selling price to middleman= 63 $ / blanket i.e 126 US$
So profit margin = 18.15 US$ (five days)
Middlemen sell blankets at 80$/blanket. i.e. 160 US$
So profit for middleman = 34 US$

The middlemen incur some costs such as costs for collecting products from the clusters (gasoline) and for sending the products to shops in Seam Reap. However, the middlemen collect products in bulk and therefore the cost is minimal but the profits are still high considering the effort and costs involved in the transactions. The study also observed that middlemen are the most powerful actor in the value chain as the producers are dependent on the middlemen for marketing of the products.

**4.8 Role of Support Agencies:**

The existence of support agency is very vital for the cluster value chain as it allows the smooth functioning of the chain, including transportation, packing and handling, business services such as consulting and accounting, quality and process certification, financial support, etc. These support service providers are not direct actors in the value chain but indirectly help the actors to work with efficiency.

**Support services in Cambodia: Rattan**

Presence of support agencies is very vital in the direction of making the value chain more active in a cluster.

**Indirect support**
Rattan Association of Cambodia, Trade Promotion Department, Ministry of Commerce, WWF rattan project, Trade Promotion Department, and Department of Small Industry and Handicraft are the agencies found to have interest in providing support services to the cluster indirectly.

**Rattan Association of Cambodia (RAC):** RAC supports the actors in establishing legal status at the central and local level, in promoting green Cambodian rattan products for international export, in getting government support with reduced bureaucracy, in increasing smoother trading channels. RAC actively engaged in promoting green Cambodian rattan products locally and internationally through trade fairs and other means available, prohibiting the export of raw rattan material and encouraging replanting of rattan, increasing knowledge, skills and attitude of stakeholders on the management of sustainable forests and improving the quality of production through exposure, and monitoring rattan trading in Cambodia.

**WWF Cambodia:** WWF intends to improve the livelihood of local communities through better rattan supply system, improve efficiency and effectiveness of entrepreneurs. They bring innovations and support processors through improving cooperation with institutions concerned and links to international markets.

**Trade Promotion Department, Ministry of Commerce:** This government department is involved in assisting Cambodian enterprises to identify business opportunities through dispatching trade missions abroad, hosting foreign business missions visiting Cambodia and organizing business meetings, seminars and conferences for Cambodian enterprises. It wants to assist Cambodian while participating in trade fairs and exhibitions in Cambodia and abroad. It organizes training for Cambodian enterprises in trade promotion and export marketing. It also provide consulting services and technical assistance programme in trade and export promotion. Above all it helps to formulate government level policy framework for the Cambodian business communities and for the development of business support activities.

**Direct support**

Existence of machinery supplier in the rattan cluster of Cambodia is of much of a requirement as the producers often require them. These machineries include splitting/seizing machine, drying machines, straightening machines, bending machines, and cane broaching machines. In fact rattan enterprises interviewed in this study found complaining about available of new and updated machineries on an easy financing scheme. As such the producers are using seizing/splitting machines, sanding machines which were bought from the foreign companies long ago. According to interviews with key rattan enterprises, in Cambodia there are no big suppliers of machineries that are used in rattan processing. Supplying machinery to rattan enterprises may not be a business idea for several reasons. First, there is a small market for that due to a small number of rattan enterprises. Second, smaller rattan enterprises do not wish to upgrade their machinery since the machinery is expensive and the actors do not have the buying power. Rattan products are mostly for local market which resist price increases and do not require much better quality, and hence the rattan enterprises are not also willing to invest in modernization desperately. Other small items such as nail guns, LPG burners, and brushing equipments are available at the Toul Tompong Market which is a traditional market in the center of Phnom Penh. Rattan Enterprises may also purchase them from retail shops near their processing factories.

**Other Support Services:**
- **Skill development**: No vocational training schools provide relevant training on rattan furniture design or furniture making in the vicinity of the cluster. WWF assisted the rattan enterprises in rattan furniture design but this was not continued thereafter.

- **Research institutions**: There are number of research institutions in Phnom Penh which could be of great use to the Rattan enterprise/farmers in extending research based understanding in the matter of scientific cultivation of the rattan, curing and maintaining Rattan in post harvest situation. However, all rattan enterprises interviewed did not acknowledge of receiving any support from the research institutions.

- **Accounting services**: Similarly, a number of accounting firms are operating in Phnom Penh who can assist rattan entrepreneurs in setting their accounting system in a professional way. But the rattan enterprises interviewed under this study found not interested in utilizing an accounting system to aid their businesses primarily due to lack of knowledge.

- **Micro Finance Institution (MFI) / Banks**: All rattan enterprises interviewed were found to be cash starved. On the other hand, they do not wish to take loans from banks and MFIs citing risks involved in servicing the debts. They prefer to expand their businesses with profits which they gain from their business operation.

**Support services in Cambodia: Silk**

In case of silk cluster there exist a number of organizations who are indirectly supporting the silk value chain actors. Their names are stated below with belief description about the support services they are likely to be discharged.

1. **National Silk Centre**: For providing training and consultancy services towards the initial and specialized sericulture process.

2. **Khmer Silk Village (KSV)**: For strengthening domestic silk yarn production of improved quality in the northwest areas of Cambodia through community training in the matter of mulberry plantation, extension of planting areas, breeding management and new breeding management.

3. **International Trade Center, Cambodia Export Diversification and Expansion Program (CEDEP)**: For improving the livelihood of rural poor producers through imparting skills development training and design development training based on creativity and tradition.

4. **Trade Promotion Department**: This department of the government is responsible for extending support to the entrepreneurs in the matter of developing market link with the domestic and international customers. It initiates, organizes and encourages domestic enterprises to participate in domestic & overseas trade fairs, national exhibition in cities, provinces and around the regions. This organization is also responsible for overall monitoring markets and provides feedback to the domestic producers so that small enterprises can frame strategy to compete in the market place.

**Impression**: The institutions listed above and few other institutions are responsible for indirect support to the cluster actors so that they can achieve the potential. This study found that through there are hordes of institutions present for providing the support services but interactions with the weavers or with the harvester revealed that of considerably less impact of the support services provided by these institutions on the cluster actors.

**Direct support**
For achieving the cluster efficiency it is important that there exist smooth supplies of input materials. Therefore, understanding the supply efficiency in the cluster is of utmost importance which this study endeavored to understand. Khmer Silk Village (KSV) is an organization which renders direct support to the cluster actors by providing them with silk yarns. However, there are no other agencies in the cluster that can stock and supply other important input materials like chemical dyes and other. Presently the natural dyes are arranged by the weavers themselves from tree barks etc.

**Support services in Lao: Silk and furniture**

Agencies like Department of Production and Trade Promotion and the Lao Handicraft Association etc are designated to provide support services to the cluster actors in silk weaving but when interacted with the cluster actors no major impact was found to be felt by them.

The main actors in silk production i.e. the weavers are typically based in places that are far from the markets. Although they themselves are the source of a great deal of creativity but theirs distance with the ever changing requirements of the end users is a matter of concern. Often they are not aware of the latest requirements of the customers. This ‘void’ has made the weavers reluctant to learn new design. Here comes the requirement of skill development training to set equation right. The requirement at this stage is to make the weavers’ skill upgraded so that they can learn, absorb and weave the latest commercial design given by the professional designers. Many of those involved in silk weaving in the cluster frequently pointed toward the scarcity of new design stream in the work compelling them to follow the traditional one which might have been outdated by now.

Similarly, in furniture sector two associations namely Lao Wood Processing Industry Association (LWPIA) and second, the Lao Furniture Industry Association (LFIA) are responsible for providing indirect services. However, these two agencies are yet to make any large impact on the smaller actors in the furniture sectors.

**Support services in Myanmar: Fishery and Mango**

Myanmar Fishery Federation started cluster initiatives way back in 1989 with the encouragement of the Department of Fishery (DOF) and other related agencies namely Myanmar Shrimp Association, Myanmar Fish Farmers Association (MFF), Myanmar Fishery Products Processors and Exporters Association, Myanmar Aqua-Feed Association, Myanmar Marine Fisheries Association, Myanmar Freshwater Capture Fisheries Association, Myanmar Marine Fisheries Association, EEL Entrepreneur Association, Ornamental Fish entrepreneurs Association and district or township Fisheries Associations. The MFF cooperated with the DOF in providing various training to the cluster actors which includes HACCP, GMP training, fish and prawn cultivation training etc to the fishery producers. MFF also organized weekly discussion sessions for the fisheries entrepreneur’s to sort out the issues faced by them and supported the export oriented entrepreneurs by issuing the Country of Origin (COO) Certificates.

In the mango belt agencies like Mandalay Region Mango Group (MRMG) was established during 2010 with 30 members including mango farmers, owners, brokers and leading association members with the aim of providing support services to the mango cluster actors. It aimed to provide technology as well as GAP (Good Agricultural Practice) training to increase yield and quality of mangoes required for reaching the international markets. The central governmental agency like Myanmar Fruit and Vegetable Producers and Exporters Association (MFVP) in
Yangon acted as the nodal organization to develop the entire support system in fruits and vegetable sector.

**Support services in Vietnam:**

The Bat Trang Ceramics and Pottery Association (BTCA) was formed by the ceramic and pottery entrepreneurs to act as the representative agency of all the cluster actors located in the Bat Trang area. This agency was mandated to instill greater professionalism in all aspects of doing business. Another agency namely Bat Trang Exporting Promotion Center (BTEP) was solely formed by the entrepreneurs to connect the export markets with the small business located in the cluster. BTCA supported the entrepreneurs by providing an umbrella brand image to the big as well as small cluster members. In case of quality products the member are even allowed to use the BTCA brand name and export their products via BTCA or BTEP. Updating members on new technologies in production like baking technology, shaping techniques was the responsibility of BTCA. The tasks of connecting members with external buyers, support to sign contracts, maintaining copyright protections, researching on external markets and promoting member products to international buyers were the responsibility of the BTEP. The study found that both BTCA and BTEP are sufficiently active in discharging the responsibilities entrusted on them.

**4.9 Export Consortium: Status**

**Cambodia:**

With the assistance of The World Wide Fund for Nature (WWF-Cambodia), the Rattan Association of Cambodia (RAC) was established in the year 2009 with participation of 11 small and medium Cambodian rattan products manufacturing enterprises, representatives from the Forestry Administration, Ministry of Environment, business enterprises and local and few international NGOs. Subsequently, other relevant institutions also joined hands with RAC to form it as export consortium which got recognition from the Royal Government of Cambodia. The association’s statutes and by-laws were also registered with the Ministry of Commerce. As of March 30 2011, the RAC is a provisional member of the World Fair Trade Organization (WFTO). The RAC is actively promoting ‘green’ rattan production quality to match with the international standards. RAC is also educating the entrepreneurs about importance of maintaining fair wages during production and protecting rattan forests through training and awareness building. With the assistance of WWF, RAC has been trying to advertise products of its members during trade fairs and through website hosting. This study found that most of the members of RAC agreed that participating in the association has been beneficial in terms of improved relations among rattan enterprises, learning from each others, raw material sourcing and improved production techniques. However, the most important expectation of its member’s i.e.RAC would ensure their products’ access to new markets beyond the border was not satisfied. The study also observed that RAC’s membership had gone down from 11 to 8 and then further to only 5 with the possible reason of lack of fund and therefore, now almost unable to conduct activities benefiting its members.

Another support organization namely Khmer Silk Village (KSV) is also acting as an export consortium in the cluster. Besides the efforts to improve silk yarn productions, skills and quality up gradation, KSV also playing the roles of intermediary i.e to buy productions from its members in the clusters and sell them in the local and international markets. KSV buys silk products from the cluster in Phnom Srok and export them to EU, Japan and Australia. However, not all weavers work for KSV or sell their products to KSV due to competition from the middleman. As the individual middleman makes quick payments and provides personal financial assistance to
weavers so many weavers avoid KSV. Besides this, to make products for KSV is more difficult than for the middleman because the products KSV orders are meant to export and must meet stringent quality requirements of international buyers. This makes middleman powerful and hence some weavers prefer to work for or sell products to the middleman although prices middleman offers are lower.

**Lao PDR:**

**Silk:** Economic Research Institute for Trade (ERIT) with the support from Mekong Institute, Thailand, made joint efforts on cluster development and installing an export consortium in the silk sector. The Ministry of Industry and Commerce as the highest policy making organizations of the country also supported the move. The responsibility was given to big enterprises namely Pheangmai Gellery etc to unite the small enterprises under a platform. But the move met with little success as the big enterprises could not increase membership strength further. So, there is no export consortium, presently functioning in real sense of term in this sector.

**Furniture:** The agro forestry enterprises grew up in Cambodia over the years based on the enviable forest resource of the country. These enterprises build business networks with material suppliers, local traders, tool suppliers, retailers and middlemen connected with the sectors. Big foreign companies came in with relaxation of FDI policies are quite comfortable in exporting their products to foreign countries. However, smaller furniture units are increasingly finding it difficult to send their products out of the country. Support service almost found nonexistent.

**Myanmar:**

**Mango cluster:** This cluster has been developed with support the of Ministry of Commerce and Union of Myanmar Federation of Chambers of Commerce and Industry (UMFFI) and private organizations. However, it requires to develop effective networking amongst cluster actors like mango farmers, marketers, material suppliers, private support associations, government support associations, trade bodies or intermediaries, etc. in order to make it a cluster in true sense. The present study finds out some obstacles for mango producers in marketing, communication with international customers and so on. Similar is the case with fishery sector. The most important things for these two sectors are quality of the products, regulation certification etc which require high order of support services. However, such support services in the form of consortia formation are not seen forthcoming, as observed by the study.

**Vietnam**

The Bat Trang Ceramics and Pottery Association (BTCA) has a long tradition of support the units located in the craft village. Another agency Bat Trang Exporting Promotion Center (BTEP) provides services to connect to the export markets if a business or household meets export standards and almost works like export consortia. Over the year the units located in the craft village leant to co operate with each other and unite for common cause. However, the same is not happening in the tea sector possibly because of the difference in the production process. By design the tea processors are big companies and unless the tea leaves, produced by the small producers, are process the product i.e finished tea cannot be exported. However, the big companies are handling the exportation process for themselves within the company set up successfully.
5. Conclusion and Recommendations:

5.1 Rattan Cluster (Cambodia)

It was found out that the rattan products manufacturing enterprises in Cambodia are facing both internal and external constraints and the internal issues require immediate attention. To be able to export rattan products regularly to the international markets, rattan products manufacturing enterprises should expedite their efforts to improve quality, design, productivity and efficiency. In the external front, existence of a small local market is inhibiting enterprises growth and constraining up-gradation of production processes, adoption of new technology and improvement in productivity. Entrepreneurs are shying away from making additional investment in new technology/production process. The recommendations of the action research team here is as under;

Disseminate the benefits of clustering

The rattan cluster here in Cambodia is a natural cluster having weak cluster actor linkages. The main actors i.e., the silk farmers need to be sensitized about their importance in the whole supply chain. There is a need to disseminate the benefits of clustering in terms of achieving economy of scale and scope. Once the members get convinced about the benefits of clustering, they could be encouraged to work in unison and promote export of their products to the international markets though export consortia. The entrepreneurs could think of hiring international designers or experts in international marketing to train them systematically.

Strengthening support services:

Rattan Association of Cambodia (RAC) should be strengthened so that it can provide support services to its members and encourage them to participate in value chain upgradation, market and export development through export consortia, brand building, design development, technology upgradation etc. It can play an effective role in policy advocacy. SMEs in this sector wish to see more assistance like support of the Government in terms of land concession for Rattan SMEs, improvement in legal structure, awareness building on quality of products etc. They need effective advocacy with garnering support from all the members of the cluster. Attempts should be made to make the RAC members aware about the significance of associations, clustering and export consortia. They should be provided capacity building support to become effective in the long run. The recent move of RAC for setting up a research institute for the rattan industry to support sustainable resource use, design improvement, innovative etc. is a welcome sign in this direction.

Though there are a number of support organizations, in reality, their services do not reach its members. In fact, the support organizations do not understand the requirements of the enterprises. There are problems with availability, accessibility, approachability of business development services (BDS) in this cluster. There is demand supply gap in terms of BDS market. Therefore, attempts should be made to establish linkages between the enterprises and support institutions and also between enterprises and business development service providers (BDSPs). The business membership organisations (BMOs) could play an important role and evolve a mechanism to understand the actual requirements of various actors and put a system in place to establish linkage with the support organisations.

Technological upgradation
One of the most important campaigns the RAC could take up is to make local people understand and appreciate the benefits of rattan and encourage people to use rattan instead of wood furniture, as wood is expensive and the issue of deforestation crop up. When the size local and export market grow, rattan enterprises will be motivated to improve technology, increase production, improve quality and productivity. This will also facilitate induction of more cluster actors such as suppliers, designers, training institutions or vocational training centers, investors etc. and encourage them to participate in value chain up-gradation and value chain integration in the regional and global context.

**Dissemination of market information**

The cluster in the present state has no information collection and dissemination structure. In this context, RAC can play a pivotal role. Information about latest technology, market, designs, trends, competition etc. need to be collected systematically and disseminated to the members for their overall benefit. They could be made aware of the activities which can be completed with joint participation resulting into collective efficiency. Information on foreign markets needs to be disseminated to the members so that the cluster can export its products on a regular basis. Procedures and formalities of export documentation need to be passed on to the cluster enterprises regularly.

**Empowerment:**

Empowerment programme for the main cluster actors like farmers and weavers is the need of the hour. With empowerment, these cluster actors will think about their requirements and possibly come out with solutions thereof. Outside intervention many a times may not be well received by the actors in a traditional cluster. With empowerment and updated information received from RAC, the clusters actors would be more proactive in spelling out their requirements with possible internalization of solutions.

**Product diversification**

The possibility of product diversification has not been explored much in this cluster. With increased market competition in the same product category, it is worthwhile for the enterprises to diversify their product portfolio. It is believed that with imbibed dynamism, the cluster enterprises would continuously search for diversification opportunities and manufacture products as per the requirements of domestic and international markets.

**Internal strengthening**

The management and accounting practices of the rattan enterprises should be improved. They should be trained to maintain basic set of accounting practices and produce financial statements so that they have a better control on their finances and profits. Management and financial disciplines should be inculcated amongst them and they should be trained on improving operational efficiency. Here RAC can play an extremely important role in this direction.

5.2 Weaving Cluster (Cambodia)

**Strengthening supply of raw material inputs:**
As indicated earlier, the farmers operating here started switching from growing mulberry trees to cassava for exporting to Thailand. This has caused lack of mulberry leaves for raising silkworms and this is considered to be an important pressure point of this cluster. Though efforts are made by the KSV in this direction, however, more concerted efforts should be put forward. They should be trained to analyse the long term economies of planting mulberry trees vis-à-vis cassava so that this issue can be resolved without further delay. Continuance of farmers’ switching over acted as a stumbling block in increasing the raw material supply. In addition, silkworms are getting increasingly susceptible to diseases, which have hit the silk production. The stakeholders believed that the silkworms get affected by the overuse of chemicals in the paddy fields. There should be a concerted effort by all the stakeholders to salvage the situation. To start with, a scientific study can be initiated to understand the dynamics of how chemical contamination affects silkworms and what sort of corrective actions should be taken up for this.

**Quality consistency:**

International market demands consistency of quality at every stage of production. This requires enhancement of skill of the local producers and assurance that the producers work with high quality raw material. Therefore, a training need assessment survey can be initiated in this cluster to understand the skill gap and understand the types of training required by the stakeholders in the supply chain in the cluster area. Accordingly skill development/up-gradation trainings should be organized in a phased manner involving different cluster actors from silk farmers to weavers.

**Correcting power imbalance and reducing dependency on middlemen:**

It was found here that the middlemen are more powerful than the producers in the supply chain. This has happened due to lack of access to market information on the part of the weavers. For example, the weavers are not aware about the final price of their products in the local market in Siem Reap although Siem Ream is just one and half hour’s drive from the cluster. Basically the weavers depend on middlemen for market information, working capital, raw material, access to yarn supply etc. The producers have no direct contact with the market and therefore have little understanding about the buyers’ requirements. Whatever little information about the market, buyer, and their tastes and preferences etc. they have, they get it from the middlemen. Therefore, it is imperative that the producers-market linkage needs to be improved. The cluster development executive (CDE) could be engaged in this job and he/she independently or in consultation with Domain Expert should access and disseminate information about market, market demand, tastes and preferences of the customers, market price etc. With updated information, the producers/weavers should be able to bargain with the middlemen or search direct marketing opportunity themselves. This will reduce their dependence on middlemen. The weavers’ dependency can further be reduced through setting up of a weaver material bank and saving groups so they become self-reliant in the fronts of input procurement and finances.

**Training on entrepreneurship:**

In practical sense, the weavers should act like entrepreneurs who continuously search for new markets and new and innovative products. This requires change in the mindset of the weavers. This can be made possible through entrepreneurship training designed to motivate weavers to act as independent business entities and having specific business goals. Presently, the weavers consider weaving as a part-time activity and hence are not fully committed to this occupation.
Entrepreneurship training can turn around this situation and can create a dynamic and vibrant enterprise cluster.

5.3 Silk and Furniture (Lao PDR)

Disconnect between the cluster actors:

The clusters of silk and handicrafts were formed through external interventions and two lead companies were entrusted with the responsibility of taking forward the development agenda with inclusion of more cluster actors subsequently. Initially there were six producer companies who were brought under the aegis of the cluster. These lead companies preferred to work with salaried weavers and farmers and focused on increasing their businesses. They engaged about 200 silk farmers and weavers to work with them on salary basis for supplying silk yarn and weaving. This arrangement, therefore, failed to incorporate independent weavers and silk farmers under the ambit of the cluster. As a result, the present clustering process could not be considered as an inclusive process since a large majority of the actors remained outside the purview of the clustering initiative.

Shortage of silk Yarn:

The rich tradition of Lao silk has contributed in creating a brand value in the international market. It was found during the study that about 80-90% of the silk yarn, for making textiles in Lao, comes from Vietnam, China and Thailand. This is a serious issue and requires concerted effort from the Government and other stakeholders. The problems of the silk farmers need to be addressed. They need to be properly rewarded for their labor in producing quality silk yarn. Efforts should be made so that they feel a sense of inclusiveness in the cluster. Secondly, cluster development initiative must support activities directed towards enhancing the yield of silk yarn.

Competition from Chinese low cost products:

The local products are found to be far more expensive than the imported products from China. In reality these Chinese products are mere replica of the original products but they come with much lower price tags. This poses a serious threat to the local producers who use original Lao silk and produce genuine quality products. It is a matter of fact that the indigenous producers are fast loosing out markets to the ‘copy products’. This issue requires to be handled with utmost care. Introduction of quality mark which can only be used by the producers using original indigenous Lao silk, will possibly sort out this problem.

Power Imbalance in the value chain:

The cluster development effort in both the sectors i.e silk and wooden furniture, were driven by the big companies. It was found during this study that only a few members attended cluster related meetings. The main concern here is how to “unpack” the relationship between the lead firms and other local actors in the value chain; who are either included or waiting invitation for inclusion. For this relationship unpacking, it requires advocacy from a neutral person who is considered as unbiased and work with the larger objective of cluster development. The Cluster Development Executive (CDE) can play a pivotal role here, as observed in the dynamic clusters in different countries. Therefore, appointment of a qualified and trained CDE is highly recommended here.

Exclusive supply chains governed by powerful global actors:
In the wooden furniture sector the supply chain was governed by the big companies operating with production and management efficiency. However, the small local players could not follow this production and management system due to host of reasons. Thus, the solution lies in developing a sound and cohesive cluster where the supply chain is governed by both small and large companies through networking, joint action and collective participation. The small enterprises will be supported to participate in value chain up-gradation through collectivization of efforts.

**Small cluster size in silk and furniture:**

Based on the findings of the study, one can infer that more and more quality actors should be included in both the clusters. The cluster actors should be able to internalize the benefits of cluster development. A well conceived agenda for promoting the benefits of clustering and facilitating the process of cluster development, is required to be put in place through involvement of the Government and business associations. It would spread the message from a neutral platform and induce other actors to voluntarily join the process of cluster development.

**Entrepreneurship training:**

The weavers need to be empowered to work as entrepreneurs through conduction of well structured training programmes. They will then be able to manage their businesses more professionally and put concerted effort for their business growth, increase turnover, income and profitability. This will facilitate them to proceed upwards in the value chain ladder. Entrepreneurship training programmes conducted in phases for the benefit of weavers can have a cascading effect in the entire cluster.

**Technology infusion:**

Action research has unearthed the requirements of technology infusion and provision of financial support to the weavers in the silk sector. There is an urgent need to dissemination information on the appropriate techniques of silk farming and weaving. Documentation of ‘best practice’ elsewhere and dissemination of the same would allow them to move forward in the right direction. Shortage of funds in the hands of the weavers is an area of concern here, as this constrains adequate investments in technology. Formation of Self Help Groups (SHGs), could prove worthwhile here.

**Training of Government officials**

It is not possible to propagate the concept and mechanism of cluster development without proactive support from the Government. Concerned Government officials could be trained on the principles of cluster development and export consortia in order to ensure that they extend required support services for the benefit of the enterprises. This could go a long way in transforming the under-performing clusters into dynamic clusters where SMEs flourish and contribute to the economic development of the country. In this respect, inter regional developmental organizations like Mekong Institute (MI) could be consulted to understand the training needs and designing a customized training-cum-orientation programme for the Government officials.
5.4 Mango and Fishery (Myanmar)

Clustering and Support Services

As discussed earlier, agriculture is the main sector in the Myanmar’s economy and it provides employment to two-thirds of its population. Most of the small and medium enterprises in Myanmar are resource based industries and constitutes 89% of the total industries. Therefore, the needs of developing SMEs in the two vital sectors namely mango and fishery, cannot be underestimated. The examples of successful SME clustering in different countries in the world suggest that, the vital sectors of an economy could be developed holistically through cluster development approach wherein, the actors work in unison to fulfill common development goals and objectives. This study found that the mango and fishery sectors are still in the incipient stage of cluster development and some of the members were not even aware of the clustering concept and the benefits associated with it. These two natural clusters, therefore, have all the characteristics of a tier-1 cluster as stated below;

- Weak cluster actor linkages and inefficient networking.
- Main actors are not sensitized about their importance in the value chain.
- Cluster actors are not empowered to act like entrepreneurs and focus on increasing earning and profitability.
- Technology and finance are the two major requirements in the value chain and absence of these factors lead to the vicious cycle of poor quality and poor rewards.
- The cluster value chain is imbalanced with domination of the actors who are close to the markets.

Middlemen domination:

Fishermen are the core producers in the fishery value chain. Then there are several layers of middlemen like local agents, regional brokers and wholesalers; before the final product reaches the consumers. This unnecessary long chain increases price of the final products in the external market. It was found that the middlemen dominate the supply chain because they possess the vital market information. There is no formal channel of communicating market information to the producers in both the clusters under study. Since the clusters are dealing with perishable products, the producers are wholly dependent on the middlemen and they often resort to distress selling. According to the present study, the profit margin of the wholesalers dealing with prawn is more than 30-35% compared to much lower profitability earned by the fishermen. Lack of market information prevents the producers in getting a higher bargain against the middlemen. Installing a system of information dissemination across the value chain actors is the need of the hour. It could imbibe efficiency in the operations of the value chain.

Lack of cluster cohesion

It has been observed in this study that in the past, cluster development effort was initiated in the mango cluster but it did not produce much impact. The cluster cohesiveness was found to be missing. It is therefore, necessary to promote cooperation amongst various actors of the cluster and build a trust based relationship and coordination amongst the members. The difficulties faced by the producers in the clusters like price discrimination in the Muse Market, lack of market information and awareness about the requirement of value addition, requirements of assistance from the related Government department and actors in similar clusters need to be handled properly. Similarly, in spite of establishing Myanmar Fishery Federation in 1989 as an association
of cluster actors, networking amongst actors in the fishery value chain has not been improved. Actors are still seen to operate in isolation. Most of the activities of the Myanmar Fishery Federation are confined to a small section of its members and the benefits did not percolate to the actors operating in the townships and villages. Although there are branch associations in some rural areas but, the system of communication is lacking and the benefits are not reaching the rural people, fishermen. Therefore, it can be inferred that the concept of cluster development is yet to sink at least in the two sectors covered under the study. The support organizations need to play important roles in this direction. Learning from ‘best practices’ of other countries should be disseminated for overall benefit of the sectors.

**Resource constraint**

In Myanmar, majority of mango species are single season fruit. Therefore, experiments can be made with other mango species to get yield in two to three cycles in a year and this would benefit local people. The actors are required to improve pre-harvest technology. Inability to produce quality products which gets easily accepted in the international markets, by majority of the farmers, producers, is a matter of concern at this moment. Lack of financial resources to run a development programme like skill upgradation, improving harvesting practice etc., affected the sector. The situation in the fishery sector is not much different.

Due to lack of financial resources the fishermen rely on age old technology of fish cultivation. No effort has been made to improve the practices. Attempts should be made to improve the socio-economic condition of the fishermen so that they become able partners of any development programme aimed at improving long term commercial viability of the product sectors. Moreover, availability of fish in certain areas is rapidly diminishing which is affecting the socio-economic condition of the fishermen. Thus it is necessary to undertake research and take measures to check further depletion of the resource base.

**Limited market**

It was found during the study that almost all the mango production in the Mandalay Region rely on the Chinese markets. The farmers face difficulties when Chinese buyers do not purchase their products. Therefore, the Market Information Center (MIC) should be installed in the major mango production centres in the Mandalay region; so that the growers can choose their markets rather than being dependent only on the Chinese market only. Moreover, the mango farmers need to relook at the buyers-sellers relationship and should get contract well in advance so that it acts as a security to save wastage of perishable mangoes due to lack of market demand. It would protect interest of the farmers in Myanmar as the Chinese buyers generally do not make payment immediately after purchasing the products. The mango farmers and wholesalers in Muse wait for several weeks to receive money from the Chinese buyers.

In the fishery sector, access to the international market is not an outcome of a planned initiative. There are instances when suppliers did not get payments as the buyers were not genuine and unreliable. In one such case the customer did not come and collect the products from the port as price had fallen in the international market. The supplier had to remain content with 30% of the payment which they received as an advance. The producers and sellers must therefore collectively install a system which continuously scans the market, source and prospect customers around the world. Then comes the requirement of providing marketing support services in the form of an export consortium. The export consortium should be fully owned and set up by the cluster actors collectively that is easily accessible to the actors.
Lack of value addition

The present study found that almost 90% of fresh mangoes are sold locally and in the international markets without value addition. Only a few value added products like mango leather, mango juice, salted mango and so on are produced and sold in the local markets. Efforts should be made to introduce more number of value added products and improve quality of the final product to target the international market. Introduction of new technology and up-gradation of existing ones could go a long way in tapping export market opportunities. The storage facilities were also found to be not up to the mark and thus affect shelf life of the perishable mango. Proper warehousing facility can reduce wastage and improve profit margins.

Similar situation prevails in the fishery sector. Only a few fishery firms here could use cold storage and adopt processing technology. Most of the fisheries do not have cold storage and they use only ice to export their products. This results in huge losses to the producers because of wastages during supply. As it may not be feasible to install appropriate technology in the premises of individual units due to investment factor, creation of a common facility centre (CFC) under the aegis of cluster development could prove wonders here.

Export requirements

The mango and fishery products require safety certificates, while exporting the final products to certain countries. Since there are food articles consumed by the human being, product safety consideration is of the highest order even in the developing countries. Depending on the country norms the importers ask for certificates like HACCP (Hazard Analysis & Critical Control Points), SSOP (Sanitation Standard Operating Procedures), ISO (International Organization for Standardization) before placing the order. Therefore, the local firms require improving their knowledge on safety standards and certification thereof. Organizations, be they Government or association, should assist small producers for the certification system. Some firms could manage these certificates easily but the smaller ones cannot do so. Mostly due to lack of knowledge about certification requirements, the process gets delayed and also at times results in non-granting of certification. A Cluster Development Advisers (CDA) who has reasonably good understanding about the requirement of export market can act as a facilitator in the certification process. Therefore, engagement of CDAs here is strongly recommended.

Training of Government officials.

It is not possible to propagate the concept of cluster development and collective efficiency and their requirements, conditionalities, unless the local Government believes the process and support its implementation in a pro-active way. Therefore, a group of key functionaries in the Government, could be oriented with the concept of SME cluster development, value chain up-gradation and export development through export consortia. This probably would ensure that the support services are in place for leveraging the benefits of cluster development in the two products sectors. This could go a long way in transforming the tier one cluster, as it is today, to a tier two cluster in the near future. Then only the SME sector would flourish and contribute significantly in the economic development of Myanmar.

5.5 Vietnam (Tea and Ceramic sector)

Tea cluster:
Lack of cluster cohesiveness:

The cluster actors are yet to realize the benefits of collectivization. The big tea companies along with their limited partners are trying to take the Vietnam tea in the world market aggressively. However, cluster development requires holistic development of the cluster where different category of enterprises is party to the development process. The tea farmers of different sizes, processors and exporters, marketing agents, equipment and machinery suppliers, R&D, consultancy organizations, in agro and forestry, suppliers of input materials such as fertilizer, packaging companies, warehousing facilitators, international marketing specialist etc. are required to unite under a common vision and mission of cluster development. Despite huge potential of domestic and international marketing, output and quality of local products remained unstable, primarily due to weak linkages between the household tea producers and tea enterprises. The different actors require a common platform to share their worries and discuss solutions on a periodic basis. This would enable them in playing a complementary role for holistic development of the tea cluster in the country. This would create an atmosphere of stability and sustainability with prospect of long term development.

Low productivity:

Presently, most tea gardens in Vietnam (about 60-70%) are over 30 years old—well past their productive age. This necessitates new plantation. At the same time, cultivation techniques are outdated with fertilizers used inappropriately. The on-going effort of capacity development through modernization of cultivation techniques is not reaching every cluster actor, though the bigger players are aware of it and are utilizing the benefits. The reasons of low productivity, consequences and the remedies are not known to the household farmers. Therefore, there is an urgent need for capacity development in matters concerning use of fertilizers, productivity improvement measures and pruning of tea leaves etc. with inclusion of various stakeholders.

Focus on brand development

Export prices for the Vietnam tea varieties in the world market are low and as much as 70% of tea varieties are exported as commodity. This is a matter of great concern. Vietnam is selling tea at very low price – about 1.4 USD/kg compared to the world average of 2.5 USD/kg or Indian Tea of 3 USD/ kg. The benefits of brand building in terms of eco-tea plantation, production and export are obvious but not so clear to many value chain actors, especially to the growers, who has subsistence living. If they continue to be bogged down by the pressure of earning livelihood then, scope of making them aware about eco branding diminishes. Success of eco branding depends greatly on the cultivation techniques. The big companies should take lead in this direction and develop a common agenda. Attempts should be made to move towards ecological agriculture, financial support for certification etc.

Developing a common platform:

Presently the clustering effort is confined to only a section of the cluster actors. Only six to seven cluster actors understood the benefits of clustering. So they are united and endeavored to pursue the process of clustering aggressively. However, concerted effort should be made to create a common platform and design development activities while taking everybody on board.

Ceramic Cluster:
Assisting Ceramic Craft Village in International designing and R&D

The ‘craft village’ concept in Vietnam is unique wherein leading firms actively tries to make cluster growth inclusive. The leading firms get export orders but execute them with collective participation and profit sharing. In the ceramic sector, further development of the cluster could be achieved through incorporating latest designs in production. This strategic action is designed to ensure that the craft village develops strong foothold in the international market. For graduating to high value fine-art designer products, the producer should know the tastes and preferences of the customers in the target market/country. Therefore, involvement of international designers could be beneficial for the ceramic ‘craft village’. It is quite likely that the international experts will introduce new concepts, designs, trend, and techniques and enhance R&D activities for the producers. Presently, the big firms know the requirements of international market and just foist production responsibility to the household units. The small household producers are deprived of the market information. The cluster requires a common platform where even the small producers have access to the latest information about market, trend, designs, manufacturing techniques etc. In this respect, the ‘craft village’ association has a lead role to play and can create a platform of interaction and mutual collaboration.

Imbibing professionalism in the cluster:

The Bat Trang ceramic cluster is very old and took the shape of cluster long before the cluster proponents in the world started talking about the benefits of agglomeration economies. The actors had practiced close business relationship for production. They formed a natural cluster based on the decision to leverage benefits out of supporting each other. Bat Trang Ceramics Association’s committee supported this development and guided them in the right direction. Without hearing or understanding the term ‘cluster’, they used to mutually collaborate and support one another. However, as markets are becoming increasingly competitive, there is a requirement of formalizing and fine tuning the system/practice. Actions and interaction within the ‘craft village’, in business matters, need to go beyond their personal relationships. Developing a common goal for the cluster, deciding ways and means to achieve it, allocating roles and responsibilities by the cluster actors etc. are needed to take best advantage of collective efficiency and induce professionalism in the system.

Enhancing production efficiency:

It is a matter of fact that not everybody is equally blessed with access to appropriate technology in the ‘craft village’. Leaving the big players, other producers do not have appropriate production technology. This has lowered efficiency of the cluster village as a whole. Many small producers are susceptible to producing defective products and thus incur higher input costs of production. This gets reflected badly when the entire ‘craft village’ is considered as a unit of production and their efficiency is calculated in terms of input-output factors. The solution to this problem lies in providing access to appropriate technology even for the producers in the lower echelon of business. However, since all the individual unit holders may not have capability to invest large to obtain appropriate technology, creation of a common facility centre (CFC) could prove worthwhile here. CFC built and developed with joint effort of the cluster actor will enhance efficiency of the ‘craft village’ as a whole.

Access to raw material (clay):
Presently there is no quality checking system on the incoming raw material i.e. clay. Moreover, only one type of clay is used for making different type of products. The cluster, therefore, needs to have a raw material bank at the cluster level where clays are sourced, graded and stored for the consumption of the cluster actors.

**Training of Government officials:**

It is not possible to propagate and practice the concept of cluster development and the mechanism on which it works, unless the local Government believes in the process and supports its implementation in a pro-active manner. Therefore, a group of key officials could be oriented and trained on the principles of cluster development. This could ensure their support so that the clusters could utilize their growth potential fully. This could go a long way in transforming the tier one cluster to tier two clusters in the near future. The SMEs would then flourish and contribute significantly in the economic development of Vietnam.
References

2. Department of Agriculture Report (2011)
3. Department of Border Trade Report, 2012
6. Export Consorcia Group Cluster 1, 2012. Role of Core Actors for Export Consorcia Group1
7. Fishery Statistical data from Fishery Department, 2012
22. PhouphetKyophilavong, 2010. *SME DEVELOPMENT IN LAO PDR*. faculty of business administration, national University of Laos
25. Subgroup, I. (?). *Design of cluster initiatives - An overview of policies and praxis in Europe*.


The Mekong Institute (MI) is an inter-governmental organization with a residential learning facility located on the campus of Khon Kaen University in northeastern Thailand. It serves the countries of the Greater Mekong Subregion (GMS), namely, Cambodia, Lao P.D.R., Thailand, Vietnam, Yunnan Province and Guangxi Zhuang Autonomous Region of PR. China.

MI is the only GMS-based development learning institute, founded by the six GMS Governments, offering standard and on-demand human resource development programs with focus on regional cooperation and integration issues.

MI’s learning programs and services cater to the capacity building needs of current and future GMS leaders and policy makers on issues around rural development, trade and investment facilitation, human migration, with good governance and regional cooperation as cross cutting themes.

1. Rural Development for Sustainable Livelihoods
   - Agriculture value chains
   - Natural resource management
   - Food security and sufficiency
   - Productivity and post harvest support

2. Trade and Investment Facilitation
   - SME clusters, business to business and export networking
   - Trade & investment promotion in Economic Corridors
   - CBTA and logistics
   - Public-Private Partnerships

3. Human Migration and Care
   - Safe migration
   - Labor migration management
   - Harmonization of migration policies and procedures
   - Mutual recognition arrangement for education, training and skill standard
This publication of Research Working Paper Series is part of the three-year project on “Capacity Development Program for Integrating CLMV Economies into AEC” funded under the New Zealand Aid Programme in the CLMV Countries (Cambodia, Laos, Myanmar and Vietnam). This research has been pursued by the team of Trade and Investment Facilitation Department of Mekong Institute.