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THE STUDY
ON
STRENGTHENING CAPACITY OF SME CLUSTERS
IN INDONESIA

FINAL REPORT

SUMMARY

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ABBREVIATIONS

ADB	: Asian Development Bank
AFTA	: ASEAN Free Trade Area
AMT	: Achievement Motivation Training
AMV	: Astra Venture Capital
APBD	: Regional Government Budget
ASMINDO	: Association of Furniture and Handicraft Industry
ASPEP	: Association of Scientists and Professional Engineering
BAPPENAS	: National Development Planning Agency
BBLM	: Metal and Machinery Research Unit
BDS	: Business Development Services
BIPIK	: Guidance and Development of Small Industries
BPPT	: Agency for the Assessment and Application of Technology
BPS	: Central Statistical Office
BPT	: Technical Service Institute
CAD	: Computer Assisted Design
CD-SMEs	: Center for Development of Small and Medium Enterprises
CEFE	: Creation of Enterprise through Formation of Entrepreneur
DG	: Directorate General
DINAS	: Local Government Bureau
EHRD	: Economic and Human Resources Development
EKUIN	: Coordination Ministry for Economic Affairs
FEDEP	: Forum for Economic Development and Promotion
GOI	: Government of Indonesia
GTZ	: Deutsche Gesellschaft für Technische Zusammenarbeit
HRD	: Human Resource Development
IBI	: Institute of Banking Indonesia
IETC	: Indonesia Export Training Centre
IMF	: International Monetary Fund
ISIC	: International Standard for Industrial Classification
ITS	: Institute of Technology
JICA	: Japan International Cooperation Agency
KKB	: Business Consultation Clinic
KKMB	: BDS for Financial Consultant
Kopinkra	: Industrial Cooperative
KPEL	: Partnership for Local Economic Development
LIPI	: Indonesian Institute of Sciences
LPBT	: Development of Technical Business and Technology

LPM	: Institute for Community Service
MOCOSME	: Ministry of Cooperative and Small Medium Enterprises
MOF	: Ministry of Finance
MFI	: Micro Financing Institutions
MIDC	: Metal Industry Development Centre
MOHARA	: Ministry of Home Affairs
MOIT	: Ministry of Industry and Trade
MOM	: Ministry of Manpower
MTAP	: Mid-Term Action Plan for SME Promotion
NAFED	: National Agency for Export Development
OSS	: One-stop Service
PCM	: Project Cycle Management
PROPENAS	: National Development Plan
RED	: Regional Economic Development
RETPC	: Regional Export Training and Promotion Centre
RGDP	: Regional Gross Domestic Product
SMEs	: Small and Medium Enterprises
SMECDA	: Small and Medium Enterprise and Cooperative Development Agency
SMERU	: Institution for Research and Policy Studies
SOEs	: State-Owned Enterprises
SATGAS	: Small Task Forces at Provincial Level
SAWARUNG	: NGO consortium in Kabupaten Lombok and a civil society forum in Bandung
SMU	: High School
SMK	: Vocational High School
TFPP	: Permanent Field Consulting Staff
TOT	: Training of Trainers
TPL	: Public Field Consulting Staff
UMR	: Regional Minimum Wage
UNS	: University of Solo
UGM	: University of Gadjah Mada
UPT	: Technical Service Unit
WARSI	: Information Kiosk operated by POS Indonesia
YDBA	: Astra International Foundation

CHAPTER 1 INTRODUCTION

1.1 BACKGROUND

The Government of Indonesia (GOI), since the early 1970s, has been supporting clusters through promotion of the cooperatives and provision of common service facilities, training, advisory services, and loans. Some clusters now show distinctive features. However, the majority remains inactive with small and micro enterprises working independently without integration. The recent movement towards globalization, stimulated by World Trade Organization (WTO) and ASEAN Free Trade Area (AFTA), shall threaten cluster SMEs to lose their comparative advantages in the local markets.

This Study has been designed to follow the recommendation of the Japanese mission on the *Policy Recommendation for SME Promotion in Indonesia* (2000). Recognizing the importance of SMEs in Indonesia, the Report recommended enhancement of industrial linkages to create dynamic clusters through expanding market contacts and improving technologies of the cluster SMEs.

The Scope of Work for this Study was agreed upon in July 2001 between the Coordinating Ministry for Economic Affairs (EKUIN), Ministry of Industry and Trade (MOIT), Small and Medium Enterprise and Cooperative Development Agency (SMECDA)¹ attached to the Ministry of Cooperative and Small and Medium Enterprises (MOCSME) of the GOI, and JICA.

1.2 OBJECTIVE AND EXECUTION

(1) Study Objectives

The objective of this Study is to implement pilot projects in the selected target clusters for strengthening their collective capacity and to present a set of policy recommendations with a master plan and action plans for creating dynamic SME clusters in Indonesia.

(2) Framework

The Study covers all SME clusters that are classified into the following three groups:

- a. Metal and machinery part and component clusters

¹ SMECDA merged with MOCSME in January, 2001.

- b. Export-oriented clusters
- c. Rural, indigenous product clusters

At the commencement of the Study, the GOI and JICA selected ten (10) sample clusters for the baseline study. These are shown on Table 1.1 and Figure 1.1. Out of each group, a single cluster is to be selected for the implementation of a one-year pilot project.

Table 1.1 Ten Sample Clusters

Cluster Group	Place / Type of Industry
Metal and Machinery Part and Component Clusters	1) Tegal / Metalwork 2) Sukabumi / Metalwork 3) Sidoarjo / Metalwork
Export-Oriented Clusters	4) Serenan-Klaten / Wooden Furniture 5) Hulu Sungai Utara-Amuntai / Rattan Furniture 6) Haran 50 kota / Gums of Gambier 7) Garut / Vetiver Oil
Rural, Indigenous Product Clusters	8) Tanjung Batu / Agricultural tools 9) Manpang / Tempe and Tofu 10) Kebumen / Roof-tile

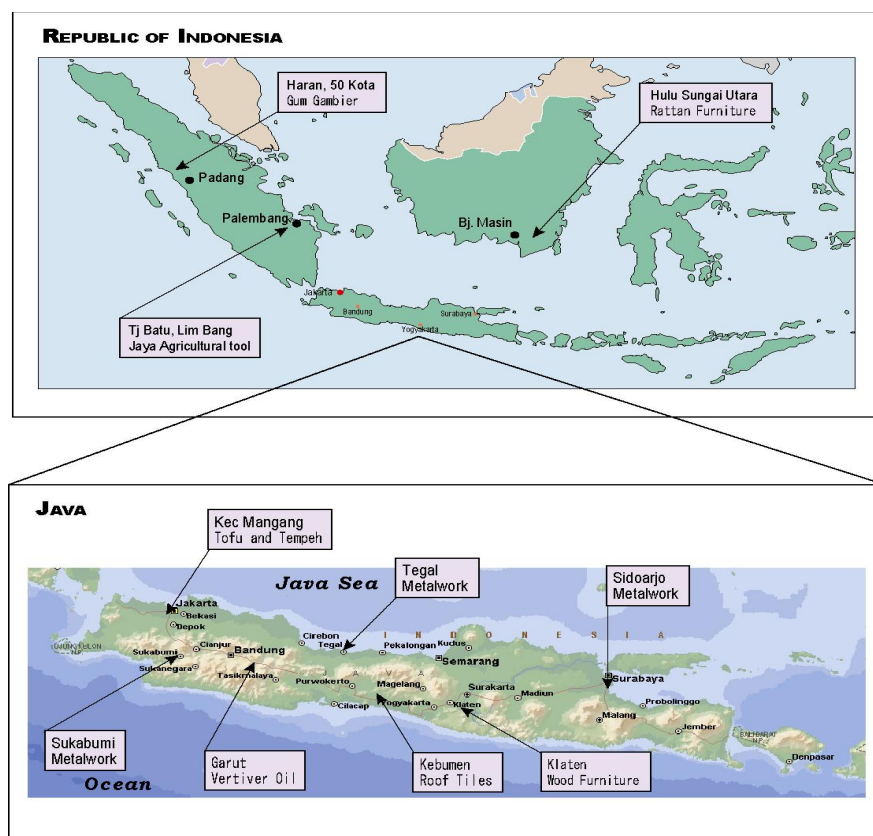


Figure 1.1 Location Map of Ten Clusters

The study has been executed for 28 months from October 2001 to February 2004 in accordance with the following process/step:

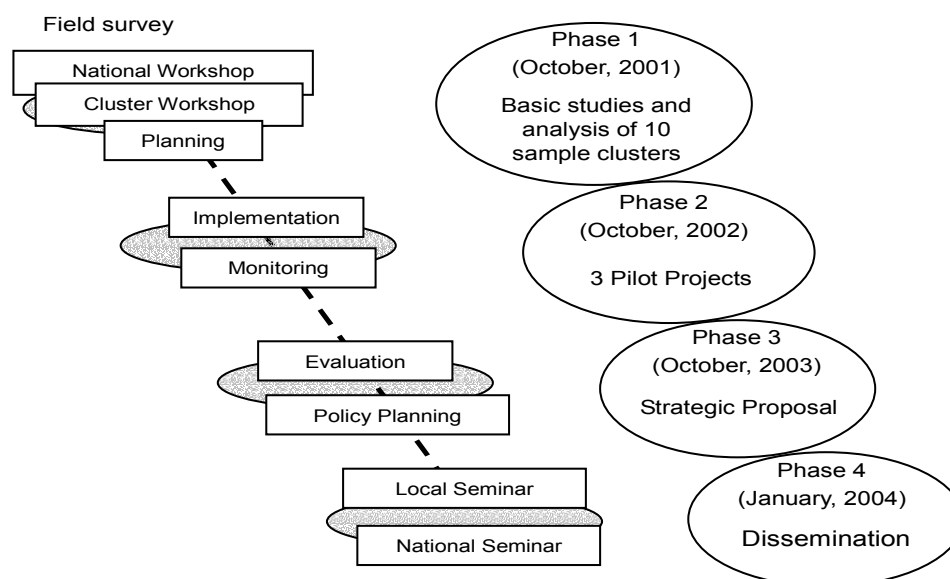


Figure 1.2 Study Process

1.3 Discourses on Clusters

(1) Definition of Cluster

The working definition of clusters in this Study is a “*geographical concentration of related industries and institutions*”. *Sentra* in Indonesian is a similar concept, as it is defined as a geographical concentration of manufacturers in the same sector. According to the 1996 census, there are nearly 10,000 *sentra* in Indonesia.

Although the clusters and *sentra* are not necessarily synonymous, this Study focuses on strengthening collective capacity among SMEs in *sentra* in view of the fact that the 10 sample clusters given by GOI and JICA at the commencement of the Study are all *sentra*.

(2) Dynamic Cluster

Michel Porter’s Diamond Model and Michael Best’s dynamic cluster model (1999)² give a clue as to what constitutes the dynamic cluster. Porter’s Diamond Model identifies four determinants that lead to industrial competitiveness. He argues that successful clusters are those in which the four determinants are most dynamically correlated as illustrated in Figure 1.3.

² Best, M. (1999), *Cluster Dynamics in Theory and Practice: Singapore/Johor and Penang Electronics*. UNIDO/ISIS.

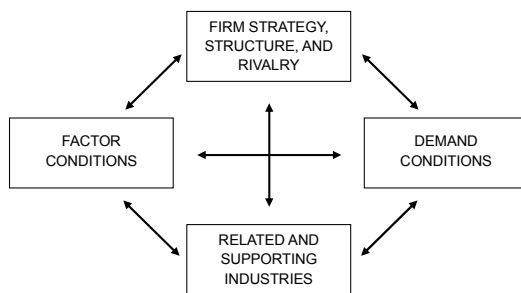


Figure 1.3 Porter's Diamond Model

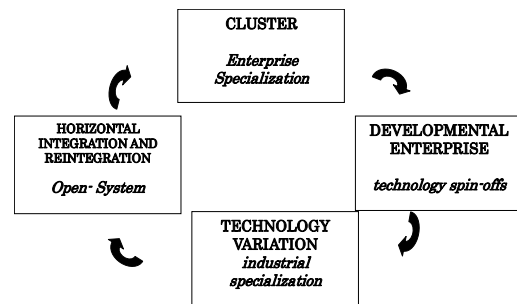


Figure 1.4 Best's Dynamic Cluster Model

On the other hand, Best (1999) explored the process towards the dynamic cluster (see Figure 1.4). Best's model leaves three issues for creating the dynamic cluster; i.e., (i) importance in utilizing the existence of a developmental firm as a stimulant to a cluster, (ii) importance in maintaining the technological variation and open nature of a cluster, and (iii) importance in directing each enterprise towards specialization.

This Study will refer to the Porter's Diamond Model and Best's dynamic cluster model in creating dynamic clusters in Indonesia.

CHAPTER 2 OVERVIEW OF SME AND CLUSTER

2.1 SME AND SME CLUSTERS

(1) Economic Performance

The majority of cluster SMEs comprise small enterprises (5 to 19 workers) and micro enterprises (1 to 4 workers). Value added by small and micro enterprises accounts for 9% of total manufacturing, while employment in small and micro enterprises represents 59% of the total manufacturing work force in 1999.

In 1996, some 9,800 *sentra*/clusters were scattered over the country. The cluster enterprises numbered around 475,000 or approximately 17% of small and micro enterprises in Indonesia (2,875,000). The following table presents the 10 largest sub-sectors (ISIC 4 digits) of clusters:

Table 2.1 Ten Largest Sub-sectors of Clusters

No	ISIC	Sub sectors	Units	Labors	VA ('000 Rp)	Clusters
1	3313	Plaints made of wood / rattan / bamboo	107,350	229,000	86,789,000	1,433
2	3642	Refractory bricks, roof tiles	45,530	175,000	243,412,000	935
3	3118	Sugar processed	63,760	126,000	20,643,000	677
4	3211	Spinning/weaving/yarn/textiles	51,930	117,500	73,028,000	880
5	3124	Tempe made of soy bean	25,660	65,500	295,317,000	660
6	3125	All kinds of chips (food)	22,630	64,700	27,624,000	413
7	3221	Wearing apparel	16,030	62,400	67,104,000	454
8	3321	Wood/rattan/bamboo furniture	13,030	53,690	50,284,000	468
9	3127	Cake, pastry, similar products	15,210	44,490	17,649,000	327
10	3710	Iron and steel basic products	9,980	35,950	22,598,000	458
Sub-total			371,110	974,230	904,448,000	6,705
Total (All Sub-sectors)			(75%) 475,000	(75%) 1,295,000	1,270,405,380	(68%) 9,800

Source: MOIT

The business environment associated with SME clusters are characterized as follows:

- (i) There are many identical clusters, resulting in almost no product differentiation and fierce price competition.
- (ii) Profit squeeze occurs because of low value added per labor.
- (iii) Products are typically labor-intensive and low technology.

The number of clusters in Java-Bali was 4,558 (46.5%), followed by Sumatra (1,810 or 18.5%), Sulawesi (1,102 or 11.3%), East Indonesia (1,101 or 11.3%) and Kalimantan

(856 or 8.7%). Around 74% of larger clusters having more than 100 cluster enterprises are concentrated in Java-Bali.

(2) Financial Position

For most SMEs, financial management is synonymous with cash flow management. They keep a record of orders and cash flow. The principal concern is how to retain sufficient working capital to receive orders, balancing cash for the purchase of raw materials, labor, transport, and cash received from buyers. Most SMEs consider the possibilities of external finance such as bank loans, and some actually are taking these out. In general, a loan of Rp. 10 to 50 million is readily available provided that SMEs have sufficient collateral to cover loans. On the demand side, SMEs are reluctant to obtain loans due primarily to the reasons that: (i) the interest rate is so high (more than 20% p.a. in June 2003), and (ii) the loan amount is limited to the value of tangible assets.

The on-going financial assistance scheme, with preferential conditions, extended by MOIT, MOCSME and state owned enterprises, are less known to SMEs. Thus the majority of SMEs do not receive the available information.

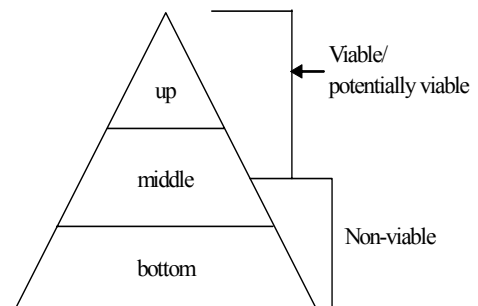
(3) Major Constraints

The majority of commodities manufactured in clusters are homogeneous and dominated by final consumption goods. Quality and delivery are almost secondary because the market outlet is an intermediary and not directly linked to buyers.

Table 2.2 Major Constraints of Cluster Industries

Description	Major Constraints
Products	Dominance of final consumption goods, low quality primarily for domestic market
Technology	Low-technology being far from manufacturing industry
Market	Dominated by intermediaries, little access to retail markets
Price	Low price controlled by traders or intermediaries
Institutional aspects	Weak bargaining power, most enterprises belonging to informal sector
Social	Supplement to agricultural incomes, linked to local society

SME clusters are composed of enterprises at various levels. If expressed in a hierarchy of up, middle and bottom, the up-level enterprises may be called viable SMEs, representing a few percentages of cluster SMEs. As discussed later in Chapter 4, this Study suggests that cluster SMEs having a strong willingness to improve and to step forward could be classified into potentially viable SMEs irrespective of their current technical and financial positions.



2.2 SECTOR POLICY AND PROGRAMS

The sector policies in the 1980s and 1990s emphasized special measures to assist SMEs to become viable, providing SMEs with a range of incentives and concessions (e.g., free access to business services and mandated targets to commercial banks to lend to the SME sector). The increased efforts to support SMEs have resulted in significant coordination problems, as a large number of public agencies were concerned with SMEs but few systems were in place to coordinate efforts.

The Government action for SME cluster development dates back to the BIPIK Program (1974) initiated by the Ministry of Industry with the aim of forming small enterprises into *sentra*. In the 1980s, the Government adopted a policy called KOPINKPA organizing *sentra* SMEs into cooperatives.

The year 2000 was a turning point in changing SME policy. PROPENAS (National Development Plan) spotlighted strengthening SME clusters based on the following agenda:

- (i) Create a Climate Conducive for Business Environment
- (ii) Access to Productive Resources
- (iii) Develop Entrepreneurship and Competitive SME Cluster

The Mid-Term Action Plan (MTAP) was subsequently proposed, emphasizing the strategic role of the SME sector in the national economy. However, MTAP presents few strategies for cluster strengthening.

The recent efforts in SME and cluster promotion are directed towards the following:

- Decentralization
The Economic Forum in Central Java initiated a cluster development program in line with the decentralization policy. The Forum is a sort of experimental project

assisted by BAPPENAS and GTZ, with a major focus on capacity building of local resources.

- Demand-oriented
MOIT, with the ADB technical assistance, is currently executing a study on BDS development in Central Java and South Sulawesi. MOCSME, on the other hand, is implementing the three-year cluster development program appointing a BDS provider per cluster.
- Public-Private Partnership
Private initiative is encouraged for SME and cluster development; however some public support is still required during the transition period.

2.3 RELATED STAKEHOLDERS

Stakeholders for SME cluster development are largely classified into policy makers, executors, and supporters. The main policy makers for the cluster development are supposed to be MOIT and MOCSME. Cluster development requires integrated or inter-departmental coordination. MOIT's guideline for SME promotion is based on a commodity development strategy focusing on exporting commodities and high value added products. MOCSME's policy is to introduce BDS in SME cluster development and strengthen cluster cooperatives. BAPPENAS, on the other hand, is assisting regional stakeholders in organizing a forum as an instrument for cluster development.

Executors are primarily classified into two groups; i.e., regional organizer and implementation agencies. Economic Forum implemented in Central Java represents the former while MOCSME's BDS development program represents the latter.

Economic Forum (Central Java)	MOCSME's BDS development program
The "Forum" means a decision-making body for regional development issues including cluster development. It consists of the provincial government, the BDS Association, banks, and others.	A cluster selection is entrusted to the provincial office of the MOCSME. Selection of BDS providers for selected clusters is based on an evaluation of technical proposal prepared by BDS providers.
The FEDEP corresponds to a forum at the regency level and comprises the regency government, BDS providers, business associations, and others.	The main office is primarily responsible for programming and budgeting. Implementation is carried out based on a work schedule prepared by a BDS provider.

Potential stakeholders related to SME cluster strengthening encompass public authorities attached to the line agencies, private organizations (e.g., KADIN, business associations, financial institutions, BDS association, and large/medium enterprises), and universities. Among them, universities are playing an increasingly important role as a regional stakeholder. The Institute for Community Service, known as LPM, appears to be a symbol of universities which contribute to the development of regional societies.

CHAPTER 3 PILOT PROJECT

This Chapter summarizes the execution and outcomes of the pilot projects. Details are reported in the Pilot Project Report.

3.1 OBJECTIVES AND SELECTION OF PILOT PROJECT

Pilot projects have been conducted in three SME clusters for one year, in search for effective measures for capacity strengthening of SME clusters and for the formulation of appropriate strategies. At the beginning of the pilot project operations, focuses have been put on the following:

- SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis,
- market-oriented strategy,
- participatory approach,
- role of leaders and the cooperatives,
- role of BDS providers and cluster facilitators,
- joint actions, and
- decentralization.

3.2 SELECTION OF PILOT PROJECT SITE

Three clusters have been selected from the given 10 sample clusters for implementation of the pilot projects, each from the following groups:

- Metal and machinery component clusters
- Export-market oriented product clusters
- Rural, indigenous product clusters

The primary concern in the selection was to identify the cluster that could serve as a model for dissemination. In this context, two main criteria have been applied; i.e., “growth opportunity” and “action-taking capacity”. The growth opportunity factors are based on four determinants of the Porter’s Diamond Model, while “action-taking capacity” is assessed on the basis of the performance at the cluster workshops.

Table 3.1 summarizes the result of evaluation. Consequently, the metalwork cluster in Waru-Sidoarjo, the wood furniture cluster in Serenan-Klaten, and the roof-tile cluster in Kebumen have been selected for the pilot project operations.

Table 3.1 Selection of Pilot Project Sites

Group	Cluster	Growth opportunity (highest score: 54 points)	Action-taking capacity (highest score: 36 points)	Percentage of scoring	Rank in group	Pilot cluster
Metal/machinery component	Tegal	31	10	45.6%	3	
	Sukabumi	33	18	56.7%	2	
	Waru-Sidoarjo	38	21	65.6%	1	+
Export market -oriented	Serenan-Klaten (Wood furniture)	36	20	62.2%	1	+
	Amuntai (Rattan product)	30	5	38.9%	4	
	50 Kota (Gambier)	29	8	41.1%	3	
	Garut (Vetiver oil)	33	5	42.2%	2	
Domestic market -oriented	OKI-Tanjung Batu (Agricultural tool)	30	7	41.1%	3	
	Mampang / Bekasi (Tofu / tempe)	27	11	42.2%	2	
	Kebumen (Roof-tile)	36	21	63.3%	1	+

3.3 FRAMEWORK OF PILOT PROJECT OPERATIONS

(1) Operational Steps

The study commenced with profiling and needs assessment, followed by socialization and planning of the pilot activities. Based on the result of the survey and participatory workshop, a cluster development strategy and one-year action program have been prepared. Flexible feed-back has been made between “program execution” and “program planning”. The overall evaluation provides various lessons to the stakeholders.

(2) Operational Structure

A standard operational structure for the pilot project is shown in Figure 3.1. A working group is designed to represent the stakeholders and to act as an advisory body. A program operation unit (POU), composed of leading SMEs and a cooperative, has been formed to oversee program preparation and execution. A local BDS provider has been appointed to a cluster facilitator who coordinates among the stakeholders and works as a secretariat in executing the action programs.

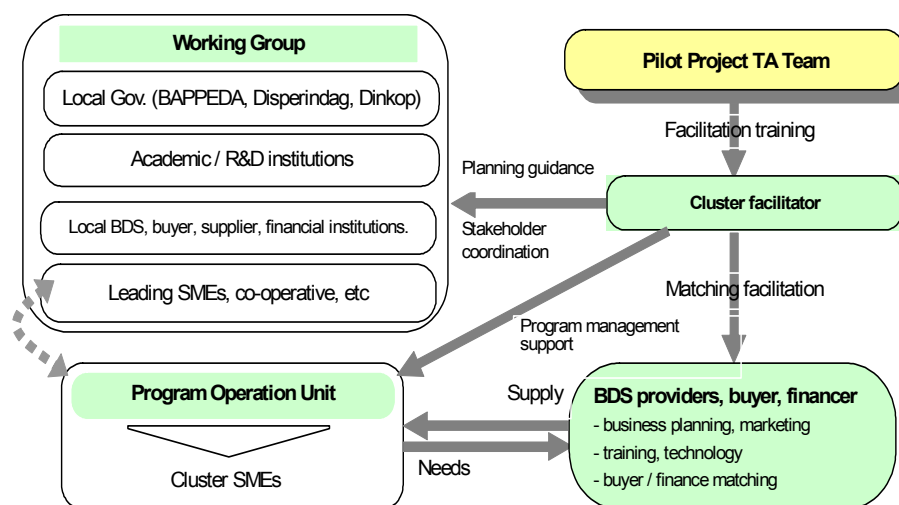


Figure 3.1 Operational Structure of Pilot Project

(3) Monitoring and Evaluation

The cluster facilitator has been primarily responsible for preparation of the progress monitoring report on the achievements and changes brought about by the action programs. The evaluation focuses on the impact, referring to the Porter’s Diamond Model, and the lessons for policy recommendation and action programs for SME cluster strengthening at the national level.

3.4 OUTLINES OF PILOT PROJECT

Each pilot cluster has been operated in accordance with the cluster development strategy prepared at the beginning of the pilot project. Box 3.1 summarizes the pilot project operations in three clusters over a period of one-year.

Box 3.1 Outlines of the pilot projects

a) Waru-Sidoarjo, metal and machinery component cluster

Vision and strategy: Vision is to enhance competitiveness by entering into the better final product market and to become the supporting industry. This vision requires improvement in designing capacity, production process, and quality control.

One-year action programs

Program	Objective / content
Guidance	To form an operational structure, define its role and responsibility, and share the strategy and context of the action programs. To stress importance of entrepreneurship.
Core product development	To develop a product through a collaboration among SMEs with a step-by-step approach including planning - designing - experimental production - establishing marketing strategy. The propulsion system of a fishing boat and a portable cooking stove have been chosen by SMEs.
Factory management training	To improve skills in factory management through a series of lectures and on-the-spot advice in the topics of 5S, inventory, production, and quality control.

b) Klaten-Serenan, wooden furniture cluster (export market-oriented)

Vision and strategy: Vision is to enhance competitiveness by expanding access to the market through launching the finishing process and preparing a variety in quality of classic furniture. This vision requires the cluster to employ the strategy of concentrating on the classic furniture business, improving and mechanizing processing practice, creating interactive relationships with buyers, and strengthening collaboration among SMEs.

One-year action programs

Program	Objective / content
Institutional strengthening and training in business planning	To form a program operation unit and sub-programs for preparing for the technical training and details of action programs
Seminar on the classic furniture	Lectures on the European antique market through lectures
Technical training	Training in production management skills and equipment usage
Study on joint use of dry kiln and machinery	To prepare business plan on the joint-sharing and operation of dry kiln and machinery
Exhibition participation	Participation in a national exhibition ranging from product development, finishing, product brochure making, show-room design, developing new linkage with buyers, and establishing the system of joint-order

Box 3.1 (continued)

c) Kebumen, roof-tile cluster (Rural, indigenous product clusters)

Vision and strategy: Vision is to catch up with more advanced clusters and to enhance competitiveness by improvements in standardized production quality and in production efficiency. This vision requires the cluster to employ a strategy of forming the networks through marketing activity, innovative production process, material supply and employing joint activities in order to complement limitations of individual SMEs.

One-year action programs

Program	Objective / content
Initial socialization	To socialize the strategy and action programs among SMEs
Study tour	To conduct study tours to learn from other advanced clusters and seek technical partnerships with supporting institutions
Marketing strategy and sales promotion planning (followed by implementation)	To provide training on business planning and formulate a marketing strategy and action plans, and to execute the action plans (brochure, market study, agent finding)
Revitalization of co-operative activity and service	To review the services rendered by co-operatives, prepare action plans, and execute the plans
Process improvement program	To conduct process improvement through establishing a linkage with a supporting institution
Business planning	To prepare a business plan in the newly established joint organization for material supply, market development, and common facility sharing

3.5 EVALUATION OF PILOT PROJECT

(1) Outcomes by Determinants

The outcomes of the pilot project operations are evaluated on the basis of the impacts on the four determinants of the Porter's diamond model. In general, SMEs in the furniture cluster and roof-tile cluster have been well motivated to initiate joint actions during the pilot projects while the pilot project in Sidoarjo has left less impact on the determinants. This is due to three characteristics associated with the Waru-Sidoarjo cluster; i.e., (i) heterogeneous nature of products limits the area of joint actions; (ii) most owners and workers commute from outside villages and are reluctant to have meetings outside of business hours; and (iii) indifferent attitudes, attributable to the

continuous assistance from donors and government, have made SMEs less enthusiastic in participating in the pilot project.

Demand Conditions

Demand conditions vary from the low to high level markets in Indonesia. Three clusters have been linked to the lower quality market, but the pilot projects have aimed at exploring the requirements of the higher markets and improving the factor conditions based on the market requirement.

A consortium, formed in the Kebumen roof-tile cluster, has found some potential agents and is setting up storage in Bali where it is targeting expansion of its markets. The Klaten furniture cluster has joined the national exhibition and learned the requirements in the competitive markets.

On the other hand, the Sidoarjo metalwork cluster has adopted a strategy to improve the demand conditions through a core product program. SMEs conducted a market survey and prepared a business plan. The product reached the stage of experimental production and is not ready for sale in the one-year operation.

Factor Conditions

Depending on the nature of problems observed initially, various options have been applied to improve factor conditions. All pilot projects have managed to improve the conditions to some extent. It became clear that their improvement is attributable to the level of willingness and passion of SMEs.

The Sidoarjo metalwork cluster has executed two main activities in improving the factor conditions. The first activity is factory management. Although various attempts have been made to make SMEs aware of the importance of factory management, no measure has been found to be effective. Most SMEs are not willing to improve their production process and still neglect the use of drawing. On the other hand, the second activity, the product development program, has left some hope towards improvement. SMEs have upgraded their skills in production to some extent.

The pilot projects in Klaten and Kebumen have been much more successful in promoting the importance of quality improvement. The most critical issue has been the wood moisture content in Klaten, and many SMEs have become aware of the necessity for quality improvement. In Kebumen, SMEs have initiated discussion on quality assurance by improvement in composition of clay material, clay stocking, and drying process in order to maintain its brand name, *Kebumen Sokka*.

Related and Supporting Industries

The availability of supporting institutions depends on the location of SME clusters. Geographical proximity to Surabaya gives a favorable condition for the Sidoarjo metalwork cluster to strengthen linkages with local stakeholders. There are ample human resources ready to extend assistance as long as the TOR is specified with proper payment. Institute of Technology Surabaya and a ship-building high school in Sidoarjo became the main BDS providers during the pilot operation.

The Klaten furniture cluster and the Kebumen roof cluster have employed support from the LPM in universities: Solo University (UNS) and Gadjah Mada University (UGM). Yet, the remoteness in Kebumen is disadvantageous in continuing a close relationship with UGM.

None of the pilot projects has been able to find a capable cluster facilitator from the private BDS providers in the region. Performance of LPM-UNS has left a clue that the cluster facilitator requires the spirit of contributing to the society.

Firm Strategy, Structure, and Rivalry

Geographical proximity should make it easier to collaborate among SMEs, yet, three clusters did not have a collaborative atmosphere at the beginning of the pilot projects. SMEs were quite individualistic and were not open to each other. The pilot projects successfully made changes in this atmosphere.

In the Sidoarjo metalwork cluster, an informal network has been formed by eight leading SMEs to help each other in an area where common interest exists. In the Klaten wood furniture cluster, the collaboration unit has experienced a joint action in attending the national exhibition. In the Kebumen roof-tile cluster, the consortium implemented joint marketing and is planning to start the joint material supply and operation of the common facility. All three groups have recognized the importance in raising competitiveness through collaboration.

(2) Major Lessons Learned from Pilot Project

Three most important lessons have been learned from the pilot project operations. The first lesson is the importance of entrepreneurship, or passion to improve business. The pilot project initially tried to maximize the number of participants in the operation; yet, only those who were willing to improve have been able to utilize the opportunities given. The second lesson is the importance of social capital, or “reciprocal trust”, built among cluster members, that gives an impact on the four determinants of the Porter’s Diamond Model. The third lesson is the importance of cluster facilitator, who guides the cluster SMEs to collaborate and to identify the area for strengthening. The pilot

project also suggests that the support of the Working Group formed by stakeholders is necessary for the cluster facilitators to conduct his/her role.

Other major lessons are listed below.

Identification and Selection of Clusters: In addition to the four determinants of the Diamond Model, the social capital should be included in the criteria for the selection of potential clusters.

Cluster Development Strategy: An assumption that the cluster can have one voice as envisaged in the cluster development strategy has been found to have limitations for the heterogeneous cluster. The size of the horizontal linkage in the heterogeneous cluster also tends to be small.

Target Beneficiaries: The target beneficiaries should be those who have the willingness and passion to upgrade.

Supporting System: Intermediary functions such as information center and cluster facilitator are necessary to bridge any gaps between the BDS providers and cluster SMEs.

Implementation System: A regionalized forum system (working group) should be established to implement the cluster development programs.

(3) Cluster Strengthening Approach in the Indonesian Context

From the lessons learned through the pilot project operations, cluster strengthening can be summarized as simultaneous implementation of the following:

- upgrading of individual SME in the cluster,
- facilitating the linkages and joint actions among cluster SMEs, and
- facilitating external linkages in accordance with the requirements of cluster SMEs.

(i) Upgrading of individual SMEs in the cluster

Stimulus to Change

Most cluster SMEs are just manufacturers without innovative ideas. They are serving for the low quality markets that are caught in price competition. Despite the increasing competition in the low-end markets, most SMEs are unwilling to venture into the higher market. Under such situations, any program remains inefficient unless a proper stimulus is given to modify their way of thinking.

Experience in the pilot projects suggests that the most influential stimulant is a demanding buyer in terms of quality. If a cluster demonstrates comparative

advantages, buyers may be patient to teach cluster SMEs how to upgrade their quality. The second stimulant, as experimented in the pilot projects, is “learning by visiting” to more advanced clusters or participation in an exhibition in which SMEs have opportunities of hearing directly from potential buyers.

Basic Skills

While effectiveness of the training targeted at SMEs is limited, the basic skills essential for manufacturing should be taught before graduating from schools. The pilot project observed a lack of basic skills in accounting, measuring, sketching, and drawing among SMEs.

Program Continuity

Various institutions offer SME training programs, but most of their schedules are “ad-hoc” and depend on resource availability. Moreover, the program offer is notified to a limited number of SMEs. These conditions make it difficult for SMEs to fit in a program at the necessary times. A local government has to coordinate with institutions to schedule the programs on a regular basis and notify them in public by the open information system (discussed below).

(ii) Facilitating the linkages and joint action among cluster SMEs

The social capital has been found to be a critical factor to facilitate linkages and joint actions among SMEs.

Open information system

It should be borne in mind that a seed of collaboration in SME clusters is usually found in a small rather than a big group. Although the government and the supporting institutions utilize cooperatives as intermediary for the cluster promotion, non-cooperative members also have some seeds for collaboration.

The undermining of cooperatives is closely related to a lack of an information system. Information is usually delivered through a cooperative, which accesses SMEs *one-by-one*. Inevitably, information tends to be given to selected cooperative members, and provision of services through the cooperative has created distrust among cluster SMEs. To counteract this situation, the *one-to-x* information system is to be developed to provide equal opportunities to cluster SMEs. A local government should assume the role of developing the *one-to-x* information system.

Specialization

As discussed in the Best’s dynamic cluster model in Chapter 1, a key to creating a dynamic cluster is specialization of each firm. However, what is generally observed

among cluster SMEs is a diversifying strategy rather than specialization. Diversification is a natural tendency for SMEs in developing countries. Specialization requires higher skills in marketing, management, and techniques unless SMEs collaborate with other firms to complement the requirement. The social capital is required to promote specialization in SME clusters.

(iii) Facilitating external linkages in accordance with requirement of SMEs

Many stakeholders can contribute to cluster strengthening, and a function is required to mobilize all resources within and over the cluster. The formation of a working group and program operation unit is an attempt to institutionalize such a function in the cluster.

The working group, mostly comprised of the cluster stakeholders at regency level, has been found effective in facilitating external linkages outside the cluster. However, a provincial cluster forum would also contribute clustering in a wider range, which would be particularly useful in creating dynamic linkages among viable SMEs at the provincial level.

Further, cluster facilitators should be someone fully conversant with local conditions so that he can coordinate the voices of SMEs in the cluster and bring in the stakeholders to the forum. LPM in university is considered better suited to this role because of its financial stability, abundant human resources, and its public nature to serve the area. Academic circles can in turn understand the business environment and practices.

CHAPTER 4 BASIC POLICY AND STRATEGY

4.1 OBJECTIVES OF SME CLUSTER STRENGTHENING

(1) Implications of SME Cluster Strengthening

Clustering refers to the process in which geographically proximate producers, suppliers, buyers, and other related agencies intensify collaboration with mutually beneficial effects. The most inner circle in Figure 4.1 below represents the majority of SME clusters scattered nationwide. The status quo of the inner circle can be explained in that the degree of inter-firm specialization and linkages with outside stakeholders is low or almost non-existent, reflecting a lack of specialists and a weak socialization. Most cluster SMEs are community-based producers that procure raw materials or inputs nearby and distribute products to local markets.

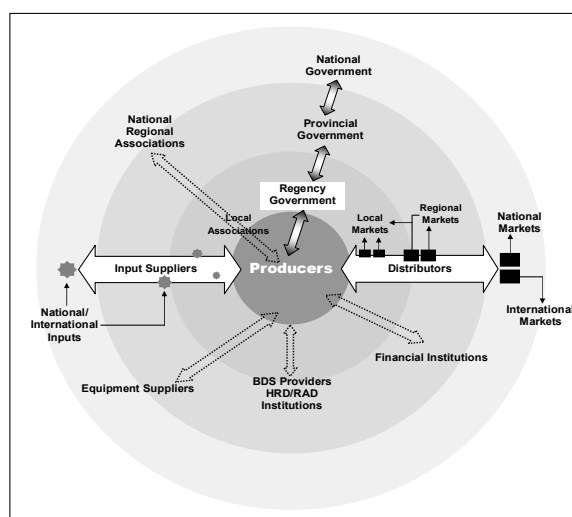
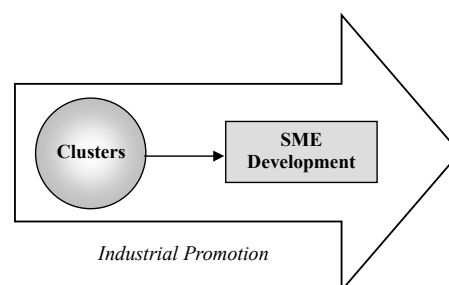


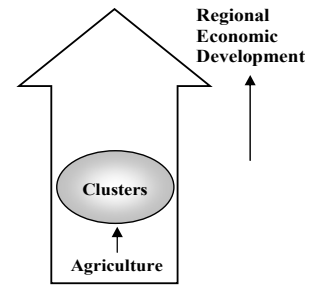
Figure 4.1 Cluster Continuum^(*)

Strengthening SME clusters makes the leading cluster SMEs grow as engines in the manufacturing industry. In this context, cluster strengthening should contribute to acceleration of industrial development.



^(*) Policy discussion Paper No. 8, 2001, "Best Practice in Developing Industry Clusters and Business Networks, ADB TA papers

On the other hand, the recent decentralization policy has raised a growing interest in SME cluster strengthening in the context of regional and community development. The cluster strengthening in this context is justified for the following reasons:



- (i) About 17% of small and micro enterprises are concentrated in clusters, mostly in rural areas. Cluster strengthening would be a driving force to regional development.
- (ii) Cluster strengthening would strengthen community networking and trust building in a cluster.
- (iii) Cluster strengthening will contribute to balanced regional development, lessening resource concentration in urban areas.
- (iv) Both economic prosperity and social stability will be attainable through SME cluster strengthening.

(2) Objective of SME Cluster Strengthening

With the recognition on implication of SME cluster strengthening, the objectives of SME cluster strengthening are proposed as follows:

SME Development

Cluster strengthening serves for nurturing potentially viable SMEs to become viable, hence contributing to SME development and economic prosperity.

Strengthening Social Fabric

A dormant cluster implicates a weak socialization and resultantly fragile social fabric. Cluster strengthening would involve various actors and stakeholders in the process of clustering, hence contributing to strengthening of the community-based social fabric and social stability.

Stabilization and Sustainable Development

Strengthening of community-based SME clusters nationwide is to attain stabilization and sustainable development of the country through employment creation, poverty alleviation, trust building, and networking.

4.2 BASIC POLICIES

An image of capacity strengthening of SME clusters is illustrated in Figure 4.2. With assistance from a cluster facilitator and BDS providers, potentially viable SMEs,

working independently, yet, having willingness and passion to step forward, are to be motivated to work jointly and to specialize. These potentially viable SMEs will be a core for creating dynamism in the cluster.

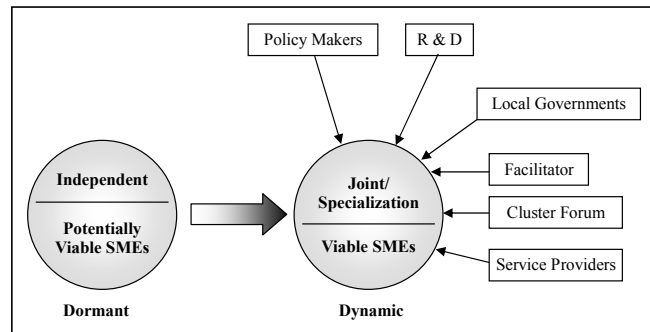


Figure 4.2 Capacity Strengthening of SME Clusters

Through the cluster strengthening process, a principle of “3C” (*competition, cooperation, and concentration*) shall be applied.

Competition

- (i) A linkage to the dynamic markets is a requisite for SME clusters to shift away from price-competition in the low market which has been a restraint on technical innovation.
- (ii) Take-off from a pre-information society is of vital importance for SME clusters to gain a competitive edge.

Cooperation

- (i) A flexible form of cooperation will be promoted to further activate SME clusters.
- (ii) Adherence to a bottom-up approach is a prerequisite to consolidate the social capital.
- (iii) A Public-Academic-Private partnership is a basic form of cooperation required for capacity strengthening of SME clusters. Yet, public support is to be extended based on demand-driven delivery.

Concentration

- (i) Targets should be concentrated on potentially viable SMEs, which have ability, willingness, and passion to step forward.
- (ii) Cluster strengthening shall be promoted by focusing on collective activities linked by commonalities.
- (iii) Export oriented clusters and those clusters producing the target products, supported by a commodity development plan by MOIT should be targeted in light of creating competitiveness of the nation.

4.3 BASIC STRATEGIES

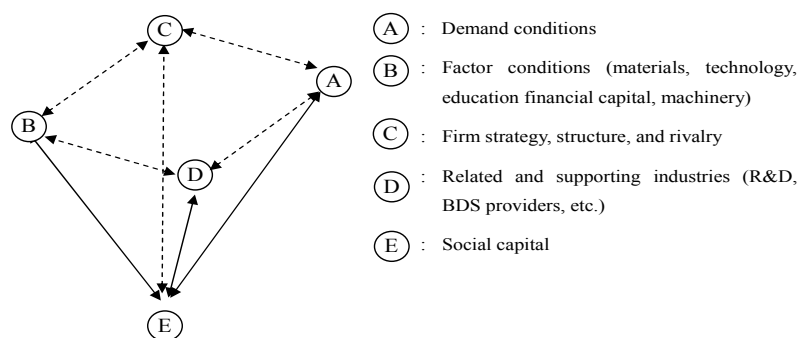


Figure 4.3 Five Conditions for Capacity Strengthening

Demand Conditions

A missing link between SME clusters and dynamic markets is the major constraint to gaining access to the higher markets. Priority would be given to the matching services, which connect potentially viable SMEs with stakeholders in the higher markets.

Factor Conditions

Most cluster SMEs are generally in short of factor conditions including human, natural, financial, and capital, and machinery resources.

Firstly, technological improvement is required for cluster SMEs to be linked to dynamic markets. Given the scarcity of natural resources, resource saving technology and practices must be developed with a support from the public and private sectors.

Secondly, SMEs should have an easier access to financial resources. A growing concern has been observed about the financial intermediaries. Capacity strengthening of such intermediaries would facilitate SMEs in the access to the banking sector.

Firm Strategy, Rivalry, and Structure

Emergence of a competitive mind will lead to a flexible formation of SME groups, which share a common interest such as a method to raise profit. The type of group formation may differ according to product type and nature of SME clusters.

Related and Supporting Industries

Cluster strengthening requires promotion of linkages with the related and supporting industries in order to obtain specific assistance that fits the needs of each cluster. BDS for cluster development is varied including assistance in machinery renovation, production management, brand development, design assistance, exhibition support, etc.

Specialization of each cluster SME will lead to development of the supporting industry in general; however, this is unlikely to emerge in a short period. Alternatively, a more realistic approach is strengthening linkages with outside supporting industries.

Social Capital

The status quo of SME clusters appears to be in a vicious circle. Unless stimulated from outside, social capital might remain weak and fragile.

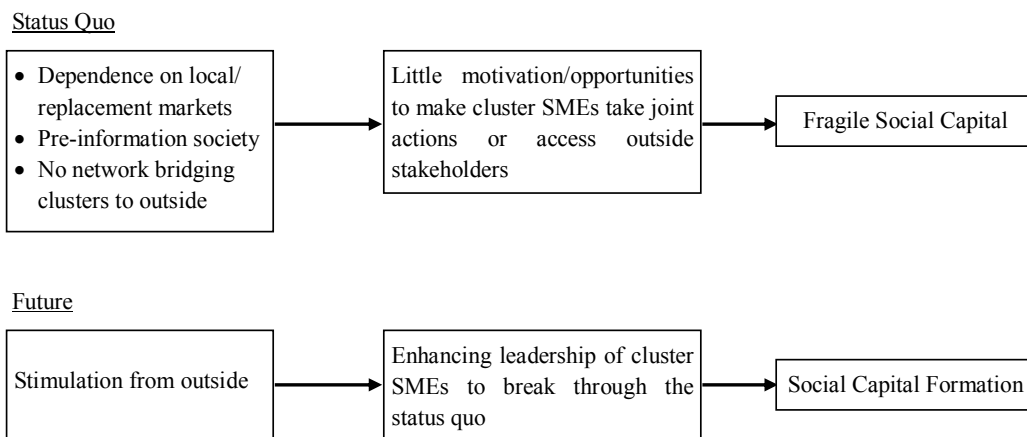


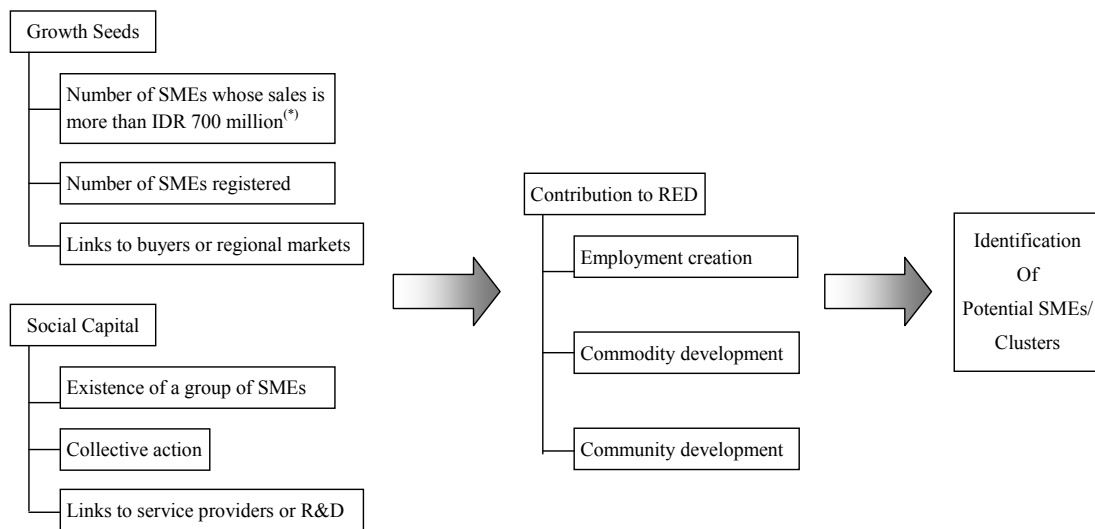
Figure 4.4 Formation of Social Capital

Enhancement of social capital and entrepreneurship are the most important factors in breaking through the status quo. Cluster SMEs, independently running business, should be motivated and lead to the promotion of linkages based on mutual trust, and maintain the passion to step forward.

4.4 STRATEGY IMPLICATIONS FOR CLUSTER STRENGTHENING

(1) Identification of Potential SME Clusters

Potentiality of clusters is mainly determined by availability of growth seeds and social capital. Target clusters are further evaluated in terms of their contribution to regional economic development. Moreover, identification has to take into account various statements of the concerned stakeholders.



(*) IDR700 million is the average of sales of small industries.

Figure 4.5 Identification of Potential Clusters

The forums, organized by local stakeholders, will be the platform for consensus building. The provincial forum is initially set up by representatives of provincial government, investors, banks, cluster SMEs, BDS providers, and a cluster facilitator. The provincial forum is responsible for identifying potential clusters.

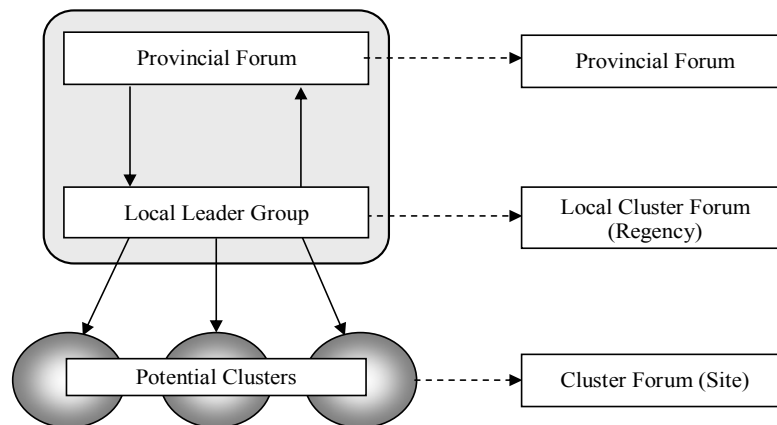


Figure 4.6 Formation of Cluster Forum

(2) Fostering Growth Seeds and Entrepreneurship

The success of cluster strengthening depends primarily on availability of potentially viable SMEs who have ability and passion to step forward. Such SMEs are seeds for growth and become a leading force to strengthen the SME clusters.

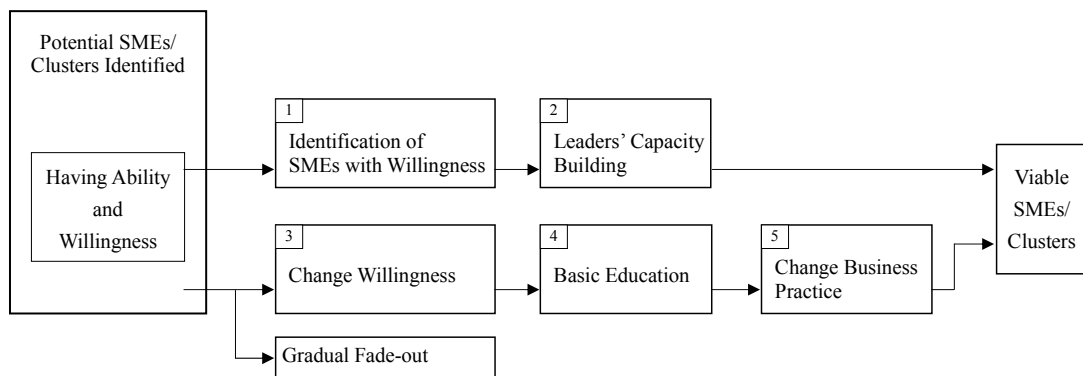


Figure 4.7 Motivating Potentially Viable SMEs

(3) Enhancing Social Capital

Enhancement of social capital is a core element of cluster strengthening. The social capital can be defined as trust and norms of reciprocity that develop into internal bonding and bridging to external stakeholders.

Many research papers point out the limitation of cooperatives. The limitation appears to be due to a diversity among cluster SMEs. The cooperatives are no longer a uniform set of organizations representing voices of all cluster SMEs. The lessons from the pilot project suggest that a comprehensive approach, targeting all cluster SMEs, require time-consuming socialization procedures.

While the principle of “3C” (competition, cooperation, and concentration) is applied to cluster strengthening, groups of different types would emerge within and outside the cooperative. The three pilot projects have demonstrated such transformation. In Kebumen, collective actions for clay provision (raw material supply) and marketing/trading are introduced in pursuing a common interest among SMEs. Then a consortium, comprising two cooperatives, has been established to implement the collective actions. Similar initiative is taken for improving common facility sharing of a dry-kiln in the Klaten-Serenan furniture cluster, which formed a collaboration unit. In Sidoarjo, an informal network, comprising eight leading SMEs, was established to identify the area of cooperation.

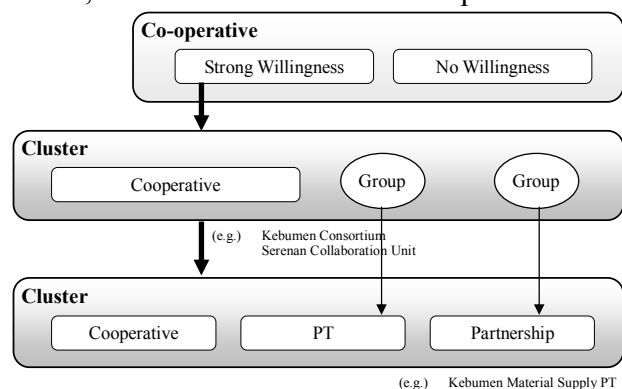


Figure 4.8 Transformation of Cluster Organization

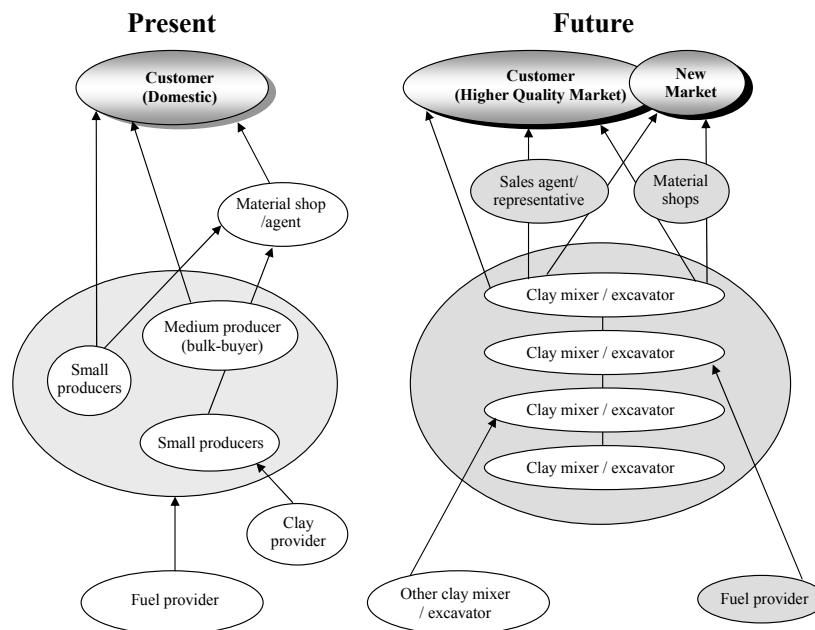


Figure 4.9 Expected Transformation of Kebumen Roof-tile Cluster

(4) Facilitator

A cluster facilitator will attend one or more SME clusters of similar type and provide the following services to the cluster(s):

- orientation to cluster development
- identification of related stakeholders
- promotion of participatory approach to clustering
- socialization of cluster members
- identification of SMEs having willingness/passion to step forwards
- motivation/stimulation to joint actions
- analysis and improvement of a value chain
- assistance in preparation/implementation of action plans
- promotion of linkages (horizontal and vertical)
- advice in technology, management, and marketing
- channeling to BDS providers and the financial sector
- monitoring and evaluation of clustering

The provincial and local cluster forums are responsible for identification of the best candidates for cluster facilitators. The candidates or selected facilitators should be further trained. A guideline for cluster facilitator has been prepared for reference.

4.5 Strategy Implications for Cluster and SME Strengthening

(1) Information Management

Unavailability and uneven distribution of information tends to distort a resource allocation among SMEs, reducing opportunities to be taken by the potentially viable SMEs. Moreover, favoring some SMEs in delivering information creates distrust among the cluster SMEs.

To counteract such situations, an open information system should be established to disseminate information to SMEs. A proposed information delivery method is presented in the figure on the right. Regency governments are recommended to deliver information relating to training and other support opportunities to SMEs. The information delivery can also be contracted out to the private sector.

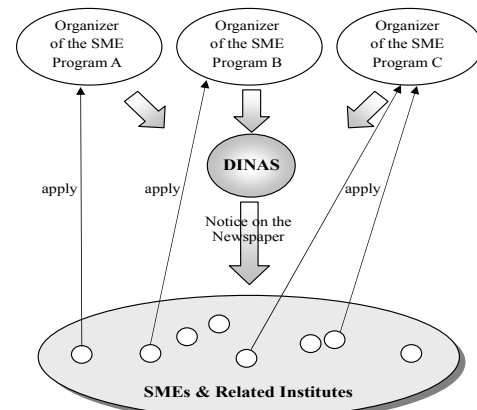


Figure 4.10 Open Information System

A lack of an SME database is another significant drawback, particularly in conducting strategic planning and support to cluster SMEs. It is suggested that the outputs of census and regional profile information be combined to generate more significant data on cluster SMEs.

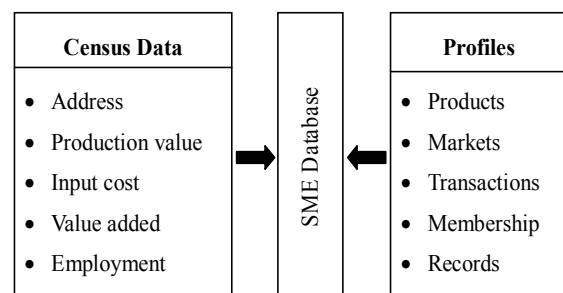


Figure 4.11 Composition of SME Database

(2) Intermediary Services and One-Stop Service

To facilitate supply/demand matching for BDS, technical assistance, and support programs, it is desirable to set up function of one-stop-service (OSS), which intermediates between BDS providers and cluster SMEs.

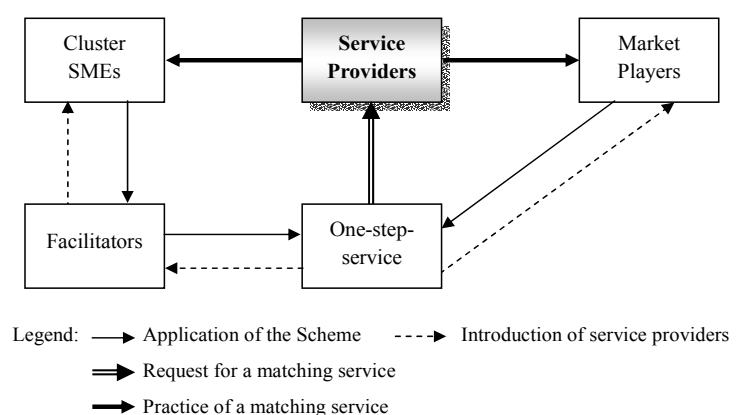


Figure 4.12 A Scheme for Matching Service

Information should be stored in a database, including SMEs,

service providers (private or public) and market information. The database should also include profiles and performance of the BDS providers.

To meet the requirement for specific technical assistance, a databank of skilled resource personnel (e.g., retired craftsman) will be set up in KADIN. The databank is ideally established at the regency level. Upon receiving a request for service, OSS shall coordinate with the regional KADIN to provide SME clusters with technical consultation.

As for access to financial sources, a program called *Konsultan Keuangan Mitra Bank* (KKMB) has been initiated to improve accessibility of SMEs to the credit. BDS providers should be trained as key agents under the program. Bank Rakyat Indonesia (BRI), with its large number of branches nationwide, is taking a leading role in developing KKMB.

4.6 EFFECTIVE RESOURCE ALLOCATION

As an integrated approach is required for cluster development, effective resource allocation by the stakeholders should be realized for capacity strengthening of SME clusters. The table below shows a responsibility matrix of stakeholders.

Table 4.1 Roles or Responsibilities of Stakeholders for Capacity Strengthening

Strategies Required for Capacity Strengthening of SME Clusters	Central Govt			Forum			Local Govt		Private Sector						
	MOIT	MOCSME	BAPPENAS	Province	Regency	Cluster	Province	Regency	BDS provider	KADIN	Foster Company	BRI	BDS Association	Facilitators	CD-SMEs
(1) Cluster Strengthening															
1) Identification of Potential SMEs/clusters			○	○	○										
2) Fostering of Growth Seeds and Entrepreneurship	○	○		○	○	○		○	○		○		○	○	
3) Enhancing Social Capital		○		○	○	○								○	
4) Facilitator		○											○		
5) Regionalized SME Cluster Strengthening				○	○		○	○							
(2) Cluster and SME Strengthening															
<u>Information Management</u>															
1) Open Information and Networks	○	○			○			○							
2) Directory of SMEs	○			○			○								
<u>Intermediary Services</u>															
3) Market and technology									○	○				○	○
4) Financial Services											○		○		
<u>One-Stop-Service (OSS)</u>															
5) CD for SMEs									○		○				○

Central Government

The government agencies at the central level are primarily responsible for policy issues. The MOIT, in particular, will concentrate on dissemination of its policies (e.g., commodity development and enhancement of SME entrepreneurship) to regional stakeholders. MOCSME will work out strategies for cluster strengthening, concentrating initially on capacity building of cluster facilitators in collaboration with the provincial forums.

Forum and Local Governments

A forum system accords with the decentralization policy and promotion of the private initiative as well as enhancement of “good governance”. Under the fiscal limitation, the priority of resource allocation would be given to forum formation. Local

governments (province and regency) are primarily responsible for open information system and coordination with other public supporting institutions.

Private Sector

The private sector should be encouraged to play a major role in cluster strengthening. Nevertheless, public support to small and micro enterprises is still necessary. An ideal model for the public-private partnership should be established, such as collaboration in the forums.

CHAPTER 5 ACTION PROGRAMS

5.1 PROGRAM SUMMARY

Based on the one-year operations of three pilot clusters and study on strategies for cluster strengthening, a dozen action programs are proposed for implementation. The action programs include those applicable to cluster strengthening and those applicable not only to clusters, but also to SMEs as a whole. Setting up of the latter programs is based on the recognition that the cluster development cannot be realized without development of individual SME in the cluster. The figure below illustrates how action programs are applied to the cluster promotion process.

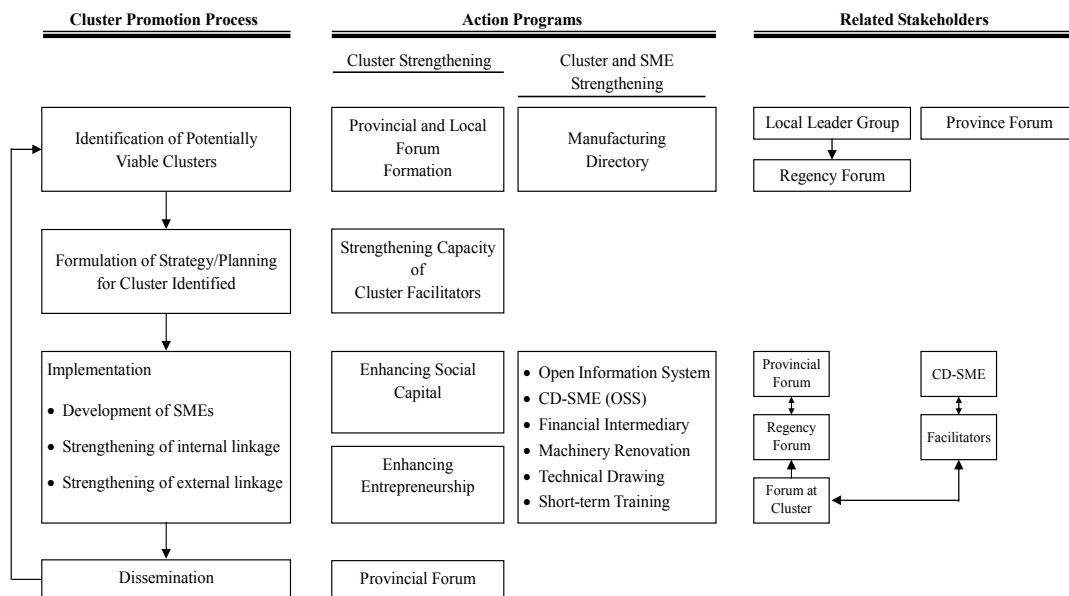


Figure 5.1 Cluster Promotion Process and Action Programs

The proposed Action Programs are summarized on the following page:

Table 5.1 Action Programs for Strengthening Capacity of SME Clusters

CLUSTER STRENGTHENING	WHY	WHO*	WHAT
1 PROVINCIAL CLUSTER FORUM FORMATION	Needs an institutional arrangement to facilitate the linkages in region	BAPENAS, <u>BAPPEDA</u> , Provincial Dinas, Regency Disperindag and Dinkop, SMEs, NGOs, Universities	1) Formation of provincial forum 2) Identification of potential cluster
2 LOCAL CLUSTER FORUM FORMATION	Needs an institutional arrangement to facilitate the linkages in clusters	Provincial Forum (BAPPEDA), Regency Gov., <u>Regency Disperindag and Dinkop</u> , SMEs, NGO, Universities, Cluster facilitator, CD-SMEs	1) Formation of local forum (at Kabupaten and cluster) 2) Capacity building of local forum
3 CAPACITY BUILDING OF CLUSTER FACILITATOR	To manage cluster promotion programs and to facilitate clustering process	<u>MOCSME</u> , Provincial and Regency Disperindag and Dinkop, BDS, Extension workers, LPM	1) Development of model training curriculum 2) Training of the candidate for cluster facilitator
4 ENHANCING SOCIAL CAPITAL IN CLUSTER	To enhance trust relationship among SME clusters	<u>Provincial and Local Forums</u> , MOCSME, cluster facilitators and SMEs	1) Information seminar 2) Regular meeting 3) Joint actions
5 ENHANCING ENTREPRENEURSHIP IN CLUSTER	To increase SME's motivation	<u>Provincial and Local Forums</u> , MOCSME	1) Study tour to more advanced cluster 2) Exhibition holding 3) Matching with buyers
CLUSTER AND SME STRENGTHENING	WHY	WHO*	WHAT
6 MANUFACTURERS' DIRECTORY	Required for baseline study for implementing any programs	Provincial and regency BOS, <u>Regency Disperindag and Dinkop</u>	Processing Economic Census data (year 2006) in detail to make manufacturers' directory at Regency level
7 OPEN INFORMATION SYSTEM	To provide an equal opportunity for SMEs to join in a program	<u>Regency Disperindag and Dinkop</u>	1) Regular promotion of information in TV, newspaper, notice board 2) Information seminar 3) CD-SMEs
8 CAPACITY BUILDING OF CENTRE FOR DEVELOPMENT OF SMES	To complement lack of information for SMEs and Clusters	<u>MOCSME, CD-SMEs</u> , KADIN, BRI, PT.Telekom	1) Training the staff in management (coordination and dissemination) 2) SME advisory service 3) KKMB service 4) Establishing revenue model
9 BDS AS FINANCIAL INTERMEDIARY	To increase the accessibility to the finance	BI, <u>BRI</u> , IBI (Institute of Banking Indonesia), BDS	1) Review of current KKMB program 2) Training BDS 3) Establish certification
10 MACHINERY RENOVATION PROGRAM	To provide alternative opportunity of machinery upgrading or replacement	MOIT(IDKM), Ministry of Finance, <u>Venture Capital</u>	1) Selecting the models 2) Order in response to the purchasing request 3) Profit sharing
11 TECHNICAL DRAWING LESSON IN SMU	To increase basic skill for technology	Ministry of National Education, <u>Regency Disperindag</u> , SMU	Adding technical drawing lesson optional to 2004 curriculum
12 SHORT TERM TRAINING COURSES	To open up training opportunities for SMEs	<u>MOIT (IDKM)</u> , LPM (University), R&D institutes, BPT, Extension workers	1) Transfer resource saving technology and cleaner production for SMEs 2) Establish model courses

* The agency highlighted by boldface and underlining takes an initiative in each action program.

5.2 ACTION PROGRAMS FOR CLUSTER STRENGTHENING

(1) Provincial Cluster Forum Formation

Background

The proposed provincial forum is similar to the forum set up for the Economic and Human Resources Development in Central Java except that this forum focuses on the single purpose of cluster development. The main tasks of the provincial forum are:

- (i) identification of potentially viable clusters,
- (ii) approval of development programs of clusters selected at a regency forums,
- (iii) programming and budgeting, and
- (iv) cooperation and coordination among stakeholders.

Actions

Formation of Provincial Forum

- (i) Preparation of a guideline for the provincial forum with respect to role, status, membership, voting, establishment of working groups, and operation rules, etc.
- (ii) Approval of the guideline by the provincial parliament
- (iii) Appointment of membership

Formation of Local Leader Groups

- (i) Workshops between the provincial forum and the regency government
- (ii) Appointment of membership of local leader groups (e.g., regency government, KADIN, business associations, regional universities, BDS providers, and viable SMEs).

Identification of Potential Clusters

- (i) Provision of basic policy and guidance for evaluation method
- (ii) Preparation of questionnaire forms
- (iii) Site survey of candidate clusters in collaboration with local leader groups
- (iv) Identification of potentially viable clusters

Schedule

- (i) Formation of provincial forum : Three (3) months
- (ii) Formation of local leader groups : One (1) month
- (iii) Identification of potential clusters : Six (6) months

Budget

The costs of meetings and communications are to be borne by a routine budget. The budget required for identification of potential clusters depends on the number of clusters to be surveyed, but it is preliminarily estimated at Rp. 3 million per regency.

(2) Local Cluster Forum Formation

Background

The local cluster forum is proposed for establishment under an umbrella of the provincial forum. This local cluster forum at the regency level is similar to the Forum for Economic Development and Employment Promotion, except that the proposed forum has the single purpose of cluster strengthening.

Actions

Formation of Local Cluster Forum

- (i) Preparation of the guideline for the local cluster forum with respect to role, status, membership, voting, establishment of working groups, and operation rules, etc.
- (ii) Approval of the guideline by the regency parliament
- (iii) Appointment of membership

Cluster Guidance

Some members of the local cluster forum are called to the provincial forum to be acquainted with the cluster guidance, strategies, and lessons learned from the MOCSME's cluster BDS scheme.

Schedule

- (i) Formation of the regency forum : Three (3) months
- (ii) Cluster guidance : A few days

Budgeting

To finance the training programs for the cluster guidance, a budget of Rp. 10 million shall be allocated per province.

(3) Capacity Building of Cluster Facilitator

Background

SME cluster strengthening through collective actions and business networking requires tailor-made planning and implementation. Accordingly, presence of a cluster facilitator becomes indispensable. The cluster facilitator promotes strengthening of the linkages among SMEs and with stakeholders inside and outside the cluster. The government should assure the quality of such cluster-specific professionals through training and information sharing.

Actions

Training of Trainers

The trainers for cluster facilitators should be trained at the national level to empower trainers with the following capabilities:

- (i) Understanding of the cluster theory, approach, and case studies
- (ii) Program management capacity
- (iii) Matching capacity between BDS/Financial sources and cluster SMEs

Training of Cluster Facilitators at the Regional Level

The candidates of cluster facilitators should be trained at the regional level. The training should be a combination of the in-class-training and on-the-job training (OJT). The OJT program includes the following:

- (i) Preparation of cluster profiling report (with particular attention to social capital)
- (ii) Formation of cluster stakeholders' group and socialization of cluster SMEs
- (iii) Conduct of problem identification and needs assessment through the cluster stakeholders' group discussion
- (iv) Preparation of cluster strategy and action programs through the cluster stakeholders' group discussion
- (v) Formation of the program operation group
- (vi) Trial execution of the proposed action programs
- (vii) BDS and financial matching according to the needs of action programs
- (viii) Monitoring and evaluation

Schedule

Training of Trainers

Executor : MOCSME
 Period : About 10 days
 Trainers : Qualified trainer selected by MOCSME

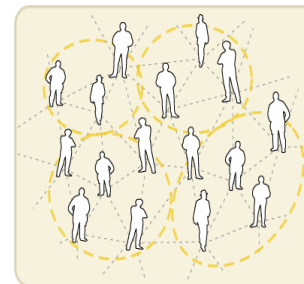
Training of Cluster Facilitator at the Regional Level

Executor : Provincial government (DINAS) at model provinces
 Period : About 10 days (class-based training)
 About one year (OJT-based training)
 Trainers : Trainers certified in the training

(4) Enhancing Social Capital in SME Clusters

Background

Joint actions are essential for successful SME cluster development. Through joint actions, a cluster can develop its collective capacity and linkages. Whether joint actions take place or not will depend on the level of social capital in the cluster. The pilot projects identified several activities that contribute to the enhancement of social capital in clusters.



Actions

Organizer

A cluster facilitator with support from the provincial/regency forum

Beneficiaries

Motivated SMEs joined on a voluntary basis (not on a cooperative basis)

Activities

- (i) Information Seminar
- (ii) Regular Meetings to exchange views and concerns among cluster SMEs and identify areas where they can work jointly. The meetings shall emphasize the importance of “*Competition*”, “*Cooperation*”, and “*Concentration*” (See Chapter 4.2 on discussions on “3C”).
- (iii) Joint Actions

Schedule

Schedule for the above activities should be determined by the cluster SMEs. The following is a reference guideline:

- (i) Information seminar : once every 3 months
- (ii) Regular meetings : once a month
- (iii) Joint actions : to be determined according to the context of actions

Budget

In order to maintain sustainability and proliferation, self-funding efforts by SMEs shall be encouraged. If the joint actions and advice by experts cannot be fully financed by SMEs, they should seek funding from the local cluster forum, item by item.

(5) Enhancing Entrepreneurship in the Cluster

Background

While enhancing social capital is a key factor in strengthening collective capacity of SME clusters, enhancing entrepreneurship is the key factor to motivate SMEs for improvement. A combination of social capital and entrepreneurship is necessary for cluster development. The pilot projects identified some types of activities that contribute to the enhancement of entrepreneurship among cluster SMEs.

Actions

Beneficiaries

SMEs that have strong willingness and ambition to upgrade

Activities

- (i) Study tour to more advanced clusters and SMEs
- (ii) Participation in national exhibitions
- (iii) Visits to potential buyers

The pilot operation has endorsed that the shock from visiting and learning the status of more advanced clusters and SMEs is an effective stimuli to motivate cluster SMEs to improve themselves. Likewise, effects of participation in exhibitions are great when the efforts are synchronized with advisory services on product improvement and marketing skills. IETC and RETPC are recommended to train BDS providers to deliver such services, while NAFED will link the trained providers with the cluster.

Schedule

The program mainly aims at raising awareness of SMEs about the competition and conditions in the potential markets. The activity should be scheduled so that the SMEs can fully utilize the events and opportunities.

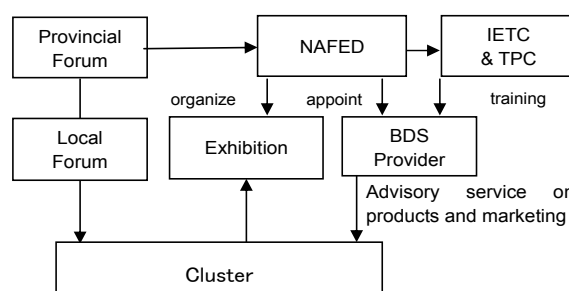


Figure 5.2 Supporting Structure for Exhibition

Budget

In order to maintain sustainability and proliferation, self-funding efforts by SMEs shall be encouraged. Many small-scale entrepreneurs are willing and able to pay for participation in tours and exhibitions when they are convinced of the business opportunities. If their financial resources are limited, they should seek funding from the local cluster forum, item by item.

5.3 ACTION PROGRAMS FOR CLUSTER AND SME STRENGTHENING

(1) Manufacturer's Directory

Background

The BPS-Statistics Indonesia compiles a manufacturing industry directory of large and medium enterprises, but there is no official directory of small and micro enterprises. Some regencies voluntarily compile a directory for SMEs, but the majority have yet to have complete information. Lack of a database frustrates program design as there is no insight into status and the number of firms that need to be taken into consideration. The pilot cluster projects have encountered many problems in identifying beneficiaries and potentially viable SMEs.

Actions

- (i) MOIT and BPS shall produce a format of the manufacturer's directory, covering company name, address, telephone, fax, sector, cooperative name, sales volume, number of employees, year of establishment, and product specification.
- (ii) Regency BPS undertakes baseline survey for the economic census (2006).
- (iii) Information is passed to regency Disperindag that compiles it into the manufacturer's directory (print out) for each regency.
- (iv) The directory is uploaded and distributed to the related agencies and centers such as Kantor Pengeloann Data Elektronik (KPDE) and Center for Development of Small and Medium Enterprises (CD-SMEs).

Schedule

This action plan will be implemented in 2006 when the economic census is scheduled.

Budget

Since this action plan utilizes the existing scheme of the economic census and data centers, the only proposed additional cost is associated with planning and compiling the data into the manufacturer's directory, as outlined below:

- Planning and requesting to the regional offices (MOIT and central BPS):
2 managers x 1 month x Rp.1,500,000 = Rp.3,000,000
- Compiling data into manufacturer's directory (prints): (regency Disperindag):
2 managers x 1 month x Rp.1,500,000 = Rp.3,000,000
30 pages x 1,000 copies x Rp.150 = Rp.4,500,000

(2) Open Information System

Background

Information on the SME programs has usually been delivered through cooperatives that contact selected SMEs *one-by-one* for delivery. This information delivery system is time consuming and leads to uneven distribution. It has caused distrust among the cluster SMEs since non-member SMEs are unlikely to receive information.

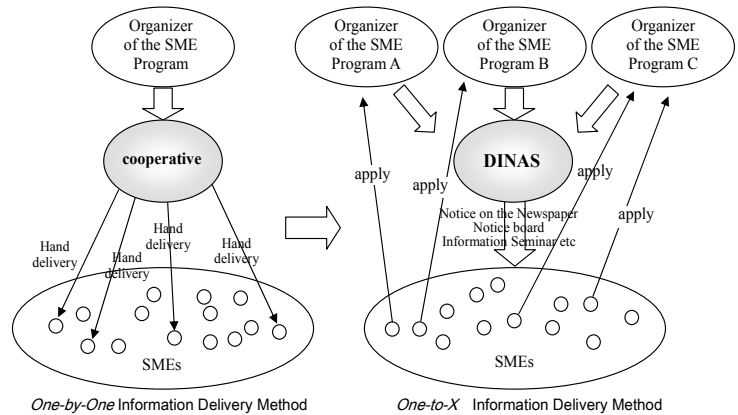


Figure 5.3 Information Delivery Method

Actions

Regency Disperindag places a notice in regional newspapers every first Monday of the month. In addition, notice boards, advertisements on the local radio, and information seminars in clusters should be promoted for an open information system.

SME Programs in January, 2004	
Please contact by phone for further information.	
<Seminars and Workshops>	<Subsidies >
Seminars on Business Plan 19-21 Jan JICA, Rp. 50,000- TEL 853xxx	Exhibition Support Program For the SMEs with experience in exporting only Disperindag, TEL 583xxx
Seminars on Drawing 26-28 Jan ITS, Rp. 50,000- TEL 792xxx	Cleaner Production Program For the SMEs in electro plating only Disperindag, TEL 583xxx
Seminars on Production Control 13-15 Jan, BPT Rp. 50,000 TEL 823xxx	
Workshops on Entrepreneurship 23 Jan. JICA, Rp. 20,000 TEL 853xxx	

Figure 5.4 Example of Notice in Newspapers

Schedule

Started from Year 2004

Budget

Notice in newspapers: Rp. 4,800,0000 / 2 columns x 10 cm (per month)

Radio advertisement: Rp. 2,000,000 / 30 seconds x 3 times/day x 7 days (per month)

(3) Capacity Building of Center for Development of SMEs

Background

Center for Development of Small and Medium Enterprises (CD-SMEs), in collaboration with the Chamber of Commerce, Bank Rakyat Indonesia, and PT Telekom, has set up 18 SME centers in the BRI branches and created the database for SMEs, using a portal site at <http://www.sme-center.com>. The centers will provide SMEs with information and intermediating services, bridging over the business partners (e.g., banking, insurance, logistics, and quality assurance). CD-SMEs also made an agreement with BDS Associations, expecting BDS providers will utilize the CD-SMEs and work as information intermediaries for the SMEs. In spite of this innovative initiative, the centers are yet underutilized by SMEs.



Actions

- (i) Training of local staff in management especially for the coordination with other resource centers and DINAS and for dissemination of the center activities
- (ii) Advisory services to cluster facilitators and SME clusters to be added to its service menu
- (iii) Establishment of a business model of CD-SMEs to become self-sustainable
An appropriate level for membership fees should be decided after surveying the level of willingness to pay. In addition, a fee-based internet search service should be offered to non-members to maximize its functional benefit. KKMB service may also be conducted by the center.

Schedule

To be planned and implemented immediately (2004)

Budget

Cost for management training program (3 days):

- Travel and accommodation cost: Rp.1 million x 1 staff x 8 centers = Rp.18million
- Fee for designing program and lectures: Rp. 12 million

(4) Strengthening BDS for Financial Intermediation

Background

Although much progress has been attained in Indonesia in the provision of micro credit, availability of credit for micro and small-sized enterprises remains problematic. Banks argue that SMEs frequently fail to prepare sound business proposals for the provision of credit, while the SME sector argues that access to formal credit is a constraint because the enterprises cannot fulfill the loan requirements set by the banking sector. Procedures also remain complicated. In an aim of strengthening financial intermediation to bridge the gap between banks and SMEs, a program, called the “Konsultan Keuangan Mitra Bank” (KKMB) (Financial Intermediation), has been implemented. The program aims to train intermediaries that will assist SMEs in the preparation of business plans that qualify for credit. A taskforce has been set up to formulate a strategy to develop the KKMB program; but, the KKMB program is still in its infancy. The program needs to be executed in a large number of provinces, and it should lead to selection and training of a substantial group of BDS providers that are qualified and certified to operate as financial intermediaries.

Actions

- (i) Review of the current KKMB program
- (ii) Learning from successful cases abroad
- (iii) Institutionalize the KKBM program
- (iv) Selection and training of potential financial intermediaries
- (v) Organize follow-up consultations with potential BDS providers
- (vi) Assessment of the first phase of the KKMB program

To implement above actions, it is proposed to set up a task force by BRI, state and private banks, MOCSME, and MOIT.

Schedule

To be planned and initiated immediately (2004)

(5) Machinery Renovation Program

Background

Most cluster SMEs use obsolete machinery and find it difficult to attain quality and productivity of their product. To renovate the machinery, SMEs need capital to invest and adequate profits to accrue from the investment. Satisfying these two conditions is quite difficult for the majority of SMEs. Mobilization of reconditioned, used machinery is an alternative approach to provide the SMEs with an opportunity for machinery renovation.

Actions

Market survey and development of the used machinery should be led by the private sector, stimulated by public guidelines. MOIT is recommended to set up a task force to execute the study, inviting members from venture capital, leasing enterprises, traders, and machinery advisors.

- (i) Identification of potential demand/supply of used machinery
- (ii) Study on the outlet schemes, e.g., sales scheme, leasing scheme, and funding scheme using venture capital
- (iii) Study on maintenance and operation schemes
- (iv) Establishment of guidelines for the machinery renovation scheme

For instance, a venture capital, invests in SMEs to purchase the reconditioned, used machinery, which is taken as collateral. The venture capital, in turn provides advices to SMEs to increase their profits that will be shared between SMEs and venture capital.

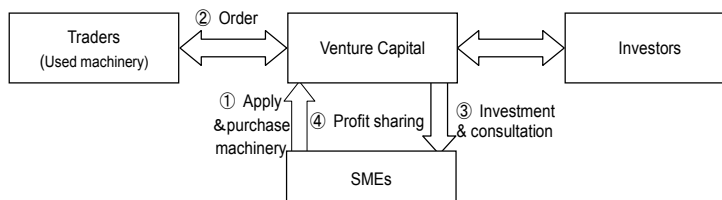


Figure 5.5 Machinery Renovation through Venture Capital

Schedule

- Study on potential demand and supply : 3 months
- Study on outlet schemes : 3 months
- Study on maintenance and operation : 3 months
- Study on establishing guidelines : 3 months

(6) Technical Drawing Lessons in SMU

Background

The majority of SMEs do not attach importance to technical drawing, receiving orders by samples and producing by imitation. Consequently, measurement of the product is not precise. Yet, the majority of SMEs lack incentives to change their business practices.

Opportunities to learn drawing skills should be given before graduating from schools. 65% of high school students attend regular high schools (SMU), and 70% of SMU graduates move on to the labor markets immediately after graduation. Yet, the industrial sector usually treats SMU graduates and those from secondary schools at the same level because SMU is not considered to provide additional

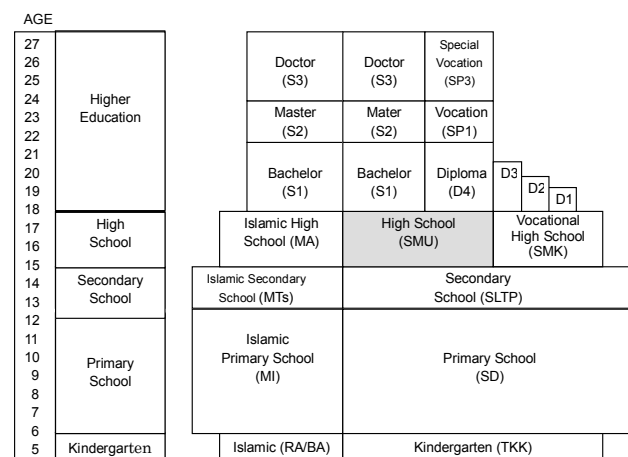


Figure 5.6 Educational System in Indonesia

value as industrial workers. The regional educational officers consider this situation critical and are placing importance in adding more practical lessons in SMU. A new curriculum starting in 2004 will allow schools to take up some curriculum that meet the regional demand more appropriately as long as it follows the principles provided by the Ministry of National Education.

Actions

The regency government, SMUs, and vocational high school (SMK) discuss the methodology and extent of introducing lessons on technical drawing in SMU as an optional course. A manual drawing lesson is recommended rather than computer assisted design (CAD) in view of the limited availability of facilities in SMEs.

Schedule

Planning should start immediately so that a new course can be adopted in the 2004 curriculum.

Budget

Since the existing resource in SMK is utilized, and manual drawing is recommended, additional costs of this program are minimized.

(7) Short Term Training Courses

Background

Although there are many institutions providing technical training to SMEs, the courses are not arranged in such a way that SMEs take up the opportunity as required. Many courses are provided on an ad-hoc basis depending on the availability of funding, and the duration is too long for SMEs to master quickly. Inappropriate management of the training courses results in the training opportunities being underutilized by SMEs.

Actions

- (i) MOIT directs each central R&D institution to identify the context of short-term training courses and to schedule them annually.
- (ii) Each central R&D institute takes a lead to establish model courses.
- (iii) Model courses should be disseminated to relevant regional R&D institutions and universities.
- (iv) Regency Disperindag collects information on the short-term training courses and notifies such programs by the open information system.

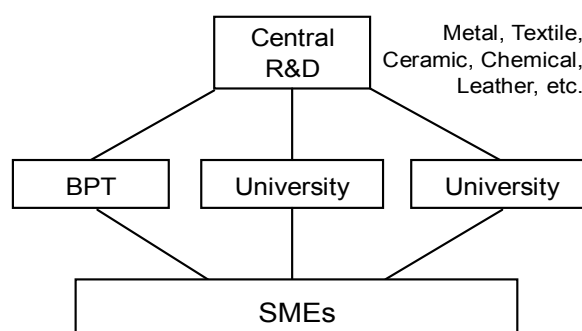


Figure 5.7 Dissemination of Model Courses

Schedule

- Study on topics and scheduling of the short-term courses : 6 months
- Establishing the model curriculum : 6 months
- Offering the model training courses : from Year 2005
- Dissemination of model courses to local R&D institutions and universities : from Year 2006

CHAPTER 6 RECOMMENDATIONS

Based on the review of the status of SMEs and SME clusters in Indonesia, as well as one-year operations of three pilot clusters and study on strategies for strengthening capacity of SME clusters, the following recommendations are presented to stakeholders:

- 1) Given 10 sample *sentras* as SME clusters, this Study has focused on how to strengthen capacity of 10,000 *sentra*/clusters. There exist a few percentages of viable SMEs in clusters, and most cluster SMEs are operating in a traditional manner, irrespective of changes in the markets. With a lowering competitiveness of their products in the market, they are in a critical position to survive. For national economic development, as well as for social stability of the country, it is urgently required to take appropriate actions to strengthen capacity of SME clusters and reactivate cluster SMEs all over the country.
- 2) Most cluster SMEs are independently operating their business though they are geographically concentrated. Even though cooperatives are formed, little collaboration in production and marketing is observed among cluster SMEs. As marketing is mostly practiced through intermediaries, market demands are not informed to cluster SMEs. It is therefore recommended that a new strategy be introduced in promoting collaborative activities and linkages in SME clusters.
- 3) Through the operation of three pilot clusters in the course of this Study, it is found that the “social capital“ is an additional condition to the Porter’s Diamond Model. The social capital is a basis for “trust building”, “internal bonding”, “social/community networking” and “passion”. To make cluster SMEs dynamic, the formation and consolidation of the social capital is of prime importance in Indonesia. The cluster strengthening programs should therefore pay utmost attention to the consolidation of the social capital in SME clusters.
- 4) For the formation and consolidation of the social capital, a bottom-up approach or participatory approach is to be taken. Motivation to change should be created by themselves. It should also be recognized that it takes time to successfully apply the bottom-up approach and to set a common target of mutual interest among cluster SMEs.
- 5) Through three pilot cluster operations, it has been found difficult to mobilize cooperative members who have no willingness to improve. If cluster SMEs, whether cooperative members or not, have “passion” to step forward, they can be classified into “potentially viable SMEs”. With the limited resources made

available, it is recommended that cluster SMEs having willingness or passion to improve be selectively attended for capacity strengthening.

- 6) It is generally observed that cooperative activities have emphasized cooperation among SMEs and set aside competitiveness. Cluster SMEs have been kept unaware of the progress made in rivals and competitors and changes in the market. Kebumen roof-tile cluster, for instance, was shocked to know the competitor (Jatiwangi) and motivated to form a cluster consortium. It is recommended that the principle of “3C” (*cooperation, competition, and concentration*) be applied as a basic strategy to strengthen capacity of SME clusters.
- 7) A fair competitiveness is unattainable unless information is evenly distributed to SMEs and clusters. A mind of distrust has been created among cluster SMEs due to uneven delivery of information. It is therefore recommended that an open information system be established to secure the 3C strategy for strengthening capacity of SME clusters. It is also recommended that a demand-driven service delivery system be worked out not only for provision of information but also for business development services.
- 8) Most cluster SMEs are engaged in labor intensive industries. Consequently, technological improvement is of prime importance in capacity strengthening. While ordinary BDS pays more attention to marketing and management issues, BDS for SME clusters should be guided to provide more technical advice and production management based on technical improvement. In the event that a BDS provider or cluster facilitator has insufficient capability to guide the SME clusters in a technical aspect, some specialized technical institutes should be mobilized in consultation with the local authorities and universities.
- 9) Viable SMEs can be attended by BDS providers’ but potentially viable SMEs in clusters are found difficult to make full payment for the private BDS providers. Cluster SMEs still require public support in securing information, technical improvement, and various training. Academic support is also required to solve technical and managerial difficulties. It is therefore recommended that a Public-Academic-Private Partnership (PAPP) be set up to strengthen capacity of SME clusters.
- 10) Capacity strengthening through PAPP can not attend to all SME clusters extensively. In view of the current economic position and the limited resources made available, priority will be given to the export-oriented SME clusters and their linkage with the related cluster SMEs. It is suggested that a consensus be reached on the priority target of cluster strengthening.

- 11) Cluster strengthening involves many stakeholders. To coordinate with stakeholders, it is recommended that a provincial/local forum be set up in line with the decentralization policy and PAPP strategy. When the provincial/local forums are set about, it is proposed to evaluate the necessity and sustainability of a national forum or committee to be formed for coordination and promotion of cluster strengthening at the national level. It is therefore recommended that a further study be conducted to formulate the Cluster Forum.
- 12) To make the cluster approach more effective, it is desirable that capacity strengthening is not limited to specific SME clusters but expanded to promote linkage with SMEs outside the cluster. It is particularly applicable to a few percentages of viable SMEs who would become dynamic with such extended linkages. It is therefore recommended that linkages and clustering be promoted in a wider range under management of the proposed forum at the provincial level.
- 13) The provincial forum should selectively promote capacity strengthening of SME clusters. It is recommended that a developmental enterprise (as defined by the Michel Best's dynamic cluster model) be linked more effectively with other developmental enterprises outside the cluster than the enterprises within the cluster until the social capital is consolidated in such SME clusters.
- 14) How to motivate the cluster SMEs is the most significant issue in strengthening capacity of SME clusters. Three pilot cluster operations under the Study have revealed that it is indispensable to have a cluster facilitator for each SME cluster. With the cluster facilitator, SMEs will come to know the non-competitiveness to work independently and form collaboration groups voluntarily. It is therefore recommended that the cluster facilitators be appointed to the potential clusters and motivate cluster SMEs to step forward.
- 15) The capacity of BDS providers should be more enhanced to effectively facilitate socialization, innovation of technology, marketing and management of cluster SMEs. It is recommended that the MOCSME's cluster BDS be further strengthened to make them serve as cluster facilitators. A recently formed BDS Association and LPM of universities should also be encouraged to collaborate in the capacity building of cluster facilitators.
- 16) The pilot cluster operations have endorsed that clustering is a learning process. Although the Study has compiled a Guideline for Cluster Facilitator, it is recommended that the Guideline be refined by incorporating the experience accumulated by BDS providers and other stakeholders related to the cluster strengthening.

- 17) Through JICA pilot operations at three clusters, a large number of lessons have been learned as reported in the Pilot Project Report. These lessons, together with lessons learned by MOCSME's cluster BDS, should be widely referred to in promoting capacity strengthening of SME clusters. It is recommended that these lessons be disseminated to cluster facilitators and cluster SMEs as far as possible.
- 18) JICA pilot operations at three clusters have encouraged SMEs to work out a 10-year vision and 3-year medium plan with 1-year action programs. These action programs have been attended by JICA experts, and the clusters have been well motivated. As suggested by Prof. Hubert Schmitz (see Pilot Project Report), it is recommended that operations of these pilot clusters be monitored and evaluated periodically and that required advice be extended, at least during the period of the 3-year medium plan.
- 19) JICA pilot cluster operations have also revealed that some educational strengthening programs are required for capacity strengthening of SME clusters. For instance, a large number of cluster SMEs are not equipped with basic knowledge in technical drawing, as well as spirits of entrepreneurship. For the capacity building of SME clusters, appropriate measures should be taken to strengthen some educational programs to meet the requirement of market-oriented industries. It is therefore recommended that MOIT and MOCSME discuss with the Ministry of National Education and take appropriate measures in education.
- 20) Most SME clusters have less impact on the environment compared with the mass-production type industries. However, utmost attention should be taken to mitigate the negative environmental impacts in promoting SME cluster strengthening. Since many SME clusters are developed in close vicinity of the urban area, it is imperative to pay utmost attention to prevent any pollution in clusters. It is recommended that a cyclical and environment-friendly society be pursued in the communities where SME clusters are located.
- 21) With a reform in the banking sector, the Bank of Indonesia and private banks are paying more attention to the SME sector. It is expected that the banking sector will be more actively involved in the cluster strengthening programs. Banks may be invited to the proposed Cluster Forum and encouraged to tighten linkages with cluster facilitators to extend loans to viable and potentially viable SMEs in clusters. It is recommended that a closer relation be maintained with the banks in capacity strengthening of SME clusters.
- 22) Large enterprises are supporting SMEs as a return to the society (e.g., the case of KKB under ASTRA). Desirably, such programs of large enterprises would be integrated by formulating a Cluster Foundation. The Foundation, if formed, can

more effectively support cluster SMEs through the Cluster Forum and Cluster Facilitator. It is recommended that such an idea be discussed among large/state enterprises.

- 23) The JICA Study is proposing 12 Action Programs as presented in Chapter 5. For each program, it is necessary to set up an institutional framework for implementation. It is recommended that EKUIN, MOIT and MOCSME take initiative to form a task force and nominate the responsible institution for each Action Program. The recommended actions should be taken immediately as they are urgently required by SME clusters.
- 24) Although this Study has been conducted to activate SME clusters and make them dynamic, it appears feasible that the cluster theory is applied to other industrial activities. For instance, a production centre could be formulated and strengthened by clustering, regardless of either agricultural, agro-processing or service industries. Agricultural cooperatives might also be strengthened by means of the cluster and/or value chain approach. It is recommended that the application of clustering be studied more widely to accelerate and strengthen economic and social development of Indonesia.