

SMALL ENTERPRISES TECHNOLOGY UPGRADING PROGRAM¹

AN INITIATIVE TO HELP ERADICATE POVERTY

I. Background/Rationale

Of the 826,783 registered enterprises in 1999, about 99.61% (823,558) are classified as micro, small and medium scale enterprises (MSMEs). MSMEs account for 53% of total employment generated by registered enterprises and represent around 60% of all exporting firms in the country. (NSO data)

Recognizing the critical role of MSMEs in generating employment, earning foreign exchange and stimulating growth and development particularly in the rural areas, President Gloria Macapagal Arroyo has refocused economic policies to support and sustain the growth of the manufacturing sector through the development of MSMEs. The President also called for efforts to expand domestic markets and assist MSMEs in penetrating non-traditional markets for sustained growth and competitiveness.

However, to be able to do this, MSMEs need substantial support in terms of:

- a. New technologies;
- b. Technical manpower training;
- c. Access to capital;
- d. Access to markets;
- e. Product standards and testing facilities;
- f. Appropriate packaging and product labeling;
- g. Sustainable raw material supply;
- h. Access to information; and
- i. Better/more efficient transport facilities.

To help provide some if not all of these needs, the Department of Science and Technology (DOST) launched the Small Enterprises Technology Upgrading Program (SET-UP) in response to the President's call for more focused programs of assistance for MSMEs. SET-UP is a nationwide strategy to encourage and assist MSMEs to adopt technological innovations to improve their operations and thus boost their productivity and competitiveness. The program enables firms to address their technical problems through technology transfer and technological interventions to improve productivity through better product quality, human resources development, cost minimization and waste management, and other operation related activities.

¹ Initiated in 2002, SET-UP is DOST's program aimed at establishing new technology based enterprises or strengthening/improving the competitiveness of existing micro, small, and medium enterprises in various parts of the country.

II. Industry Sectors Covered

Initially the Program covers the following sectors:

- a. Food Processing;
- b. Furniture;
- c. Gifts, toys, house wares, handicrafts, natural fibers and dyes;
- d. Marine and aquatic resources;
- e. Horticulture (Cut flowers, fruits and high value crops);
- f. Metals and engineering.

III. Objectives/Targets

SET-UP hopes to assist MSMEs improve their productivity and competitiveness through the:

- a. Infusion of new/advanced technologies to improve operations of MSMEs;
- b. Provision of limited funds for technology acquisition;
- c. Manpower training, technical assistance and consultancy services;
- d. Design of functional packages and labels;
- e. Assistance in the establishment of product standards including testing;
- f. Database information system.

For CY 2003/2004, SET-UP targets to:

A. FIRM LEVEL TARGETS

- a) Provide about 12,000 technological interventions to 7,200 companies;
- b) Generate at least 30% increase in gross revenues of participating firms;
- c) Increase by at least 50% the total employment of participating firms;
- d) Assist at least 50% of participating firms to penetrate new markets and/or start exporting by the end of 2004;
- e) Expand the testing services offered and number of clients served by DOST Regional Testing Laboratories by at least 50%. Estimated income from services is expected to increase by at least 30%;
- f) Improve production efficiency by reducing wastes (20%); increasing turn around time (30%) and improving productivity by not less than 50%.

B. MACRO TARGETS

- a) Identify non-traditional markets and assist companies penetrate new markets and expand market share by 30%;
- b) Develop new products and product design;
- c) Develop additional micro financing packages for MSMEs and assist them access these financing facilities.

IV. DOST Strategies to Assist MSMEs

A. Provision of technology

Technology needs assessment and sourcing of technology – Participating firms will be assisted in assessing their technology needs and appropriate technologies recommended for adoption. Once identified, the source(s) of the technology will be determined and negotiations for the acquisition and installation of the technology will be done.

Seed fund for technology acquisition – Most MSMEs have no capital or have limited access to financing from commercial financial institutions to enable them to acquire the needed technologies. Although limited, DOST will provide one-time seed fund to participating MSMEs to facilitate technology acquisition. This could hopefully enable them to access formal credit sources for future technology needs and expand their production activities.

Manpower training – Technical training for manpower on key production issues such as Hazard Analysis and Critical Control Points (HACCP) particularly for food processing, Good Manufacturing Practices (GMP), Quality and Environment Management Systems (QMS/EMS) as well as training on specific technical skills such as machining for furniture, handloom weaving, sea weed culture and tissue culture production among others will also be provided.

Consultancy and Technical Advisory Services – To ensure successful adoption of technologies, DOST through its pool of science and technology experts from its various agencies and members of the R & D network including academic institutions, will provide continuing technical and productivity consultancy services to participating firms.

B. Product Standards and Testing

Product Standards – To be able to compete globally and locally, Philippine made products must meet certain standards. Unfortunately, there are still no local standards for a large number of Philippine products. DOST is currently working with the Bureau of Product Standards (BPS) of the Department of Trade and Industry (DTI) in cooperation with the private sector, the academe, other

government agencies and non-government organizations in establishing standards for some products.

Product testing and enhancement of testing laboratories – To determine if products conform to standards these must be tested in accredited laboratories. DOST, established a network of regional testing laboratories in cooperation with the State Colleges and Universities and private testing centers. However, these facilities need to be upgraded to be able to provide as wide a range of testing service needed as well as improve testing efficiencies, consistency of results and reduce turn around time for tests to be completed.

C. Packaging and Labeling

Products must be packaged well to increase shelf life especially for food products, improve handling and protection and ultimately improve their marketability. In addition the export market requires appropriate labeling of food products in response to the demand of the highly environment and health conscious consumers. DOST established the Packaging R & D Center in its Bicutan Compound to assist MSMEs in developing functional designs for packages, identifying and developing suitable or alternative packaging materials especially from indigenous sources. However, there is a need to establish three or four similar Centers in strategic areas in the country to better serve the needs of more MSMEs especially those in the regions.

D. Database Management and Information System

Several databases vital to MSMEs are now being prepared. These include a listing of available technologies at the national and regional level, listing of S & T experts, and a listing of testing laboratories including testing services provided as well as costs. These databases will be accessible through the SET-UP web page that is currently being developed. This will be linked with the DOST web site to enable better access. Agreements with the Development Bank of the Philippines (DBP), DTI and other relevant databases have been made/are being made to allow the posting of participating firms in these databases.

E. Linkaging and Networking

Raw material sourcing – While researches on raw material characteristics and processing properties are being done by DOST and its member agencies, actual production is not directly within the mandate of the research community. DA and DENR in cooperation with the private sector are responsible for providing sustainable supply of raw materials. A viable MSME upgrading program however, requires that backward linkages with suppliers of raw materials be established. Policies attendant to the harvesting and movement of these raw materials are also important factors to consider in ensuring a sustainable supply

of the needed raw materials. Thus, the Program has taken initiatives to study policies affecting raw material supply as well as measures to establish linkages with appropriate government and non-government agencies.

Marketing – This is not within the mandate of DOST. However, the success of the Program largely depends on how well the participating firms are able to market and profit from their products. Thus, the Program will link with DTI and the private sector particularly the Philippine Chamber of Commerce and Industry and other industry associations to facilitate the marketing of the products of MSMEs.

Technical/Entrepreneurial training – Linkages with TESDA, UP-ISSI and other relevant institutions and agencies will also be established to provide the training needs of participating firms that are not covered by the program.

Financing – DOST will likewise forge linkages with both government and private financial institutions to provide participating companies access to a wide range of financing packages for technology acquisition, production expansion and marketing.

Equipment design and fabrication – Considering the high cost of most equipment, DOST through the Metals Industry Research and Development Center (MIRDC) will assist in the design and fabrication of equipment. Whenever possible, private fabricators will be trained and accredited by MIRDC to address the equipment fabrication requirement of MSMEs.

V. Status of Program Implementation

As of 27 December 2002, SET-UP has provided assistance to 46 MSMEs from various parts of the country (Table 1).

Total funding allocated from the DOST GIA amounted to P 17 million. This is over and above the investments made by other DOST agencies (Councils, R & D Institutes) including the regional offices.

The DOST Undersecretary for Regional Operations supervises the implementation of the program in cooperation with the DOST Regional Offices and assistance of various R & D Institutes and Councils.

Table 1. Distribution of participating firms by industry and by region.

REGION	Food Processing	Furniture	GTH, Fibers, etc	Marine/aquatic	Metals	Horticulture
NCR			1			
CAR	2		3			1
I	2	3				
II	1					
III		3				
IV	2	1	1			
V	2		1			
VI		3		1		
VII		1	1			
VIII	1			1		
IX	1					
X	2		1			
XI		1				
XII		2		1		1
CARAGA	1			1		1
ARMM	1			2		