

**DOST REGION 1
2014 ACCOMPLISHMENT
REPORT**

I. TECHNOLOGY TRANSFER

A. SMALL ENTERPRISE TECHNOLOGY UPGRADING PROGRAM

The Small Enterprise Technology Upgrading Program (SETUP) is the banner program of DOST designed to upgrade the productivity of small and medium enterprises (SMEs) through technology innovations. It aims to improve the viability of SMEs, enhance their productivity and competitiveness through infusion of technology, provision of technical assistance, and manpower development.

In 2014, DOST 1 focused its assistance or S&T interventions to 60 small enterprises funded under the SETUP core and DOST 1 GIA funds in five priority sectors: 21 in food processing, 15 in metals and engineering, 11 in furniture, 8 in agriculture, one (1) in gifts, decors and handicrafts, and two (2) in other sectors. Another 16 firms continuing from 2012 and 2013 were likewise provided with S&T interventions in 2014, resulting in a total of 76 firms assisted the past year.

The table below shows the total number of projects or firms assisted per sector and investments:

Sector	No. of firms assisted & total investments (PhP)		
	SETUP Core Fund	DOST I GIA	Total
Agriculture	7 (11,276,799.68)	1 (66,780)	8 (11,343,579.68)
Food Processing	14 (7,893,050)	7 (1,232,000)	21 (9,125,050)
Metals and Engineering	9 (4,490,107)	6 (1,577,054)	15 (6,067,161)
Furniture	3 (2,118,000)	8 (1,467,966)	11 (3,585,966)
Gifts, Decors & Handicrafts		1 (225,000)	1 (225,000)
Others	2 (1,326,000)	2 (746,840)	4 (2,072,840)
Total	35 (27,103,956.68)	25 (5,315,640)	60 (32,419,596.68)

The agriculture sector received the highest investment at about P11 M, followed by the food processing sector at about P9 M. The total investments for the 60 projects was P32,419,596 with P27,103,956.68 coming from SETUP Core Fund and another P5,315,640 from DOST 1 GIA fund.

A total of 289 S&T interventions were provided to the assisted MSMEs. The assistance or interventions provided to the firms included upgrading of production equipment and facilities, product label design and packaging execution, nutrition analysis, technical assistance and consultancy services on energy use and efficiency, cleaner production, and food safety, product testing and standardization, and manpower training such as good manufacturing practices cum food safety, financial management, , among others.

The interventions provided considerably improved the operational efficiency of the firms as reflected in the total gross sales which reached PhP652,445 millions. Furthermore, the 257 persons employed during the year earned income for the daily needs of their families. The average productivity of the firms was 17%.

B. COMMUNITY EMPOWERMENT THRU SCIENCE AND TECHNOLOGY

For year 2 implementation of CEST in Bagulinn La Union, the beneficiaries in Tagudtod, Libbo and Dagup continued to receive assistance in four areas: livelihood, water and sanitation, basic education, health and nutrition, and hazard mitigation.

- For livelihood efforts, Kalipi Tagudtod Bugnay Wine association, Libbo Farmers Association Bugnay Wine and Dagup-Loslosi Farmers Association Bugnay Wine were provided with weighing scale, digital gram balance and heat gun.

On the other hand Kalipi Tagudtod banana chips and Dagup's banana chips producers received packaging and labeling assistance, and production facilities such as weighing scales, kitchen utensils, and rotamatic slicer.

The micro businesses established in the area generated additional income and employment for 61 housewives and farmers.

- 500 units of ceramic water-pot filter were distributed to 500 households assuring a safe drinking water to about 1500 individuals.

- The interventions in basic education and literacy in 2014 included assistance to 24 graduating high school students to apply for DOST-SEI scholarships, and ICT training for 132 teachers in Bagulin.
- For health and nutrition, a seminar on Package for the Improvement of Nutrition of Young Children was conducted for BHWs and barangay nutrition scholars, and complementary food feeding for 58 undernourished children

II. HIGH IMPACT TECHNOLOGY SOLUTIONS

High impact technologies were rolled out in the field to solve pressing concerns. These are the following:

A. Ovicidal-Larvicidal Traps were continuously distributed to dengue-stricken areas all over region to reduce Aedes mosquito population and eventually the incidence of dengue. In 2014, the project focused on the 254 sentinel schools with 6,414 classrooms or 8.78 % of the 2,895 schools in region1. On-site validation confirmed the efficacy of OL trap in lowering mosquito population thereby reducing dengue cases.

B. DOST Hydromet Project

Under the Hydromet Project, installation of automated rain gauges (ARG), water level monitoring sensors (WLMS), and automated weather stations (AWS), and tandems of WLMS and . The stations are developed to gather and record hydromet data over a set period of time and automatically sends the data to a central base station on a pre-determined interval basis. The rainfall data are sent wirelessly through the cellular network as a text message or Short Messaging System (SMS). Designed to be rugged and standalone, the station can be deployed even in the harshest remote areas and can operate continuously as it gets power from the sun backed up by an internal rechargeable battery.

In 2014, additional 3 ARGs were installed, particularly in Pozorrubio, Calasiao and Bolinao, Pangasinan while the 1 WLWS was

installed in Dingras, Ilocos Norte . The 36 stations installed in 2013 plus those installed this year contributed much in flood forecasting capability of PAGASA.

C. Ceramic Pot/Candle Type Filters for Water Purification System Technology

Among the urgent and lingering problems of our country is the lack of access to potable drinking water, especially in rural and slum areas. To address this concern, DOST thru the Industrial Technology Development Institute (ITDI) developed a low-cost water filter using nanotechnology called Water Purification System Using Ceramic Pot-Type Filter (WPS/CPF). This ceramic pot filter system is made from clay (similar to that used in pottery) coated with an anti-microbial agent that can replace the chlorination process to purify/treat water.

The University of Northern Philippines in Vigan City, particularly the Ceramics Research and Development and Training Center (CRTDC) is the selected production site in the commercial production of the ceramic pot-type filter. In 2014, ITDI staff conducted an on-site hands on training on the adoption of ceramic pot/candle type filters for water purification system, conducted an on-site evaluation of the initial output of the project. Furthermore, UNP's CRTDC have produced more than 500 pcs. ceramic filters. Procurement of plastic receptacles and food grade sealant to complete the filter system is on-going.

III. S&T Services

1. Testing and Calibration Services

The DOST 1 Regional Standards and Testing Laboratory (RSTL), composed of the Chemistry laboratory, microbiology Laboratory and the Regional Metrology Laboratory conducted 9465 testing and calibration services 2014, serving a total of 2,799 clients/customers representing 1,192 firms. Moreover, the income generated for the

government from the services provided was recorded at Php4,391,373 an increase of 32.11% from the previous year.

Aside from maintaining the ISO 17025 accreditation, the chemistry and microbiology laboratories are accredited as Regional Testing Laboratory for Health Products by FDA while the chemistry laboratory was recognized as Regional Environmental Laboratory by DENR. The Metrology Laboratory obtained ISO 17025 accreditation in December 2014.

2. Labeling and Packaging Services

Thirty six (36) label designs were completed for 20 firms for this year.

A total of 73 additional markets were reported by all firms assisted with label design and packaging, generating an aggregate increase in income of Php 9,610,700.

3. Technical Assistance and Consultancy Services

A total of 54 firms were provided with technical assistance and consultancy services in 2014. Among them, 15 were assessed for Cleaner Production, 16 were audited for their Energy Management system, 15 Food Safety compliance and Good Manufacturing Practices, and 3 were provided with assistance on equipment design and improvement.

Improvement in productivity were observed for firms that followed the recommendations of the Productivity Teams through savings in raw materials, reduction in energy consumption, and better process flow.

4. Technology Trainings and Techno Clinics/Fora

A total of 40 trainings were conducted for this year for 265 firms representing 1,218 participants.

On the other hand, DOST 1 was able to undertake a total of 23 technology clinics/fora for 176 firms out of 694 participants.

IV. OTHER S&T SERVICES

A. Science and Technology Scholarship Programs

1. RA 7687 Scholarship and DOST Merit Scholarship

A total of 199 graduating high school students qualified for scholarship for AY 2014-2015, out of a total of 1890 examinees from all over the region. Of this, 182 qualified for the RA 7687 Scholarship Program and 17 under the DOST Merit Scholarship Program.

Thirty (30) DOST scholars graduated this school year, eight (8) of them or 22.86% graduated with honors.

As of the first Semester of AY 2014-5, there are 290 RA 7687 on-going scholars that were continuously assisted by the DOST Regional and Provincial Offices.

2. PSHS Scholarship

A total of 503 graduating elementary pupils from all over the region were assisted by the DOST PSTCs in their application for the PSHS Scholarship Program.

B. S&T INFORMATION AND PROMOTION

S&T information service was provided to clients through the S&T libraries located at the regional office and the four provinces in region 1 which served 4,041 customers in 2014.

Promotion to the public of what DOST does, appropriate technologies ready for commercialization, and the products of firms assisted by DOST were done through press releases, Science and Technology Fairs, and press interviews/ conference. In 2014, DOST 1 released 200 press releases in quad-media, participated in 5 S&T fairs, and conducted 60 press interviews.