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S&T good news

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ASEAN textile confab showcases S&T innovations in traditional woven fabrics

Text & photo by **Rodolfo P. De Guzman**, *DOST-STII*

The Sinh or Lao skirt represents the charm and elegance of Lao women while the T'nalak made of abaca fibers mirrors the intricate design and creative pattern formed out of dreams by the T'boli women weavers of Lake Sebu in Mindanao.

These unique and majestic fabrics were just a few of the many beautiful textiles showcased by ASEAN member nations during the 1st TELA ASEAN Textile Conference held November 7-8, 2017 at the SMX Convention Center, SM Aura, Bonifacio Global City, Taguig City. The participating ASEAN countries were Lao PDR, Cambodia, Indonesia, Malaysia, Myanmar, Singapore, Thailand, Vietnam, Brunei, and the Philippines.

The conference dubbed “Weaves of Change, Fostering Ties that Bind” was organized by the Department of Science and Technology-Philippine Textile Research Institute (DOST-PTRI) in collaboration with the ASEAN Foundation and the DOST-Philippine Council for Industry, Energy and Emerging Technology Research and Development (PCIEERD). TELA refers to the ongoing program of DOST-PTRI called “Textiles Empowering Lives Anew” that aims to infuse science and technology innovations to strengthen the Philippine textile industry.

“This conference is important to address common concerns among the ASEAN countries because clothing and textile is a common denominator and textile is a fusion of culture, tradition, and the arts,” said DOST Secretary Fortunato T. de la Peña during his keynote address.

The science chief also stressed the need to marry technology and the creative arts to promote inclusive growth and innovative capacity, and at the same time understanding the ASEAN, learning from the best practices, and addressing issues that affect the textile sector involving environmental security and sustainability.

“The TELA ASEAN Textile Conference is a first of its kind that coincides with PTRI’s and ASEAN’s 50th year anniversary, focusing on



ASEAN delegates show solidarity in promoting handloom weaving and use of natural dyes for textile production during the 1st TELA ASEAN Textile Conference. DOST Secretary Fortunato T. de la Peña (7th from right) and DOST-PTRI Director Celia B. Elumba (8th from right), with ASEAN Foundation Director Elaine Tan (6th from right), welcomed the participants to the conference. The event provided a venue for the delegates to present the state of the textile industry in their respective countries and showcase their intricately designed textiles and fabrics in an exhibit and fashion show.

strengthening collaboration on textile research and technology, supporting the growth of the handloom weaving industry, and promoting the use of sustainable natural textile materials and natural dyes to achieve sustainable economic growth and meeting the demands of globalization,” said Director Celia B. Elumba of DOST-PTRI.

The conference featured forums wherein each ASEAN country, except Brunei, presented the state of the textile industry in their respective countries and the programs they are implementing to further develop handloom weaving and promote the use of natural dyes.

For one, Cambodia’s Phon Sreyrath, general manager of Khmer Artisanry, discussed silk

weaving incorporating traditional and ancient “ikat” technique using the flower and peacock patterns. “In Cambodia, we produce organic silk and natural dyed products that help improve rural life by providing jobs for community workers, promote products made by disabled people, promote Khmer products in international markets and inspire the young generation to keep dyeing alive and to preserve cultural pride,” said Phon Sreyrath.

On the other hand, Lao PDR’s Kong Thong Nanthavongdouangsy, co-founder of the Phaeng Mai Gallery, discussed the product policy they are implementing that harmonizes the environment and culture in their textiles. “In order to protect the environment, we, together with the weavers

DOST R&D projects aim to increase public appreciation of biotechnology

By Allan Mauro V. Marfal, DOST-STII

Many research and development (R&D) projects of the Department of Science and Technology (DOST) are geared towards capacitating various industries and fields such as agriculture, healthcare services, and food manufacturing. The department's R&D programs also highlight the vital role of biotechnology in the development of innovative products and services.

"In DOST, all of our researches and services are anchored on wanting to make science and technology applications to be an integral part in improving the lives of every Filipino. Among those applications that I am referring to is biotechnology," said Dr. Jaime C. Montoya, executive director of DOST-Philippine Council for Health Research and Development (PCHRD), during the closing program of the 13th National Biotechnology Week (NBW) celebration on November 24, 2017 at Fisher Mall in Quezon City.

Montoya said that the public has managed to witness a glimpse, and now has better appreciation of the various benefits of biotechnology through technological products exhibited in this year's NBW festivities.

"All of the products highlighted by DOST for this edition of the National Biotechnology Week seek to give people a better explanation on how biotechnology applications can make positive impact on different services and fields that many people heavily rely on," Montoya said.

Among the featured DOST products is DOST-PCHRD's funded project called Biotek-M Dengue Aqua Kit, a diagnostic test designed to detect dengue infections in serum/plasma during the first three days of illness. Within just an hour of administering the test, result can already be generated giving doctors a faster method to

confirm or rule out dengue quickly.

Aside from Biotek-M Dengue Aqua Kit, other DOST projects that took center stage in this year's NBW celebration are the Bioactive Bamboo of DOST-Forest Products Research and Development Institute; Nutritional Research on Genomics of DOST-Food and Nutrition Research Institute; Molecular Characterization of Edible Mushroom Collection of DOST-Industrial Technology and Development Institute; Mutation Breeding and Tissue Culture for Mangosteen; and Efficient Sterilization Technique for Biofertilizer Carrier Production Through Gamma Irradiation of DOST-Philippine Nuclear Research Institute.

"We are always looking forward to an event like the National Biotechnology Week as it gives opportunities for our researchers, engineers, and scientists to present to the public their innovative products and researches. NBW provides hope for the public and inspiration for our scientists, especially in the area of biotechnology, to discover life changing technologies," said Montoya.

Aside from the exhibits, DOST also organized various fora during the entire celebration that focused on researches on cardiovascular diseases and diabetes, agriculture and aquaculture, as well as food safety.

Montoya added that the DOST will continue to increase its efforts in advocating for all the developments in the area of biotechnology. He shared that in DOST's harmonized R&D agenda, biotechnology will be included as one of the core fields in the program.

Montoya also represented DOST Secretary Fortunato T. de la Peña in accepting the chairmanship from the Department of Agriculture for hosting the 2018 NBW celebration.



Dr. Jaime C. Montoya delivers his message during the closing ceremony of 13th National Biotechnology Week (NBW) celebration. Dr. Montoya, representing Secretary Fortunato T. de la Peña, accepted from Department of Agriculture the hosting of the 2018 NBW celebration. (Photo by Gerardo G. Palad, DOST-STII)

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plant natural dye materials like almond leaves to produce brown-green color, ebony for grey color, and jackfruit wood and lac dye which is a mixture of sour fruit and sour leaves to produce bright red color," said Kong Thong.

Other speakers were Diana Jusuf of Torajamelo-Indonesia, Eric Ong of Society Atelier Sarawak-Malaysia, Phyu Ei Thein of Sunflowers Group Social Enterprise-Myanmar, To Hai Yen of Vietnam Rural Industries and Development Institute-Vietnam, Dr. Wiwat Hirunpruk of Thailand Textile Institute-Thailand, Dr. Nanci Takeyama of Nanyang Technological University-Singapore, and Jeannie Javelosa of ECHO store Sustainable Lifestyle-Philippines.

As closing activity, a socio-cultural night featuring a gala fashion show was held after dinner where delegates and other stakeholders were treated with a colorful array of different apparels representing unique designs from each of the ASEAN member countries.

To wrap up the ASEAN event, the delegates had a half-day tour on November 9 of scenic and historical sites around the metropolis like Intramuros and later attended two DOST-PTRI sponsored workshops. The first one was on natural dye conducted by Ms. Kommaly Chanthavong from Lao PDR, a 2015 Ramon Magsaysay Awardee for Community Leadership. The other one was on Shibori dyeing, a Japanese word meaning a variety of ways of embellishing textiles or fabrics by shaping the cloth and securing it before dyeing with colors.

ABOUT US

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DOST NegOr conducts robotics training workshop

By Sean Adrian T. Guardiano, *Negros Oriental PSTC*

About 30 participants composed of teachers and information and communications technology coordinators from primary and secondary public schools in the province of Negros Occidental were trained on robot hardware and programming as part of efforts to integrate said subjects in the teaching of STEAM (Science, Technology, Engineering, Arts, and Mathematics) among elementary and high school students.

The two-day training workshop on LISER (Low-cost Intelligent STEAM Educational Robot) was held on November 3-4, 2017 at the Department of Education's (DepEd) Dumaguete Division Office, Taclobo, Dumaguete City, Negros Oriental.

Organized by the Department of Science and Technology (DOST)-Negros Oriental Provincial Science and Technology Center, the training aims to equip science and mathematics teachers for robot hardware and programming using the open source MINIBLOQ programming language. It also affirms DepEd's commitment to holistic academic growth of both teachers and students.

"LISER is a low-cost but helpful robot that can enhance the capability of elementary and high school students so that at a young age, they can already design robots, join robotics trainings and workshops, and most importantly participate in various local and international robotics competitions," said Engr. Diogenes Pascua of the University of Science and Technology of Southern Philippines (USTP). Engr. Pascua, together with Engr. Bronson Mabulay, also a faculty member of USTP, served



Engr. Diogenes Pascua lectures on LISER, its programming software, and environment used.

as resource speakers during the said training.

According to its developers, LISER is an inexpensive educational robot aimed to boost STEAM education by teaching robot hardware and programming to public and private elementary and high school students. LISER was developed at USTP and was a recipient of the USAID-STRIDE Prototype Research and Innovation Grants.

LISER is an Arduino-based educational robot that is easy to assemble, easy to use, and is kid-friendly. Arduino is a popular open-source development board that engineers use to develop electronics projects in an easy way.

During the short but very informative training, the speakers extensively discussed on LISER robots, its several designs and modifications through the years, programming software used, the MINIBLOQ programming environment, partner institutions, previous collaborations with DOST and introduction of the LISER team. Participants were able to program the robots and ran it according to the codes inputted.

The robotics training workshop was done in cooperation with DepEd Dumaguete and USTP. The LISER team hopes to conduct more robotics training workshops in Negros Oriental. The speakers have been involved in numerous trainings locally and internationally on robotics design and competitions, among others.

Those interested in LISER can contact 0977-334-7536, e-mail diogpascua@gmail.com or visit the LISER Robotics Facebook page.



Teachers from primary and secondary public schools program the robot and run it according to the resource person's instructions.

4,363 firms now more competitive thru DOST-SETUP

Text and Photo by Rodolfo P. De Guzman, DOST-STII

Some 4,363 micro, small, and medium enterprises got the needed boost to be more competitive in both the domestic and local markets through the assistance of the Department of Science and Technology (DOST) through SETUP or Small Enterprise Technology Upgrading Program.

This was disclosed by DOST Undersecretary for Regional Operations Brenda L. Nazareth-Manzano during the DOSTkusyon press conference held recently at the Kamuning Café and Bakery in Quezon City, a regular forum organized by the science department to provide information or “good news” to its media partners on the achievements of the different flagship programs particularly those benefiting MSMEs.

“From 2002 to 2016, the DOST disbursed a total of P 3.336 billion in financial assistance to 4,363 MSMEs in all of the regions in the country resulting in P 35.354 billion in gross sales by the SETUP adoptors,” said Usec. Manzano. For the same period, 167,939 new jobs were created due to SETUP.

During the forum, DOST Secretary Fortunato T. de la Peña also presented to the media other features of SETUP as a very viable program of the DOST to improve the plight of MSMEs particularly those in the provinces. The science chief said that this is in line with the Duterte administration to promote economic growth in the regions through science, technology and innovation.

“SETUP, which was created in 2002, is the DOST’s answer to revitalizing regional economic development by transferring practical technologies,” said Secretary de la Peña. “Some of their technology are for food processing to improve operation, increase productivity and strengthen competitiveness.”



Leveraging technology for MSMEs. Secretary Fortunato T. de la Peña (middle) underscores the importance of science and technology in promoting business growth particularly in the countryside during the DOSTkusyon media forum.

After more than a decade, SETUP assistance to MSMEs resulted in significant improvements in the adoptors’ competitiveness. The science chief shared some of the many success stories that served as inspiration to other entrepreneurs. Secretary de la Peña cited the thriving business of Shaquil Wine in Kalinga that started small by using traditional wine making practices of the owner’s mother. Now it has several institutional buyers because of the DOST assistance for equipment and training through the DOST-Cordillera Administrative Region.

Incidentally, Kamuning Café and Bakery now owned by newspaper columnist and realtor Wilson Lee Flores is also a beneficiary of SETUP that was provided with modern bakery equipment while retaining its long time tradition of using the brick oven.

“There are a lot more success stories that we can share like the one in Region II that produces civet coffee. Another example is one of our guests

who owns Amanda’s Marine Products and now she supplies the needs for shrimp paste or bagoong of leading fast food chains like Chowking,” revealed Sec. de la Peña.

From January to September 2017, SETUP provided assistance to 574 projects with total funding of P 577 million. Due to increased productivity, 45,314 new jobs were generated and the average productivity rate was pegged at 39%.

SETUP caters to several priority industries involved in the following: food processing; furniture making, metals and engineering; agriculture/aquaculture, health products; information and communication technology; and gifts, decors and handicrafts.

For the next years, DOST is poised to heighten its efforts in promoting SETUP to help more MSMEs in the regions. Those interested in availing the SETUP assistance may contact the nearest DOST regional offices or visit www.setup.dost.gov.ph.



Local inventors showcase inventions at annual confab

Filipino inventors once again showcased their ingenuity at the annual celebration of the 2017 National Inventors Week (NIW). The five-day celebration, with the theme “Linking Filipino Inventions and Technology to the People,” had Department of Science and Technology-National Capital Region (DOST-NCR) Director Jose Patalinhug III (center) as keynote speaker during the opening ceremonies. Spearheaded by the Filipino Inventors Society, Inc., in partnership with DOST-Technology Application and Promotion Institute, DOST-NCR, and Walter Mart Sucat, the 2017 NIW was held at Walter Mart mall in Sucat, Parañaque City, from November 13-17, 2017.



(First line from left): Inventor (Inv.) Juanito A. Simon; FIS, Inc. National Chairman of the Board Dr. Benjamin S. Santos; DOST-NCR Dir. Patalinhug III; FIS, Inc. National President Manuel R. Dono; and Inv. Rodolfo B. Biescas, Sr. (Second line from left): Inv. Ronald Talion; Inv. Flordeliza O. Ursua; Inv. Maria Teresa E. Dono; and Inv. Guillermo M. Chua.