

HORIZON

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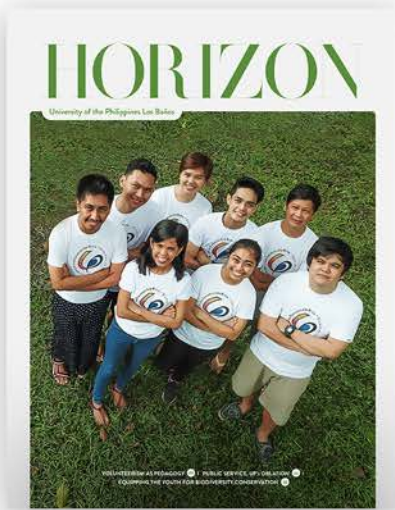


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The **UPLB Horizon** magazine showcases news and feature articles on research and extension updates, literary pieces, and information of general interest to UPLB and its stakeholders. Please email your contributions to OPR: opr.uplb@up.edu.ph.

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The Ugnayan ng Pahinungod lives and breathes the very essence of public service in the University. Devoid of any other motive, the Pahinungod volunteers—student or staff alike—take on the mantle of service voluntarily. Appropriately so, as it was established in 1994 by then UP President Emil Q. Javier in order to develop the culture of public service, especially in UP graduates.

On the cover are some volunteers of the UP Pahinungod in UPLB. More than 20 years since its creation, the UP Pahinungod lives on through them. They are the embodiment not only of “being among the best and the brightest,” but also for being the symbols of hope that UPLB is producing the “most caring and principled Filipinos,” who are steeped in the culture of public service.

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EDITOR’S NOTE

Even before it was codified as one of the mandates of UP in 2008, public service has always been a part of UP’s activities and initiatives.

UP Manila has the Philippine General Hospital that provides medical service to people, mostly from the fringes of society. UP Diliman offers its know-how in various spheres of governance and is the go-to for people needing to understand social phenomena and other events.

UPLB’s technical expertise has informed policy formulation and implementation, as well as helped millions in the country in making decisions that impinge on food security and safety, public health, risk reduction, climate mitigation, and in many other areas.

UPLB also provides public service in the manner it is best known for – in instruction. As Chancellor Fernando C. Sanchez, Jr. said at the 1st Colleges and Universities Public Service Conference held in 2016 at the UP Open University, “Instruction, the primary function of higher education institutions, is perhaps our most significant public service contribution. By offering world-class education to the country’s best and brightest, we shape them to become future nation builders.”

Of utmost value from UPLB’s public service mandate is that it provides an opportunity for its technical experts to be on ground zero and to get feedback that keeps UPLB research and instruction meaningful to stakeholders.

It is said somewhere that service to others is the currency with which one pays for one’s stay in this beautiful earth. This is the greater picture of service. Service takes on a different character and manifestation in whatever situation we are in. In this public service university, it is expressed in the many ways that are told here and in many more.

IN BROAD STROKES

Public service defines our purpose

Dr. Fernando C. Sanchez, Jr.



Public service underpins all the things that we do in UPLB, or as former UP President and UPLB Chancellor Emil Q. Javier succinctly put it: “Everything we do in UPLB is public service.”

Indeed, at the very core of our teaching is a commitment to shape the next generation of leaders. Our research activities, meanwhile, have but a single goal—to uplift the lives of the marginalized and the vulnerable. Our extension programs bring science-based knowledge and technologies beyond the boundaries of the campus. Public service is at the heart of all our duties and functions.

UPLB’s public service commitment was highlighted in the UP Charter or Republic Act 9500 in 2008, which not only designated UP as the national university, but also as a public service university. It is not new to us, but cementing this commitment in the UP Charter speaks much about the responsibility on our shoulders to direct our efforts towards inclusive growth and poverty reduction in the country. In UPLB, we are now focusing much of our resources on contributing to solutions in food security and safety in the country, because at the end of the day, not much will go on if we cannot secure this basic human requirement.

UPLB has always been cognizant of this responsibility, thus, its present crop of researchers and scientists has continued to carry the torch taken up by the University’s forebears to cast light into unexplored areas of research to produce life-changing technologies and knowledge products, the process of which helps them mentor their students to become the innovators of the future. These three roles are so linked that each can never be exclusive of the others.

Public service makes our research purpose-driven. The outputs, products, and findings of our research are aimed to help solve phenomena affecting our

countrymen. Each in our research force—from our farm workers to the scientists—has an important role to play in addressing food safety and security, sustainable development, climate change adaptation and mitigation, renewable energy, and public health, among others.

When one talks of public service in UPLB, it is impossible not to mention in the same breath the Ugnayan ng Pahinungod, our very own volunteer service program. Since Pahinungod was established in 1994, generations of UPLB students have embarked on life-changing activities that have influenced their social values and sense of community. As they reach out to school children and other stakeholders, promoting literacy, culture, arts, rural development, and environmental awareness, our students have become not only facilitators but also a part of the process of social transformation.

Another renowned public service unit of UPLB that has brought us accolades is the National Corn-based Farmer-Scientists Research, Development, and Extension Training Program (FSTP). FSTP has gone beyond agriculture but has extended its scope into the blue, literally, as it helps uplift the lives of our fisherfolk.

Year-long, our unrelenting personnel can be found in the field where the stakeholders of the public service that they provide are found – in farms, upland settlements, forests, coastal villages, in the halls of local government offices, in meetings of technical working groups, and even in the halls of Congress.

Truly, public service not only underpins all the University’s functions, it defines our purpose.



Volunteerism as pedagogy

BY GLENN S. LUBUGUIN & MARK SALAS

During his inauguration as UPLB Chancellor in March 2015, Dr. Fernando C. Sanchez, Jr. declared public service, along with research and graduate education, as the major thrusts of UPLB. In a play of Rene Descartes' words, "I think, therefore, I am," Chancellor Sanchez said, "I serve, therefore, I am from UP." He reiterated that UP is mandated by the UP Charter of 2008 to lead as a public service university.

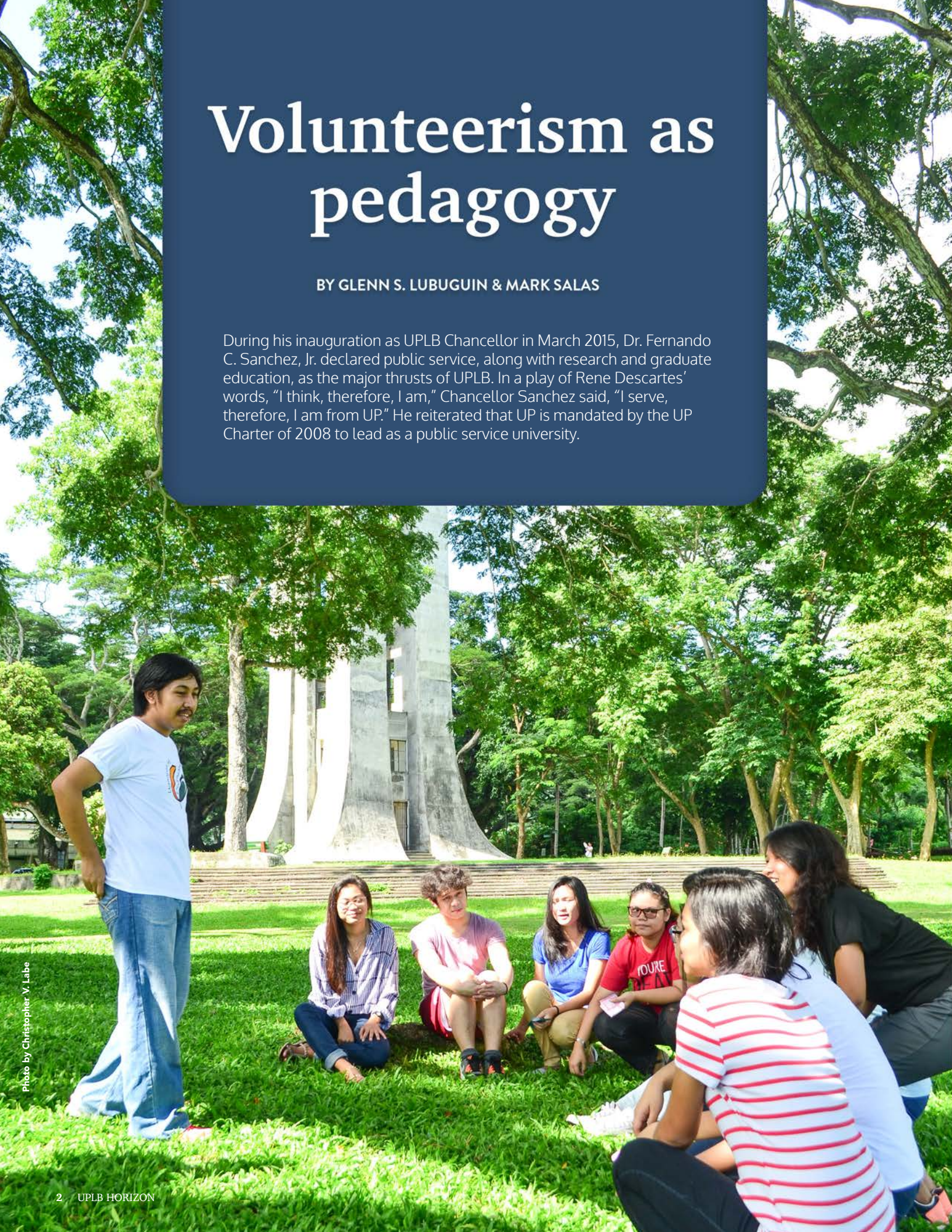


Photo by Christopher V. Labe



Photos from Pahinungod

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In all its activities and advocacies, the Ugnayan ng Pahinungod resolutely reminds itself of its fundamental obligation and the University's primary mission: the education of brilliant scholars with selfless hearts and souls for service.



Photo by Christopher V. Labe



For the UPLB Ugnayan ng Pahinungod, UPLB's official volunteer program, it was a moment of validation. For its volunteers and every UPLB constituent, it echoed as a clarion call that rang truer and louder than it ever has.

Pahinungod has persisted as a values and character development program that uses community service as a means to an end.

THE CRISIS OF CHARACTER

Pahinungod was not inspired simply by benevolence but by the findings of a study and a question posed by a "landmark" article that challenged UP to look into its values as an institution. In 1991, UP Diliman professors Ma. Luisa Doronila and Ledivina Cariño published "The Meaning of UP Education," a critical investigation on the knowledge, attitudes, and values of UP students and faculty. It reported that social responsibility, ethics, and morality did not register as important values among UP constituents. The study was quickly followed by the

release of the feature article "Has UP Lost Its Soul?" that pierced the very core of UP's tradition and character.

In February 1994, the administration of then UP President Emil Q. Javier responded by launching UP Pahinungod, a program that aimed to enrich UP students' academic preparation and leadership training through engagement in volunteer work in underserved communities. The program was then implemented in the different UP constituent units and its community service activities have since then evolved.

CHANGING LANDSCAPE, CONSTANT MANDATE

While primarily an extension and public service platform, Pahinungod was conceived as an instruction-oriented program. Javier continually claims that Pahinungod was conceptualized more as a values development program rather than a community service initiative. He explains that "UP does not have the

comparative advantage to deliver social services, especially direct developmental services. What it has is a rich pool of human resources that will be the source of leaders of academe, government, and industry."

For the last 24 years, Pahinungod has asserted its place as part of the teaching-learning environment of the University. At the end of the day, educational institutions must educate. So the real achievements of Pahinungod are its volunteers and the graduates it has nurtured through volunteer work not just for, but with communities.

CHARACTER DEVELOPMENT IN THE MIDST OF REAL SOCIAL ISSUES

And true enough, the stories of Pahinungod and its volunteers echo in the realizations that neither classrooms nor books can teach.

In Ambil, Occidental Mindoro, Megan Rayala met a community that only had four hours of electricity each day,



no regular supply of clean water, and depended mainly on a day's catch of fish to feed their family. This situation was repeated from community to community. Witnessing this, Megan realized how she and her generation had taken for granted the many comforts they have and failed to see the deprivation around them. "When you spend time in a place where there is very little of the things you enjoy like water and electricity, you do not just realize their importance, you realize your wastefulness and ignorance."

Aouie Gevaña, who was deployed in Brgy. Peza, General Nakar in Quezon, realized what hard work truly meant as she witnessed how elementary kids would wake up at 3 a.m. to help out in the farm, come home from school to cook and do household chores. "I often hear poor people are poor because they are lazy and rude. In Nakar, that is not true at all. They are simply powerless."

For many volunteers like Diahannah Lucero, volunteers learn the hard way. They learn new skills, languages, and customs. Primarily, they learn to value

their education and privileges as their perception of life and of themselves broaden. Mark Magtibay believes that volunteers get more from their experience because they learn more from the communities they engage with. He attests that volunteering has allowed him to "apply and 'concretize' the things he learned in the classroom." As Prof. Aleli Domingo puts it, "Volunteers learn many-splendored things."

A CONTINUING CHALLENGE

For more than two decades, Pahinungod has been a torch bearer of the UP tradition of serving the people. The new UP Charter has validated its niche in UP, but at the same time, it has raised high expectations of public service. But perhaps, the challenge today is not entirely different from the same one that engendered Pahinungod from the beginning: has UP lost its soul?

For now, Pahinungod and its volunteers may take pride in the fact that, in the last 24 years, no one has ever dared to ask that question again.

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A barrio doctor's love for public service

BY MARK JAYSON E. GLORIA

Fresh from medical school in 2009 and fired by idealism and a sincere desire to help, Dr. Deborrah Gesite Liao, or Doc Debbie, a BS Biology graduate of UPLB immediately signed up for the Doctors to the Barrios Program (DTTB) of the Department of Health.

She was immediately deployed in Gamay, Northern Samar, a fourth class municipality 800 kilometers south of Manila to take care of the health needs of 26,000 residents.

Getting to geographically isolated Gamay from her native Sorsogon City was an extreme challenge straight out of reality adventure shows, but this was hardly an adventure, nor was it a show. It was real life—of a 2-hour ride on a roll on-roll off vessel, oftentimes over rough seas on San Bernardino Strait, especially during the typhoon months, and a couple each of jeepney, boat, and motorcycle rides, at times, hair-raising and death-defying.

Thus, it was a given that at the end of her tour of duty, it was goodbye Gamay for Doc Debbie. "That was the first time I worked, the first time I've been thrust in probably one of the most, if not the most, uncomfortable and challenging situations I have ever experienced in my life," Doc Debbie recalled.

TAKING THE LEAP OF FAITH

But the heart of a public servant beat strongly in Doc Debbie and for the people of Gamay who endured so much from the lack of health service. A year after her DTTB appointment ended in 2012, she accepted the position as municipal health officer of the Gamay Rural Health Unit.

"I can't really articulate why I stayed," she said, when asked why she let go of a possible lucrative career elsewhere. Was it because it will be in Gamay where she would eventually meet the man who would become her husband? Maybe, the events

conspired for her to continue serving Gamay because of this, but it was her conviction and decision to serve that came before anything else.

"I have signed numerous death certificates of patients, young and old, who succumbed to illnesses without ever seeing a doctor or any health worker. I have experienced how it is to live in a society where help from the national government does not reach the grassroots," Doc Debbie said as she reflected on her decision to stay in Gamay.

Doc Debbie starts her work at 8 a.m. at the health center in Poblacion, accommodating 40-50 patients who stream in from the 26 barangays of Gamay. They come for a variety of reasons, ranging from simple infections to complicated ailments such as diabetes, or conditions such as pregnancy.



Photos courtesy of Dr. Deborah G. Lao



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Doc Debbie may be at a loss for words when asked why she stayed in Gamay, but as they say, when the heart is full, words are few. Doc Debbie’s heart is full of her love for service to the people of Gamay.

HEALTH EQUITY THROUGH EMPOWERMENT

Every summer, Doc Debbie and her team of 28 nurses, midwives, and health aides visit far-flung barangays to provide basic medical services to the people. Walking mountainous terrains for hours and crossing a raging river to reach these communities awakened her to the depths of public health needs.

This motivated her to address health equity through the Barangay Siyete Inter-Barangay Health Zone (IBHZ), a strategy that promotes inter-barangay cooperation to address gaps on access to health services of isolated barangays. In Gamay, IBHZ has resulted in a birthing facility where expectant mothers from seven barangays can give birth in a place near them.

Under IBHZ, barangay leaders were empowered and capacitated through the Barangay Health Leaders and Management Workshop conducted with Zuellig Family Foundation as partner.

The training uses the Bridging Leadership Framework, which allows leaders to be aware of their own values and interests that could result in personal responses to and co-owning others’ problems, and to dialogue with stakeholders. “When this happens, we hope for a co-creation, wherein innovations are created by the stakeholders to address a problem.”

DOC DEBBIE SERVING 24/7

With a Rural Health Midwife (RHM) managing the Barangay Health Station in one of the seven villages and with deployed RHMs and barangay health

workers in other partner villages, the IBHZ team can operate with no need for Doc Debbie.

“But we keep our communication lines open so they can easily refer difficult cases to me,” said Doc Debbie, who is on-call 24/7.

She is grateful to her team, their town mayor, and the communities in Gamay, as well as her family for their cooperation and support. “It gives much fulfillment to know that my talents, skills, and knowledge are put to use in touching people’s lives,” she said.

Doc Debbie may be at a loss for words when asked why she stayed in Gamay, but as they say, when the heart is full, words are few. Doc Debbie’s heart is full of her love for service to the people of Gamay.



Photo by Vandolph R. Maningas

A sustainable sweet life with Cherrys

BY JESSA Jael S. ARANA

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She educated them on the importance of the environment and their dependence on it. “Through organic farming, you take care of your health, you take care of the health of your customer, you take care of the environment,” she said.



Photo courtesy of Cherrys Abrijo

No, this is not about cherries, the berry that provides a whole range of health benefits. This is about Cherrys who is equally valuable, and has made life sweeter for Dumagat farmers who she helps create better livelihood systems and a healthy way of life.

After discovering the joys of being a student-volunteer with the Ugnayan ng Pahinungod, Che, as Cherrys is often called, just cannot shake off her passion for community outreach as a young professional. For almost three years now, she has braved the arduous journey into the Sierra Madre, aboard a motorcycle and aided by just one assistant, to visit the Dumagat farmers of Barangay Puray. These farmers are now her partners and suppliers in her zero-waste and organic café, Sierreza, in Los Baños, Laguna.

Che’s thriving business began with a desire to make a difference. This made her leave her corporate job after only two years to pursue volunteer work fulltime, which is how she met the indigenous farmers in Rizal. Moved by their unchanging conditions despite many outreach activities, she initiated a plan to give aid that could produce sustainable returns.

She consulted the villagers for a fitting source of revenue and submitted a proposal to the UN Development Programme through the UPLB Foundation, Inc. In 2016, they received support for the organic farming project. The grant lasted for only a year, but it enabled them to acquire farm tools, seeds, and rice subsidy to sustain their families while they trained; and waited for the crops to grow. She

employed an end-to-end approach in giving aid, from training to marketing.

“I think it was a major factor to getting the project approved,” she said. “Many proposals would only focus on the training aspect, or provide tools, or just do a survey. But without marketing, the farmers won’t be able to sell their products.”

Che also made it a point to trade fairly with the farmers. In the past, outsiders would cheat the farmers of their produce, buying them at a fraction of the market price. She talked about one incident where a farmer was scammed into selling a whole *buwig* of lagkitan bananas for only 90 pesos. “50 cents per piece of lagkitan!” she exclaimed. When they started harvesting their organically grown banana, Che bought them at 25 pesos per kilo.

Every week, she would travel to Sierra Madre to buy the Dumagat’s organic products and sell them in Los Baños. At first, she sold the produce by going house to house, then at the Saturday market in UPLB, and eventually securing orders online. As two years went by, she realized that they needed to expand their operations to become more stable and so Sierreza came to be.

Today, the farmers have a regular source of income from their weekly sales. One of them earned as much as Php 68,000 in a year and upon hearing the news blurted out “*hindi ko kikitain*

yan kahit magkalbo ako ng isang bundok sa pag-uuling.”

Che is also helping the Dumagats shift to organic farming to help put a stop to illegal logging and charcoal-making that are both harmful to the environment and their health. “They learned these things from outsiders, who have also been exploiting them for resources and [now] pointing [their] fingers at them for deforestation,” she said. “Some of them have developed perpetual coughs from inhaling charcoal particulates.”

She educated them on the importance of the environment and their dependence on it. “Through organic farming, you take care of your health, you take care of the health of your customer, you take care of the environment,” she said.

Che wants to see her concept being adapted by more people. In fact, she’s considering to franchise her store albeit through a modified mechanism. She wants to see franchisees spend part of their investment on training a community to become their supplier. “Your zero-waste store should not exist by itself; it has to support a community,” she said.

Che believes that a wider adaptation of this approach will not only help the environment, but also help people in far-flung communities sustain a helpful livelihood and a healthy way of living. Indeed, for those discovering this alternate lifestyle, life has become as sweet as a bowl of cherries.



“Foodscaping” landscapes

BY JESSA JAEL S. ARANA & JUAN PAOLO A. AQUINO

Is it possible to make your yard both beautiful and edible?

Researchers of the UPLB Edible Landscaping team certainly think so. Touting the slogan “No Filipino should be hungry,” the team also thinks that edible landscaping is going to help Filipinos go green and eat healthy.

Edible landscaping is the growing of organic vegetables, fruits, herbs, and medicinal plants in landscaping. The practice was pioneered by the late Dr. Leonido R. Naranja from the then Crop Science Cluster of the College of Agriculture (CA-CSC) in 1999. The CA-CSC is now the Institute of Crop Science, College of Agriculture and Food Science (CAFS-ICropS).

Dr. Naranja’s initial efforts in edible landscaping led to UPLB’s partnership with the Department of Agriculture-Bureau of Agricultural Research (DA-BAR) and the High Value Commercial Crops Program (HVCCP), and the establishment of two demo-gardens at the DA-BAR grounds in Diliman, Quezon City.

After Dr. Naranja passed away in 2010, Chancellor Fernando C. Sanchez, Jr., faculty member in landscape horticulture and then assistant to the vice chancellor for planning and development and now chancellor of UPLB, continued the project with the help of Bryan V. Apacionado, Maria Charito E. Balladares, Ryan Rodrigo P. Tayobong, and Norma G. Medina, of CAFS-ICropS.

Since then, the edible landscaping team has promoted it through trainings, exhibits and project presentations, and partnerships with institutions.

REACH AND BREAKTHROUGHS

Efforts to disseminate information about edible landscaping have been bearing fruit, one yard at a time.

According to Medina and Balladares, the demo-garden in UPLB has attracted more visitors over the years, including ambassadors and government representatives.

The edible landscape team has trained people across a wide demographic and designed special modules in order to maximize understanding and appreciation of the technology.

Most of its training courses are held at the University's Ornamental Crops Nursery, but this has not stopped interested adopters from traveling to UPLB, with some coming from very far. The team also traveled outside the University to distant provinces, such as Albay, Sorsogon, Oriental Mindoro and Davao.

THE FRUITS OF LABOR

Josie Eliseo, president of the Rural Improvement Club (RIC) at Brgy. Timugan, Los Baños is one of the many adopters of edible landscaping. RIC is an association under the Municipal Agriculture Office of local

government units that implements the pre-school curriculum in the community.

"Our school grounds have greatly improved," Eliseo said. "The designs that they taught us are very beautiful. Now, we can get our vegetables from the garden instead of buying them from the market. Even without a plot of land, one can use plastic containers. The produce is a good source of income."

Like RIC-Timugan, other institutions have also integrated edible landscaping into on-going projects. According to Medina, some schools have used edible landscaping to improve their surroundings and use their produce in their feeding program. Others see edible landscaping as a productive means to help parents spend their free time on the school grounds while waiting for their children, while others see it as an opportunity to teach young children where food comes from.

Enya Celoso, Agricultural Center Chief III at the Davao Commercial Agricultural Research Station, said that edible landscaping has aesthetically improved idle and unproductive spaces in their office compound. Walk-in clients, visitors, and neighbors have also said that it has inspired them to plant in their own backyards.

"The edible gardens are a source of readily available, fresh, and nutritious food for

the office and guests and showcase a simple way of food production in the fight against malnutrition since teachers and walk-in clients can see the project during their visit," Celoso said.

Meanwhile, Dong Villaluz, a resident of Bay, Laguna, is glad that his household now has an overabundance of vegetables. "You know that what you are eating is clean and organic since you planted it yourself," Villaluz said. "We also consume more vegetables now because we always have so much. Instead of letting them go to waste, we sometimes give them to our neighbors."

Marichu Villaluz, also from Bay, said that edible landscaping helps her to relieve stress. "Planting and taking care of the garden helps me unwind," she said. "Training for edible landscaping has also introduced me to edible plants, which can be used in place of the more expensive ornamental plants."

Medina and Balladares said that edible landscaping is also being adopted by restaurants that want to implement the "farm-to-table" approach as well as those that want to venture into farm tourism.

Edible landscaping is certainly transforming yards into food production hubs, one yard at a time.



SOME COMMUNITIES REACHED BY EDIBLE LANDSCAPING:

Los Baños and Calamba, Laguna: Various exhibits such as Farms and Industry Encounters through Science and Technology Agenda exhibit at the Strategic Industry S&T Program for Agri-Aqua Growth (SIPAG

FIESTA), PCAARRD; Annual Syensaya, the Los Baños Science Festival and Flower and Garden Shows Development (March 1-4, 2016)

Mandaluyong, Metro Manila: Exhibit as center piece at the annual Agriculture and Fisheries Technology Forum and Product Exhibition at SM Mega Mall.

Naujan, Oriental Mindoro: Regional training with community (March 2, 2016)

Mati City, Davao Oriental: Regional training at Davao Commercial Agriculture Research Station (DaCARS) (April 26-27, 2016)

Sorsogon Province: Inauguration and turnover ceremony edible landscape garden (April 26-27, 2016)

Diliman, Quezon City: Exhibit at the 13th Agriculture and Fisheries Technology Forum and Product Exhibition at DA-BAR Grounds (August 8-10, 2017)

Pasay City: Exhibit at the 24th International Agribusiness Exhibition and Seminars; 18th International Food Processing, Packaging and Product Exhibition;

13th National Fisheries Exhibition and Seminars at World Trade Center (October 5-7, 2017)

Los Baños, Laguna: Training of agricultural extension workers and farmer leaders in different cities in Region IV-A in cooperation with the Agricultural Training Institute – Region IV-A at Arisabel Clubhouse (November 21-22, 2017)

Sarangani: Training of the members of SOX Farm Tourism Organization and various community-based organizations, in cooperation with Department of Tourism Region XII, Local Government Units of Sarangani and Malungon town, and RioVista Farm and Forest at RioVista Farm and Forest (November 6-7, 2017)

La Trinidad, Benguet: Training of researchers of Northern Philippines Root Crops Research and Training Center at Benguet State University, (March 14-15, 2018)

Pangasinan: Training of principals and supervisors of Department of Education Schools and Division Office Pangasinan (April 12, 2018)



Yes, bees do it!

They keep entrepreneurship abuzz!

BY MARK JAYSON E. GLORIA

The UPLB Bee Program's beekeeping training course is creating quite a buzz, making farmers, researchers, students, teachers, hobbyists, and practicing beekeepers swarm the University in order to learn more about it.

A testament to this is the steadily growing demand for the training course since it was first offered in 1989, at times even exceeding the available slots for a given year. To date, the Bee Program has trained more than a thousand individuals to become "bee entrepreneurs."

On certain occasions, UPLB's beekeeping training course is conducted outside the university.

"On top of our regular training course in April, May, and October, we have on-site trainings for farmers and indigenous peoples," said Dr. Cleofas R. Cervancia, professor emeritus at the Institute of Biological Sciences

and head of the Bee Program until her retirement in 2012.

Dr. Cervancia, an award-winning scientist, is one of the forces who brought the UPLB Bee Program to wider public consciousness. She was at its helm when it was named as the National Center of Excellence for Bee Research and Development. Despite her retirement, she remains committed to beekeeping training and implementing interdisciplinary researches on bees.

Indeed, beekeeping is one entrepreneurial possibility that has caught on, a good thing because bees have an important role in ecology as pollinators.

BEEKEEPING FOR THE ENVIRONMENT

"The most rewarding training for me is on pollinator restoration," said Dr. Cervancia, who led the beekeeping training for ecosystem restoration

in communities that were hit by super typhoon Yolanda (Haiyan) in 2013.

In partnership with students from New Zealand's University of Canterbury and the civil society organization Guiuan Development Foundation, Inc., the Bee Program helped the villages of Tarong in Carles, Iloilo and Maliwaliw in Salcedo, Eastern Samar recover from the effects of the super typhoon.

According to Dr. Cervancia, these communities lost the bees after Haiyan struck their village. Without bees serving as pollinators, fruit trees fail to bear flowers that would eventually become fruits.

To remedy the situation, they brought colonies of local bees to these communities and taught the people, primarily the farmers, to take care of them. They also included in the training module livelihood activities to further help the residents recover from the aftermath of Yolanda.



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Beekeeping is one entrepreneurial possibility that has caught on, a good thing because bees have an important role in ecology as pollinators.

The products that could be generated from beekeeping are honey, pollen, cosmetics, and wine, among others. Meanwhile, the local bee species that Dr. Cervancia and her team are promoting are the stingless bees (*Tetragonula biroi*), giant honey bees (*Apis dorsata* and *Apis breviligula*), eastern honey bee (*Apis cerana*), and Palawan's *Apis andreniformis*.

A year after conducting the training, expanding the bee colonies, harvesting and monitoring, the team was delighted to see the results in these communities. "We were very happy when we returned; in a year, the colonies have expanded, the bees are strong. Finally, these places have got pollinators. The bees have spread in the ecosystem," Dr. Cervancia enthused. "And now, their mango, avocado, and coconut trees have borne fruits because of the restoration of the pollinators."

BEEKEEPING FOR LIVELIHOOD

Dr. Cervancia added that their trainees in Tarong and Maliwaliw villages

extract honey and bee propolis out of their bee colonies, which give them additional income. This shows that the economic value of bees remains high. In fact, beekeeping has become a much sought-after livelihood option among entrepreneurs. Participants in an intensive beekeeping course in UPLB attest to this.

Jeffrey Bernal, who lives in Lobo, Batangas, plans to include beekeeping in the roster of their family enterprises, which include wedding photography services, computer shop, and printing business.

Just a few months after finishing the training course at UPLB, Bernal started to take care of a few stingless bees in his backyard. He expects his beekeeping business to grow.

Teresa Gerena, an international development worker from Quezon City, said that she has long been interested in beekeeping. A training on urban beekeeping was offered back in London

where I lived; however, I didn't have the time back then, so when I saw it being offered at UPLB, I grabbed it!" she said.

One successful bee entrepreneur who was trained by the UPLB Bee Program is Luz Zarsuela Gamba. In fact, her success story landed her on the cover of the June 2016 issue of the Bees for Development Journal, a quarterly publication about bees in the United Kingdom that is distributed in more than 130 countries.

In the article in the said publication, Gamba recognized Dr. Cervancia for encouraging her to work on stingless bees. Today, she has 2,400 bee colonies in Sorsogon, from which she harvests honey, propolis, and pollen.

Almost three decades after the first beekeeping training course, the training schedule of the Bee Program remains full, according to Dr. Cervancia.

She calls her active involvement in each one of them and in bee research and development as a "call of duty." She hopes that with bees' contribution to ecology and economy, the beekeeping training course would be able to reach out to more communities in the future.

Can one cultivate the land for food and protect it at the same time? These two concepts have traditionally been intended as mutually exclusive. However, researchers and scientists at the College of Forestry and Natural Resources (CFNR) have shown that it is not so.

By implementing the Conservation Farming Village (CFV) Program, CFNR is planting seeds of change, one upland community at a time. Focusing on its major thrusts—poverty eradication, climate change adaptation, and environmental security—CFV has proven that upland communities can produce food and earn income from the land and still take care of it.

But CFV would not have accomplished this if not for its multistakeholder partnerships with LGUs and state universities and colleges as support service providers.

It promoted a new mindset where science, innovations, and traditional knowledge are allowed to come together and fuse; and inculcated a broader world view among farmers toward better awareness and responsibility for their environment, community, and fellowmen.

FREEDOM IN FARMING

To implement the Program, the CFV team first taught agroforestry techniques in upland communities. However, these communities were entirely left to choose the farming technique to adopt. The CFV team then identified a farmer-volunteer farm, assessed interventions needed, and demonstrated and tested the CFV practices on these farms.

According to Dr. Wilfredo M. Carandang, professor at CFNR, UP Scientist II, and a senior CFV team member, most of the farmers adopted a mixture of agroforestry technologies, namely: alley cropping, rock wall, and multi-storey systems.

During establishment, the farms would look like terraces. The farmers plant the hedgerow or edges to shorter crops and trees like flemengia, indigofera, kakawate, pineapple, and ti plant or rosal. Between the hedgerows, they plant vegetables like squash, eggplant, pechay, watermelon, mungbean, and sometimes, corn or upland rice. Later, the farmers plant taller crops and trees such as banana, rambutan, durian, lanzones, and jackfruit on the hedgerows.

A farm in La Libertad, Negros Oriental, for instance, was planted to fast-growing nitrogen-fixing shrubs like *Flemingia congesta* (flemingia), and trees like *Indigofera anil* (indigofera) and *Calliandra calothyrsus* (calliandra). These trees hold the soil, thereby stabilizing the tiers and providing space for planting vegetables.

“During the wet season, high value crops such as carrots, Chinese cabbage, tomatoes, and beans are planted in between hedgerows to maximize space and obtain nutrients from the trees,” said Dr. Carandang. Alley cropping reduces soil erosion with the composted leaves piled on the alleys.

CHANGING MINDSET, CHANGING BEHAVIOR

One notable outcome of CFV is the shift in the farmers’ perspective on resource extraction and use. They have embraced the practice of tilling and making land productive instead of collecting resources from the forest.

Crop diversification has provided CFV farmers a year-round food supply, reduced their food expenditure, and earned them additional income from their



Planting seeds of change to conserve forests and produce food

BY KRISTINE E. ARAGUAS

surplus production. At the same time, the agroforestry techniques that they employed have reduced the need to clear forests for additional planting area.

Dr. Carandang told the story of a farmer from Brgy. Magsikap who had already planned to cut the secondary forest adjacent to his farm. However, a study tour to an agroforestry farm in Lantapan, Bukidnon made him realize that he only needed to diversify the crops he had planted in order to tap other income sources.

“Now, in addition to rosas, he has produced ginger, eggplant, and other vegetables. The adjacent forest was left intact and has become a source of seeds of dipterocarps and other important woody trees,” Dr. Carandang said.

Further, the farmers now realize the value of forests as a shelter against extreme weather events. This has enhanced the upland communities’ resilience to climate change.

INSPIRING FELLOW FARMERS

Dr. Rex Victor O. Cruz, the CFV Program leader and former chancellor of UPLB, shared a story about how CFV has changed the perspective of farmers in Brgy. Kiling, Alfonso Lista in Ifugao, a village primarily growing monocrop

hybrid corn on a massive scale twice a year.

“One of the pioneer farmer volunteers who adopted CFV in the locality said that his neighbors thought that he had gone crazy when he shifted from planting corn—the only crop the community has ever planted. After one cropping season (six months), when he had harvested squash, tomatoes, beans, and eggplant, his neighbors came and asked him how he did it.”

Many farmers are now inspired to replicate the success of their fellow farmers who have benefited from adopting CFV. They have participated in bayanihan activities where they can observe how CFV farms are established.

Recently, the CFV Program introduced organic farming to reduce production costs, and ensure healthier produce and a safe environment.

The adoption of CFV has also reached other organizations and institutions. To date, 11 organizations have been formed because of the CFV Program.

These organizations were also able to establish linkages with the local government units (LGU) and academic and research institutions to advance their farming practices. LGUs have passed local

ordinances to express support for and to institutionalize CFV.

QUANTITY AND QUALITY OF CONSERVATION

The CFV program has developed and transformed 598 farmer-adopters, 32 CFVs, 126 model farms, 524 hectares of farms, 13 nurseries, 4 trading posts, and 9 information systems in 5 provinces. It has also capacitated almost 6,000 farmers through more than 100 training courses that it has implemented.

With the CFV Program’s success, recognition was not far behind. It was given the 2016 UPLB Outstanding Extension Program and the 2014 Galing Pook Award for one of its sites. Its main lead person, Dr. Rex Victor O. Cruz, CFNR professor and UP Scientist III, was given the 2016 NAST Environmental Science Award. These awards speak of CFV’s effectiveness in balancing the needs of the people and caring for the forests.

The CFV approach has proven that forests can be conserved without sacrificing food production. The seeds of change have been sown and have grown in many communities, and should flourish to transform the country, one community at a time, into a food-secure and environmentally sound place.



Photo by Genevieve A. Galapia



With FSTP, from barren soil shall spring progress

BY AUGUSTUS FRANCO B. JAMIAS



How does one will, or at the very least, coax productivity out of stone? Cebu has infamously been confounded by this question, as farmers dealt with its “unproductive” calcareous soil. But one man proved that it could be done, and with it, people came to experience the transformational effect of empowerment.

This man is Dr. Romulo G. Davide, touted to be the Father of Plant Nematology, a brilliant professor, and the lead implementor of the National Corn-based Farmer-Scientists Research, Development, and Extension Training Program (FSTP).

FSTP was borne out of Dr. Davide’s passion for empowering poor farmers. When he won the 1994 Gawad Saka Outstanding Agricultural Scientist and the Jose Rizal Propatria Gold Medal Awards, he allotted his research grant of PhP 500,000 to develop and start implementing the Program.

In July 1994, the FSTP was piloted in Barangay Colawin in Argao, Cebu, Dr. Davide’s hometown. Realizing that the Program can potentially elevate the socio-economic conditions of more farmers, the province of Cebu called for the adoption of FSTP. Cebu then wanted to address low corn productivity, corn being a staple of the Cebuanos.

As the Program has proven its effectiveness in increasing agricultural productivity, it expanded to other nearby provinces.

Recognizing that the Program is an effective extension strategy for sustainable agricultural development, then President Gloria Macapagal-Arroyo signed the Executive Order (EO) 710 on February 27, 2008, calling for the nationwide adoption of the National Corn-based FSTP.

Now, FSTP covers almost all provinces from Regions 1 to 13 prioritizing depressed provinces and municipalities. Under EO 710, FSTP has already covered 85 municipalities in 38 provinces as of July 2018. More than 70,000 poor farmers have already been trained by the Program, with Cebu province having the highest number of graduates of more than 40,000 farmer-scientists.

INNOVATIVE AND EMPOWERING PROGRAM

FSTP’s ultimate objective is to develop farmers’ technical and scientific capabilities in growing valuable crops through appropriate farming technologies. In its fullest sense, FSTP is designed to liberate the poor farmers from the bondage of

poverty and hunger. The Program harnesses the farmers’ entrepreneurial and agribusiness mindset; develops their leadership and sense of community; and nurtures their love for God, country, and people to uplift their socio-economic condition.

The farmers engaged in FSTP undergo three season-long phases of training. Phase 1 involves moral values and research empowerment of farmers, while Phase 2 focuses on farmers’ trials of different technologies in their own farms. Phase 3 witnesses the transfer of tested technologies from a farmer-scientist to fellow untrained farmer.

INCREASE IN KNOWLEDGE, PRODUCTIVITY, AND FOOD SECURITY

An internal review on the farm-level impact of the FSTP was published in 2015 by the team of Dr. Fe M. Gabunada of the Visayas State University. The study found that farmer-scientists are more knowledgeable than non-FSTP farmers about scientific and sustainable methods of corn-farming. It also established that farmer-scientists are agribusiness-oriented and more technically efficient than their counterparts. Furthermore, it found that farmer-scientists obtained significantly higher yield of corn (2.9 mt/ha) than non-FSTP farmers (2.4 mt/ ha).

As farmers became more knowledgeable and technically efficient, they also harvested significantly higher yield. They also derived higher income from vegetables, root crops, fruits, and other cash crops, as well as from livestock. FSTP promotes the integration of crop and animal production systems.

CAPACITATING SELF AND FAMILY

One of the many inspiring FSTP success stories is that of Elnard S. Ympal of San Juan, Siquijor. His annual income in 2004 was only PhP 15,000, but after participating in FSTP, it increased to PhP 142,837 in 2010. Ympal was able to effectively market his high-value crops, poultry, and livestock. His impressive record gained him the Outstanding Young Farmer of the Philippines recognition by the National Gawad Saka Award of DA in 2010. The award came with a grant of PhP 600,000 that he used to further expand his agribusiness and agri-learning site ventures.

On the other hand, Morena B. Dalagan of Tampakan, South Cotabatao is

“

Now, FSTP covers almost all provinces from Regions 1 to 13 prioritizing depressed provinces and municipalities. Under EO 710, FSTP has already covered 85 municipalities in 38 provinces as of July 2018. More than 70,000 poor farmers have already been trained through the various phases of the Program, with Cebu province having the highest number of graduates of more than 40,000 farmer-scientists.

among the farmer-scientists who are making waves in Mindanao.

Before FSTP, Morena practiced monocropping. Eventually, she started to strategically plant high-value crops alongside the major crop. As she adopted intercropping, her farm now grows a bountiful combination of market crops. She has enough for home consumption and surplus for market.

FSTP always emphasizes the “farming is a business” principle. For her part, Morena started producing bananas in her upland farm and aggressively sold her harvest in the market, not in kilos but in tons. Her big breakthrough was when she secured a buyer from Manila. From a simple farmer and housekeeper, Morena is now a businesswoman earning at least a million annually.

FSTP also spread the concept to the B’laan tribe of Alabel, Sarangani Province and Mangyan tribe in Mansalay, Oriental Mindoro. Being receptive to new farming technologies has improved their socio-economic status. Ricardo Tangge of the B’laan farmer-scientists who produced his Tangge Corn Variety and became a corn seed producer sold high-quality corn and corn seeds.

The sales from his corn seeds provided enough income to support the college education of his son Micarey. On June 13, 2018, Micarey finished BS Agricultural Economics at the University of Southern Mindanao.

FSTP also launched a new site in Bamban, Tarlac, the first in the province, in May 2016. Of the 40 farmers who expressed interest in the Program, one-third was from the



DR. ROMULO G. DAVIDE
RAMON MAGSAYSAY AWARD
 2012



OUTSTANDING EXTENSION
TEAM AND PROGRAM AWARDS
FROM CAFS AND UPLB
 MARCH 2006



PRESIDENTIAL GAWAD LINGKOD BAYAN
AWARD FROM THE PHILIPPINE CIVIL
SERVICE COMMISSION
 SEPTEMBER 2006

FSTP AWARDS AND RECOGNITIONS



GAWAD PANGULO FOR EXCELLENCE
IN PUBLIC SERVICE BY UP
 JANUARY 2017

Aeta community. The local government of Bamban identified FSTP as among the key programs that could further develop agricultural and economic development in the area.

COMMUNITY PROGRESS

FSTP has also become an agent of peace between the National People’s Army (NPA) and the military forces. When FSTP was introduced in some depressed areas of Quezon in the Bondoc Peninsula, and in Arakan, North Cotabato, the poor and marginalized farmers became productive and self-sufficient. They are now producing enough food for their daily consumption with extras to sell.

Dr. Davide noted that signs of peace and prosperity are now evident in the aforementioned areas. In Argao, Cebu, their status symbol is no longer the ownership of guns or ‘armalites,’ but rather, cellphones and motorcycles. Cebu is now one of the most progressive and richest provinces in the country. In Arakan, North Cotabato, the ‘armalites’ that used to be taller than

children had been replaced by corn plants that are even taller than men. The same is true in areas where FSTP is fully supported by the government.

AWARDS AND RECOGNITIONS

In March 2006, FSTP bagged two awards, the outstanding extension team and program awards from CAFS and UPLB. In September 2006, it won the Presidential Gawad Lingkod Bayan Award from the Philippine Civil Service Commission (CSC), the coveted award-giving body for government officials, employees, and institutions. CSC hailed the FSTP team for giving farmers “renewed confidence and hope, a sense of self-worth, which cannot be measured by silver or gold,” as the award citation read.

FSTP was awarded the first Gawad Pangulo for Excellence in Public Service by UP on January 30, 2017. The award recognized FSTP’s exemplary contribution to the fulfilment of UP’s mandate to lead as a public service university.

Dr. Davide, on the other hand, received the prestigious Ramon Magsaysay Award in 2012. The award, regarded as Asia’s Nobel Prize, recognized him for his “steadfast passion in placing the power and discipline of science in the hands of Filipino farmers, who have consequently multiplied their yields, created productive farming communities, and rediscovered the dignity of their labor.”

Dr. Davide, Professor Emeritus of UPLB, still remains the indefatigable program leader of FSTP. His more than two decades of spearheading the Program proves that the best fertilizer for unproductive soil is an empowered mind.

Progress like knowledge is meant to be scattered far and wide. When an empowered mind reaches and influences others, socio-economic progress will spring from the once barren soil.

Indeed, one can coax productivity out of stone, even peace from dissension. This much FSTP has proven.

From the farms where the food security war is being fought to the halls of Congress where policies are being made, the Center for Agri-Fisheries and Biosystems Mechanization (BIOMECH) contributes in large measures towards the use of agriculture machinery for efficient farming and fisheries processing operations.

BIOMECH, established as the Agricultural Mechanization Development Program (AMDP) in 1979 was established to “address the need for a regional network for agriculture mechanization.” On October 29, 2015, the UP Board of Regents approved its elevation as a center at its 1312th meeting, cementing its role as a public service unit of the university.

According to the first BIOMECH director, Dr. Rosanna Marie Amongo, mechanizing agriculture is a necessary step for industrialization. “Developed countries took the same path to industrialization by reinforcing its agricultural sector. Why? Because that’s where you get your raw materials. To have the volume of raw materials that you need for industrialization, you need to mechanize,” Dr. Amongo said.

BIOMECH’s contributions go as far back as three decades ago guided by its primary goal of helping achieve food security through agriculture mechanization and green energy production.

MILESTONE ACCOMPLISHMENTS

Among BIOMECH’s milestone achievements are the shallow tube well technology, a means to access groundwater resources and a centerpiece of the Agricultural and Fisheries Modernization Act; the Corn Mechanization Sub-Program, which involved the identification of the needs of the mechanization processes in the corn industry; and the fresh-dry methods for integrated coconut processing, a simple technology package which produces cooking oil.

BIOMECH also explored high value crop mechanization, conducted pioneering studies in land consolidation, and participated in crafting the Agricultural and Fisheries Mechanization Law of 2013 (Republic Act 10601), its implementing rules and regulations, and formulation of the National Agricultural and Fisheries Mechanization Program of the law.

BIOMECH was also a prime mover in developing the Modified Agricultural Mechanization Index, a protocol for measuring the level of agricultural mechanization in the country that was adapted by the Department of Agriculture. Another recent initiative is a study to measure the level of mechanization in the fisheries sector.

EXTENDING TO LEARNERS WHO WILL TEACH

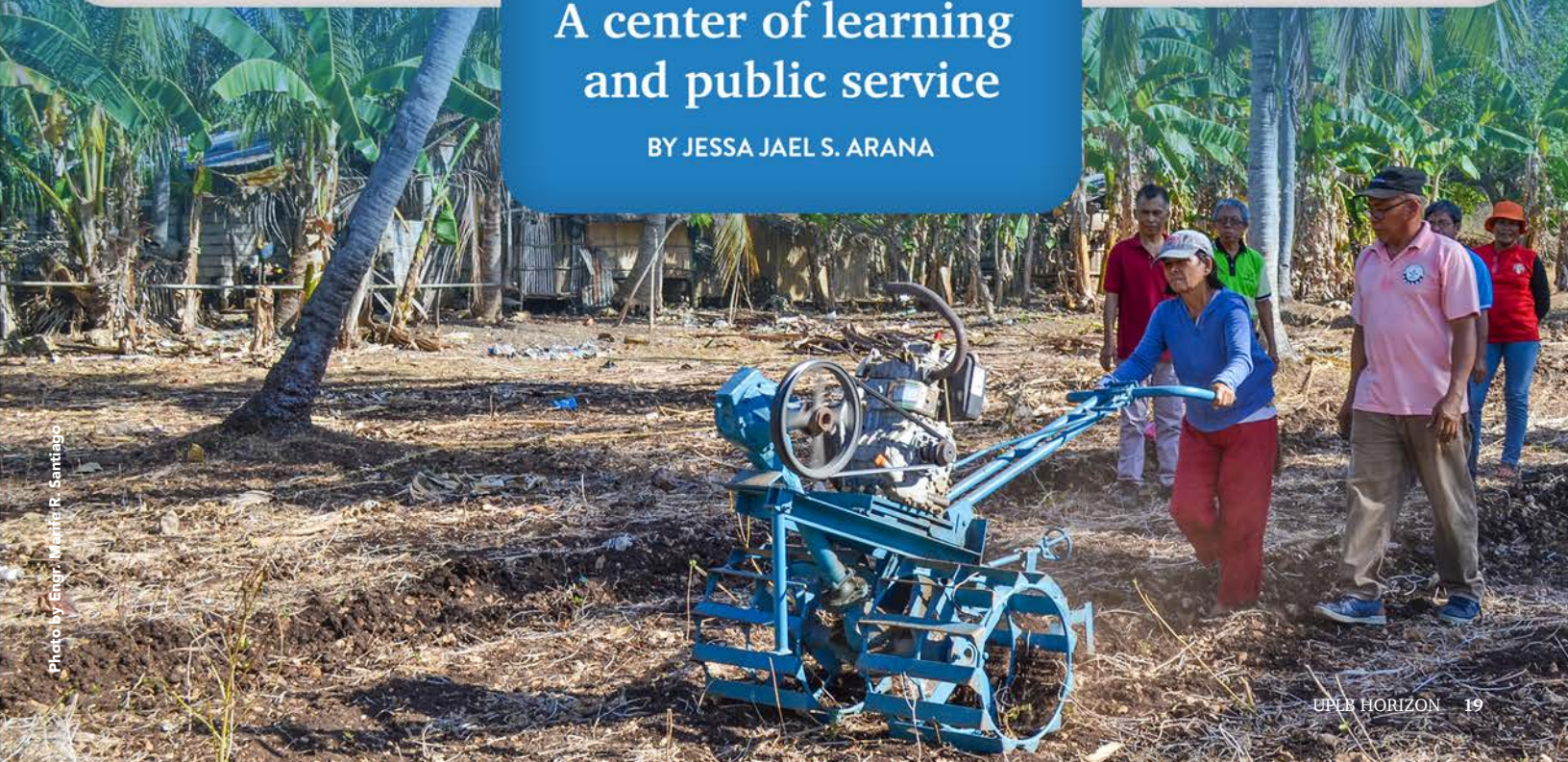
Consistent with the idea of instruction as the primary public service of UPLB, BIOMECH can indeed be a training ground for young faculty and researchers. According to Dr. Amongo, BIOMECH has supported students in engineering who go into mechanization design for their thesis and also serves as a training ground for new MS-level faculty members who have yet to establish their research credentials. They are encouraged to design, to explore, and to create as part of a mentorship practice in CEAT and BIOMECH, ensuring a pool of new and experienced researchers.

This philosophy extends to BIOMECH’s goal to increase productivity in other agriculture schools and to elevate recognition for the Agricultural Engineering profession as provided for in the AFMech Law of 2013, mandating UPLB-BIOMECH to lead and coordinate the agricultural and fishery mechanization RDE program of all academic institutions in the country. As Dr. Amongo put it: “*Hindi pwedeng UP lang ang maganda.*”

Indeed BIOMECH was elevated to a center to widen its scope, not only to small farmers and the stakeholders in the value chain, but to other academic institutions. “To really be the best, everyone must benefit, not just oneself,” said Dr. Amongo.

BIOMECH: A center of learning and public service

BY JESSA Jael S. ARANA





Achieving rice sufficiency with rice-corn blend

BY CHRISTOPHER V. LABE

How is that again? Rice sufficiency with the use of corn?

Indeed, this is what Dr. Artemio M. Salazar, a retired research professor at the College of Agriculture and Food Science (CAFS), believes in.

“Rice sufficiency does not have to be achieved through rice alone but could be achieved with the help of corn,” he said. Dr. Salazar, who used to head the Cereals Section of the Institute of Plant Breeding (IPB), CAFS, shares this belief with his team of plant breeders and agricultural extensionists.

“The country imports only ten percent of our rice requirement, and if that number can be substituted by other alternatives, like corn, we will achieve self-sufficiency,” he said.

In particular, Dr. Salazar is advocating the use of IPB Quality Protein Maize Var. 6 (IPB Var. 6) that his team developed and found to be an ideal corn variety to be used in the mix.

The rice-corn (RiCo) blend, a mixture of rice and corn grits at 70:30 ratio, respectively, is the team’s proposed solution to achieve rice self-sufficiency in the country.

Aside from reducing our dependence on imported rice, the use of IPB Var 6 has other advantages. It is high in lysine and tryptophan and is more nutritious than regular white corn. Lysine is an essential amino acid that boosts metabolic functions of the body, while tryptophan helps in the production of serotonin that improves appetite, weight loss, and mood.

The blend is not only nutritious, it is also cheaper. The average price of good quality rice is about 60 pesos per kilo while pure corn grits is about 33 pesos per kilo. At a ratio of 70:30, the RiCo blend only costs about 47 pesos per kilo.

SUSTAINING THE SUPPLY

The Cereals Section supplies about six tons of corn grits per month to various institutions in the country.

To meet the increasing demand for corn grits, IPB enjoined farmer cooperators in Quezon and Mindoro to produce more white corn. Of the cumulative 20 hectares of land in these locations, three in Mindoro are planted and managed by Mangyans. IPB trained them on seed production, specifically for white corn.



The country imports only 10 percent of our rice requirement, and if that number can be substituted by other alternatives, like corn, we will achieve self-sufficiency.

- Dr. Artemio M. Salazar

Even clerics have shown support for RiCo blend. A monastery in an upland town in Oriental Mindoro has been engaged in corn grits production after acquiring a corn mill machine.

Dr. Salazar takes delight in the response from upland communities. By producing and processing their own food, they are able to attain food security, he said.

“In the end, what we are doing is promoting the technology and showing that it works,” said Dr. Salazar.

SPREADING THE GRITS

The team continuously promotes the rice-corn blend through information campaigns that encourage people to

consume it. It has reached pre-elementary, elementary, and high schools, too.

Four years ago, the team co-spearheaded a feeding program for pupils of the BN Calara Elementary School in Brgy. Anos, Los Baños, together with the UPLB Institute of Human Nutrition and Food and local barangay officials. All 140 participants of the program achieved normal nutritional status after the feeding program.

The Benguet Provincial Hospital heard of this nutritional achievement. Impressed, the hospital bought more than 300 kilos of RiCo from IPB for its own feeding program.

STRENGTHENING RiCo POLICIES

Former UP President Alfredo E. Pascual himself endorsed the use of RiCo blend and gave away bags of it as a Christmas present in 2015.

Likewise, Chancellor Fernando C. Sanchez, Jr. issued Memorandum No. 006 Series of 2016, requiring all food concessionaires of UPLB to make RiCo available to customers. The UP Board of Regents, at its 1315th meeting, approved the first and second tranches of rice subsidy for 2016 for UP employees to be blended with corn grits.

RiCo is one UPLB product that should be brought to the attention of policymakers to bolster efforts not only towards rice self-sufficiency but also better health for our people.

Creating maps, saving lives

BY MARK JAYSON E. GLORIA



Maps were and are indispensable in warfare. They are the blueprints of strategies and tactics for offense and defense.

In this day and age, civilization is facing a different kind of warfare - climate change. This phenomenon spares no one around the world. In the quest to defend people from the “enemy,” warfare arsenal maps were created using digital technology.

At UPLB, a team of young people representing various disciplines were brought together for this singular purpose – more specifically, to create maps that would help predict the occurrence and extent of flooding, and thus alert communities to flood occurrence.

The team was part of the Nationwide Hazard Mapping Using LiDAR (Phil-LiDAR Program 1) whose aim was to produce high resolution maps that would show the extent of flooding across major rivers in the country.

The UPLB Phil-LiDAR 1 Project was entrusted with a slice of the 1.5 billion-peso nationwide budget of the Program to produce accurate and detailed flood hazard maps of the provinces of Laguna, Oriental Mindoro, Occidental Mindoro, Marinduque, and Palawan. These maps show the river systems and the physical structures, such as houses and buildings, and how floods would reach the surrounding communities in the years to come.

According to Prof. Edwin R. Abucay, UPLB Phil-LiDAR 1 project leader and

assistant professor at the Department of Community and Environmental Resources Planning of the College of Human Ecology, the existing topographic map of the Philippines still dates back to the United States colonial government. “It’s very old and much has already changed in the topographic features of the Philippines, even its riverine profile,” Prof. Abucay said, citing landslides as one of the reasons for these changes.

TAKING OFF FROM A “DREAM”

The Phil-LiDAR 1 Program took off from the Disaster Risk and Exposure Assessment for Mitigation (DREAM) Program of the Department of Science and Technology (DOST). Based in UP Diliman, DREAM was implemented in 2012 to create hazard maps for 18 major river basins in the country. It also created a water level forecast service that informed people of the water level of different rivers during typhoons and heavy rains. DREAM collected data for the maps using aircrafts equipped with Light Detection and Ranging (LiDAR).

LiDAR works by sending out a laser beam from the aircraft, which scans and reflects the Earth’s surface and its features to a sensor. Introduced in 2012, LiDAR is fairly new in the Philippines – one of few countries in the ASEAN to have invested in it.

The Phil-LiDAR 1 Project received a high resolution spatial data set from DREAM Program in the form of high resolution maps. One is a map showing data that includes objects and features, whereas the

other map shows the surface data or bare Earth, which Prof. Abucay said, were used for flood hazard mapping.

DATA PROCESSING AND VALIDATION, AND FLOOD MODELING

Three major activities – data processing, field validation and flood modeling – comprised the project. Data processing involved the use of specialized software to convert the DREAM topographic maps into maps that show the rivers, the open spaces and the structures around them. The team edited and corrected the map that bore a digital model of a 3D representation of the terrain’s surface to ensure that the topography of and the physical structures within the river basins that were captured by LiDAR are correct.

Then the team progressed to what was probably the most difficult part – field validation of the information on the map with what is found on the ground. According to Prof. Abucay, they deployed project team members to provinces to collect river flow measurements, bridge cross sections, rainfall data, land cover, soil types, and other relevant data used in the calibration of flood hazard maps. The team scaled mountains, forded rivers, and braved harsh elements to validate information on the map with what it found on the ground.

By conducting river flow measurements, the project team was able to record the actual flow of water in the river on a normal day (base flow) and during extreme rainfall event (event flow). This gave them concrete information used to



Photos from UPLB Phil-LiDAR 1 Project.

project the extent of floods during typhoons and heavy rainfall. This data was also compared with information on flooding that the team obtained through interviews. The team used Global Positioning System to collect highly accurate positional data of various features that they studied.

Flood modeling then came next.

By using the processed and validated data, the team was able to project how the rivers would behave in case of extreme heavy rainfall and flooding. Through fieldwork, they observed the depth and range of flooding and reviewed rainfall data through the years. The flood projections were modeled in various maps that show how flooding would most likely occur in any area.

USEFUL MAP FEATURES

One of the useful features of the flood hazard maps of Phil-LiDAR 1 Project are the projections on the probable extent of flooding within 5, 10, 25, 50, and 100 years. Prof. Abucay said that in the projected flooding in the next 100 years, the coverage of flood is the widest. While the principle is that it could happen in a probability of 1/100, he said that such scenario has taken place during typhoon Ondoy in 2009, and similar events keep on happening.

The project team aimed at coming up with accurate one-direction and one-dimension flood hazard maps of the river basins in assigned provinces. These maps will be useful for mitigating disaster risks, land use planning, and implementing adaptation measures such as designing drainage systems and retrofitting buildings.

The UPLB Phil-LiDAR 1 Project also developed a web-based flood management information system. Prof. Abucay said that this output is envisioned to provide flood forecast with six hours lead time to enable evacuation during the occurrence of typhoons and heavy rainfall.

TURNING OVER THE MAPS TO COMMUNITIES

Natural disasters have been happening with increasing frequency, demanding urgency for the project to come up with the flood hazard maps which would be useful in local development planning, as well. "At the end of the day, it is the community that would benefit from these maps," said Prof. Abucay. "Printed maps will be turned over to the provincial, municipal and barangay local government units (LGUs)," he added.

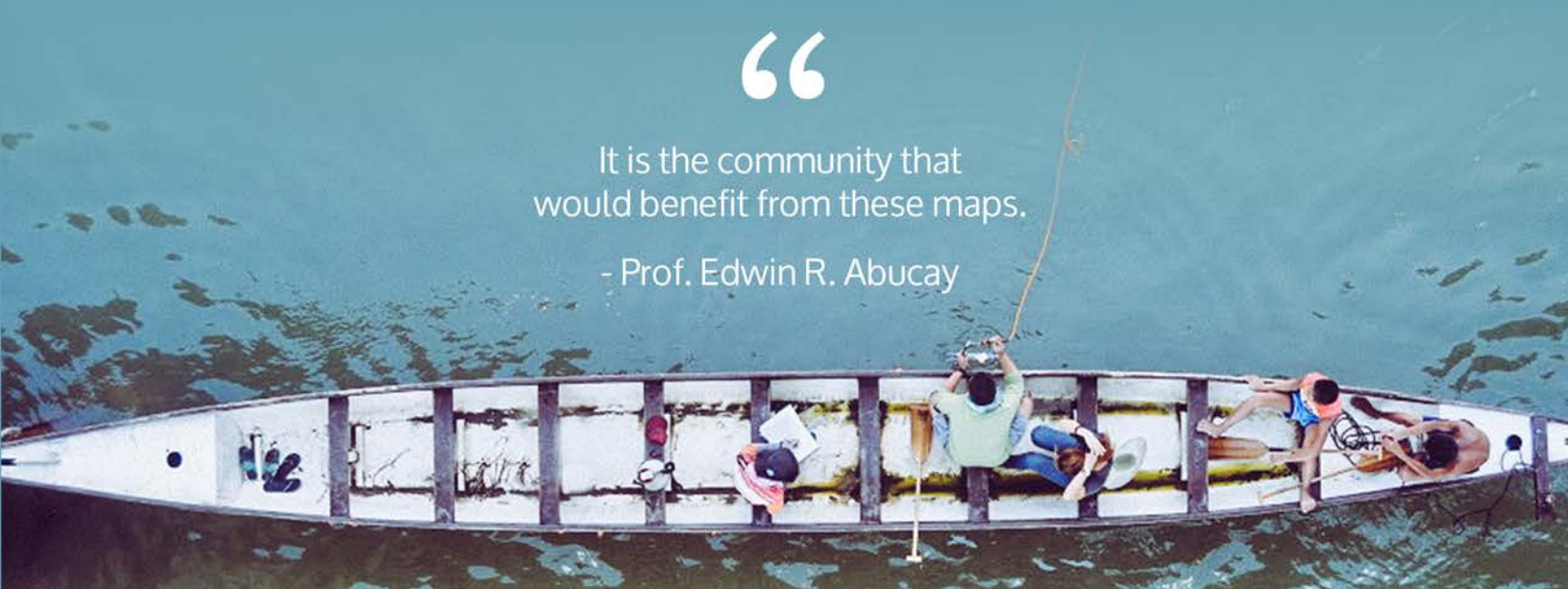
Aside from LGUs, the project also intends to provide concerned national government agencies and non-government organizations copies of the maps.

Prof. Abucay said that they are also looking at other research projects that would use the existing data and equipment from the Phil-LiDAR 1 Project. They are looking forward to making a proposal to assess the areas where excess water from floods would be stored to make natural dams or ponds; that is after fulfilling their original goal – making maps that will save lives.

“

It is the community that would benefit from these maps.

- Prof. Edwin R. Abucay



From infirmary to secondary:

University Health Service as a
Public Service Hospital

BY MIGUEL VICTOR T. DURIAN



Photo by Vandolph R. Maningas

Sakay ka ng jeep papunta ng Forestry, tapos sabihin mo sa driver, 'Infirmary.' (Take a jeep going to Forestry, then tell the driver, "Infirmary.")

Infirmary. The journey of incoming students at UPLB actually starts in this building. It is the first service unit that incoming freshmen get initiated to when they enroll in UPLB.

But the 'Infirmary' has ceased to be. In its stead is the University Health Service (UHS) that the Department of Health (DOH) proclaimed as a secondary general hospital in 1995. In 2016, it was awarded as the 2015 Best Performing Hospital in Laguna by the local government. The UHS topped in 14 of 18 indicators and emerged as the overall

best performing hospital among six hospitals that were assessed.

FROM PRIMARY TO SECONDARY HOSPITAL

According to Dr. Marilyn M. Palma-Reaño, past director of UHS, as a secondary hospital, the UHS has more modern facilities such as operating rooms for surgeries, a delivery room for normal and caesarian section deliveries, a neonatal intensive care unit (OR-DR-NICU Complex), a newborn screening unit, a dental clinic, laboratory service unit, X-Ray and ultrasound service unit and electrocardiography (ECG), and endoscopy, among others.

UHS also has a full complement of dedicated, competent post-residency-trained medical officers (MOs). They are complemented by a pool of medical specialists from other hospitals in Los Baños serving as consultants on various specializations.

This means that the UHS is capable of serving the Los Baños and neighboring communities in the CALABARZON region, in addition to UPLB students and members of the faculty and staff.

On top of its usual hospital functions, UHS also has specialized programs, which constitute an 'extra mile' for the service that it provides at a cheaper rate.



FACILITIES

1. **OR-DR-NICU Complex**
 - Operating rooms for surgeries
 - Delivery room for normal and caesarian section
 - Neonatal intensive care unit
2. **Newborn screening unit**
3. **Dental clinic**
4. **Laboratory service unit**
5. **X-ray and ultrasound service unit**
6. **Electrocardiography (ECG)**
7. **Endoscopy**
8. **Other health and wellness service facilities**



ANNUAL MEDICAL EXAM (AME)

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1. **Complete blood count**
2. **Urinalysis**
3. **Fecalysis**
4. **Chest x-ray**
5. **Physical exam**
6. **Dental exam**

Employees above 40 years old take two additional tests—blood chemistry and lipid profile including triglyceride, HDL, and LDL when necessary



DIABETES EDUCATION AND NUTRITION CLINIC

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1. **Wellness consultations**
2. **Diabetes and diet counseling**
3. **Insulin therapy**
4. **Blood sugar, cholesterol, and foot screening (1-2x/month)**
5. **Quarterly layman lectures for patients**
6. **Annual Diabetes Awareness Week in Metro Manila**

The said programs greatly contribute to one of the thrusts of the current administration, which is to create an environment conducive for creativity and innovation for UPLB constituents, through the Office of the Vice Chancellor for Community Affairs (OVCCA), the mother unit of UHS.

SPECIALIZED PROGRAMS

These specialized programs implemented by the UHS are the annual medical examination (AME), Diabetes Education and Nutrition Clinic, Mass Immunization, and the Student Health and Wellness Clinic.

The UHS administers the AME for UPLB faculty and staff members to undergo diagnostic tests to establish the state of their health and fitness to continue service.

Currently manned by Dr. Randolph Trinidad, the Diabetes Education & Nutrition Clinic offers wellness consultations, diabetes counseling, diet counseling, insulin therapy, and layman lectures for patients.

On the other hand, every year, in April and May, about 250 boys avail themselves of the Operation Tuli service of UHS, which is spearheaded by its Nursing Service Department.

Nurse Irene G. Tibor, a member of the Operation Tuli team of UHS, was

recognized with the Natatanging Kawani ng OVCCA award during the 18th anniversary of the office in 2015 because she renders circumcision service at her barangay in Dolores, Quezon.

UHS holds a mass vaccination drive every year, usually on the months of June and July, when flu is very prevalent.

“It is a primary prevention activity that aims to enhance the resistance and immune system of UPLB constituents,” Dr. Reaño said.

About 400 individuals avail themselves of the service every year.

STUDENT HEALTH WELFARE CLINIC

The newest program of the UHS, the Student Health and Welfare Clinic, is manned by in-house psychiatrist, Dr. Alexandra Jean C. Palis, who is trained in psychopharmacotherapy and psychodynamic psychotherapy. Guidance counsellors of the Office of Student Affairs (OSA) also assist in implementing the program.

The program aims to improve the psychological and socio-emotional health of UPLB students, especially those who are at risk of self-injury. Dr. Reaño, the proponent of the program, said that there had been cases of students being brought into the UHS because of self-injury and even suicide

attempts, mostly because of familial, financial or academic reasons.

Dr. Palis gives them psychological counsel, administers psychological tests, prescribes medications and gives them referrals to a tertiary facility, if necessary.

“Early detection of symptoms is the key to determine the support these students need and the definitive treatment to be done by professional psychologists or psychiatrists,” Dr. Reaño said.

UHS offers the service for free only to registered UPLB students.

THE FUTURE OF UHS

The UHS is currently undertaking a 40 million-peso infrastructure development, to expand the hospital from its 30-bed to a 40-bed capacity secondary health facility.

More private and semi-private rooms will be constructed, as well as a new Emergency Room, among other improvements.

Dr. Serlie B. Jamias, vice chancellor for community affairs, said that modernizing the hospital and further professionalizing its staff and improving its services can help provide that enabling environment to achieve Chancellor Fernando C. Sanchez, Jr.’s vision of a globally competitive graduate and research university.

Public Service UP'S Oblation

BY REGINA MAE C. ONGKIKO
(WITH REPORTS FROM
OVCRE'S EXTENSION
SECTION)

The UP Oblation—a man with arms outstretched, head tilted to the sky, eyes closed, and chest slightly thrust forward, symbolizes public service, a selfless offering of oneself to the country.

This “offering” is provided for in the New UP Charter of 2008, which mandates UP to “lead as a public service university by providing various forms of community, public and volunteer service, as well as scholarly and technical assistance to the government, the private sector, and civil society while maintaining its standards of excellence.”

PUBLIC SERVICE IN INSTRUCTION

“Instruction, the primary function of higher education institutions like UPLB, is perhaps our most significant public service contribution,” Chancellor Fernando C. Sanchez, Jr. said at the 1st Colleges and Universities Public Service Conference (CUPSCon1) held at the UP Open University (UPOU) in 2015.

By offering world-class education, UPLB molds students to become future nation builders. Such education must be imbued with the culture of public service.

Pahinungod accomplishes this through values and character development of the students who are deployed in the programs and projects conducted in underserved communities in the country.

No less than Dr. Emil Q. Javier, former UP President, believes that public service molds the quality of students, for which reason he led the creation of the Ugnayan ng Pahinungod in 1994. The Pahinungod was primarily intended to be an academic program.

The University hones the students in their respective fields and trains them to apply their knowledge and skills on the ground. For example, agriculture students interact with farmers and experience farming, while forestry students interact with forest communities and partake in forest resources conservation activities.

Development communication students produce information materials to educate, inform and mobilize people on relevant concerns. Nutrition students reach out to communities to promote proper human nutrition and health care while veterinary medicine students treat animal diseases during veterinary medical mission.

Applying theories and techniques that they learn from the University in the field not only tests their knowledge and capabilities. It provides them with experience that brings them to “ground



zero," teaches them what public service really means.

Graduates adapt easily to the workplace because they have learned to deal with people from different backgrounds.

PUBLIC SERVICE IN RESEARCH, DEVELOPMENT, AND EXTENSION

Research and extension (R and E) are equally important functions of the University. In the 1950s, Dr. Dioscoro L. Umali, then UP College of Agriculture (UPCA) dean, called on the faculty "to descend from their ivory towers" and apply their knowledge to solve actual agricultural problems, as well as to use the countryside as a learning laboratory. Because of Dr. Umali's challenge, the UPCA created the Office of the Director for Extension to monitor its training and other extension activities.

UPLB's extension programs and services cover various fields such as agriculture, environment and biodiversity, human health and welfare, and livelihood.

Many programs of the University remain focused on the agriculture sector. Perhaps one of the most prominent among these is the National Corn-based Farmer-Scientists Research, Development, and Extension Training Program (FSTP), which Dr. Romulo G. Davide, Professor Emeritus and Ramon Magsaysay Awardee, introduced to his hometown Argao, Cebu in 1994 and caused it to diffuse towards various rural areas in the country. In 2009, FSTP was implemented as a national program of the Department of Agriculture (DA).

UPLB's extension programs have also equipped both individuals and groups with technical information and entrepreneurial mindsets. One best example is the UPLB Bee Program, which has trained bee farmers in various skills, enabling them to improve their income. The Institute of Cooperatives and Bio-Enterprise Development, formerly known as the Agricultural Credit and Cooperatives Institute, continuously capacitates and empowers cooperatives across the country.

PUBLIC SERVICE IN TECHNOLOGY PROMOTION AND OUTREACH

UPLB, through the Office of the Vice Chancellor for Research and Extension (OVCRE), participates in annual exhibits that showcase UPLB technologies.

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The past 109 years have seen UPLB at the forefront of public service. UPLB has encountered many obstacles, but these have only made its purpose clearer—to mirror the symbolism that the Oblation stands for: selfless offering of oneself to the country.

UPLB's summer short courses and year-round training programs are well known all over the country. All of these activities aim to deliver the University's knowledge products to their intended users and beneficiaries.

Mandated as the UPLB unit in charge of coordinating the R and E programs of UPLB, OVCRE administers the development and implementation of these programs, initiates techniques to increase publications, and assists in generating resources as well as building linkages with other institutions.

In 2015, the OVCRE conducted a public service forum to define and create the framework of UPLB's extension and public service mandate. Experts guided the participants and shared their views and knowledge on UPLB's brand of public service. UPLB's contributions to public service were discussed, as well as its new modalities and programs. Participants were also reminded that UPLB also caters to public service in a broader scope to include areas such as culture and the arts.

During the forum, participants defined Public Service as "all activities of the University and its units, including but not limited to capacity building, technical assistance and service, and provision or sharing of knowledge and technologies in response to the needs of partners, stakeholders, and society in general, imbued with the values and spirit of professionalism, honor, integrity and excellence towards the goal of inclusive and sustainable development."

Aside from the first Public Service Forum, OVCRE also held ConExtS - Conference for Extension Services, in 2014 and 2015.

ConExtS served as a venue for UPLB units to present their extension programs.

PUBLIC SERVICE THROUGH MAJOR RDE CENTERS

In its 36 years of existence, BIOTECH has produced technologies such as biofertilizers, diagnostic kits, vaccines, antibiotics, biopesticides, food and feed enzymes, specialty soaps and body scrubs, and plant materials. On the other hand, CTTE initiates programs geared towards the protection, promotion, and disposition of UPLB's technologies through licensing and technology business incubation. The Center has been instrumental in obtaining registration agreements with the Philippine Economic Zone Authority leading to the creation of the UPLB Agro-industrial and Information Technology Parks.

Meanwhile, MNH is mandated to be a center of documentation and a repository of biological specimens for scientific reference, a center of research, a center of information on basic biology, a facility for training future naturalists, and a center of education on preserving our national heritage. Office for Initiatives in Culture and the Arts, on the other hand, aims to make UPLB a cultural center. It serves as the outlet for UPLB staff and students to channel their creativity.

The Ugnayan ng Pahinungod is the flagship volunteer service program of UPLB and serves as the service learning arm of the University. Pahinungod's efforts include reading enhancement and appreciation, immersion, and youth and women development programs. With regard to concerns on gender issues, UPLB has the Gender Center, a university-wide unit that acts on the commitment of UPLB to integrate gender perspective in academic, research, and extension programs.

Translating research into knowledge and action is not an easy feat; but as a University that has public service at its core, UPLB continues to develop technologies and innovations that meet the needs of stakeholders.

The past 109 years have seen UPLB at the forefront of public service. UPLB has encountered many obstacles, but these have only made its purpose clearer—to mirror the symbolism that the Oblation stands for: selfless offering of oneself to the country.

For ten years now, the Los Baños Science Community Foundation, Inc. (LBSCFI) has made it a part of its tradition to welcome students and anybody who is curious about science to visit Los Baños.

At "Wonderama, the Science Exhibit," the students and the curious do not stop at being in awe of things, but find out the reasons how and why they happen. For the most part, they get the answers from scientists from UPLB who, along with other LBSCFI members, never fail to participate in the annual event.

The underlying reason for holding Wonderama, though, is to tap its potential to help young minds choose a career in science. Indeed, the Wonderama audience is a

veritable source of young blood who could go into science, just what the country needs in order to move ahead in a world where knowledge, technology and innovation are the propellers of development. These young minds, who come from different schools, colleges, and universities in CALABARZON and Metro Manila, are enthralled to take part in the educational field trip experience.

Wonderama is an activity under the SyenSaya, which the LBSCFI holds annually to celebrate the National Science and Technology Week (NSTW).

SyenSaya also features the latest science breakthroughs of member agencies through its two other

major activities: the Techno Forum and the R&D Awarding Ceremonies.

AN EXHIBIT OF FUN AND WONDER

Wonderama is an interactive exhibit that showcases various research products and breakthroughs of LBSCFI's 22 member institutions.

According to Forester Roberto Cereno, director of the Training Center for Tropical Resources and Ecosystems Sustainability of the College of Forestry and Natural Resources of UPLB, and one of the creators of Wonderama, an objective of the interactive exhibit is to make science fun. Hence, the Wonderama booths have continuously evolved all these years to gain the students' attention in



Wonderment at 'Wonderama'

BY JUAN PAOLO A. AQUINO

order to impart basic and emerging science concepts.

For instance, the booth of the College of Veterinary Medicine features the skeletal structure of different animals.

A blockbuster booth in one of the recent Wonderamas is that of the Institute of Computer Science featuring virtual reality (VR). Here “techie” visitors experience first hand the popular technology Google VR Box.

CAREERS IN SCIENCE

The 2016 Wonderama featured scientists from various fields that the students needed to know about and possibly to emulate.

These were Dr. Vachel Gay Paller, a parasitologist from the Institute of Biological Sciences; Dr. Marvin Albao, a materials physicist and Prof. Romar Rabajante, a biomathematician, both from the Institute of Mathematical Sciences and Physics; Dr. Milagros Peralta, a chemist working on nanotechnology, and Prof. Mark Rickard Angelia, a biochemist, both from the Institute of Chemistry.

There also were Dr. Jaderick Pabico, an artificial intelligence researcher and Prof. Toni-Jan Keith Monserrat, a human-computer interaction researcher from the Institute of Computer Science; and Dr. Felino Lansigan, an environmental statistician from the Institute of Statistics.

Most of these scientists’ careers and what they do represented the unknown in as far as the students are concerned but the exhibit was an eyeopener for them. Knowing how these scientists succeeded in their careers is also as important as knowing how science and technology is significant in our lives.

CONCLUSION

There are no other towns in the country that celebrate the Science and Technology Week as Los Baños does. The title “Special Science and Nature City” that Los Baños solely owns is well-deserved. And in this science city’s collective effort to let science flourish, UPLB is a worthy partner.



Photo by Vardolph R. Maningas



Photos by Jessa Jael S. Arana



Training the next generation of environmentalists comes as part of the challenge to achieve continuous and long term solutions in biodiversity conservation.

Among those rising up to this task are two scientific institutions in UPLB, the Museum of Natural History (MNH) and the Makiling Center for Mountain Ecosystems (MCME). Both established institutions in the discipline of biodiversity conservation, MNH and MCME have developed strong programs designed to educate the youth and encourage them to be active advocates of biodiversity conservation and protection.

YOUTH SUMMER PROGRAM (YSP)

The YSP started out as a simple program for the children of CFNR faculty. Today, it has become a means to develop the next stewards of the environment.

The YSP was organized by the Social Forestry Division of MCME in 2005. Since then, it has been conducted every summer for elementary and high school students. Each year, MCME collaborates with a school from a city or town near Mt. Makiling where it conducts the YSP.

These knowledge sharing activities do not only inform them about forest conservation but also develop their

talents. The YSP empowers them to help conserve the environment even at a young age. MCME has worked with schools in Los Baños, Bay and Calamba City, and even as far as Tanauan, Batangas and Quezon province.

According to Forester Nicasio M. Balahadia, head of the Social Forestry Division, the objective of the program is to promote forest conservation, public awareness, and appreciation of the importance of forest plants and animals of Mt. Makiling and the environment in general.

In 2 to 4 days, the students undergo lectures, group activities and workshops that train them for leadership, intrapersonal growth, and environment conservation. Lecturers from MCME teach the students about the importance of the Mt. Makiling Forest Reserve (MMFR) as a source of life and livelihood and as a learning laboratory for forestry in Asia.

The students are taught about MMFR's various flora and fauna, problems and issues in conservation, as well as the policies and regulations for their protection. They learn about the realities of forest degradation, climate change, and global warming, and the urgency of restoring the forests through means such as building forest nurseries and

agroforestry farms. They also undergo basic first aid and survival training. All of these are complemented with a visit to the Makiling Botanic Gardens and treks within the MMFR.

Activities such as writing and art workshops encourage the students to express themselves in creative ways and to use these talents to share the beauty of nature and to spread awareness about its conservation. Role-playing and other group activities hone their social and communication skills.

In the early years of the YSP, students were housed at the MCME hostel, but recently, the program innovated to provide camping tents for the participants to fully experience nature.

For. Balahadia said that some of the students have taken the initiative to implement environmental programs in their own schools after being taught how to implement projects. "We teach them how to write proposals (for their school or barangay), how to prepare a development plan, how they can get funds and the activities they can propose, together with the objectives, rationale, and methodology."

In the past years, YSP has prompted students to initiate activities such



Equipping the youth for biodiversity conservation

BY JESSA JAEL S. ARANA



as building “mini forests” and forest nurseries in vacant campus lots, holding environmental lectures and showing educational films. MCME also continues to support the students by acting as resource persons in these activities.

BIODIVERSITY SHORT COURSE

For those steeped in the sciences looking for a great learning experience, look no further than the MNH. Over the years, the Museum has trained students through the “Summer Short Course on Biodiversity for Beginners: Methods and Analysis for Biodiversity Field Surveys” or simply the Biodiversity Short Course.

The Biodiversity Short Course is a seven-day intensive training program that is meant to provide an introduction to biological diversity and conservation and its underlying concepts and principles. The program caters to undergraduate students taking up biology or education and is also open to educators and researchers.

The program features lectures by MNH curators, who are also professors at UPLB. These are supplemented by fieldwork facilitated by MNH researchers and technicians. Students are challenged as they apply their lessons be it in the laboratory or the field. They are put up to the task of catching specimens, such as rats, birds, bats, snakes, and frogs, for their taxa exercise.

At the end of the program, the participants are expected to have an understanding of the fundamental ideas of species richness, evolution, systematics, ecosystems, biotic interactions, endangered species, and the impacts of introduced species. They are also expected to learn the basics of proper biodiversity field survey techniques. In the words of an MNH researcher, Florante Cruz, “It’s not just training. It’s an academic exercise.”

TESTIMONIALS

Alden Sinuhin, a BS Education student majoring in Biology took the short course in April 2016. “Taking the short course proved to me that there’s much to know in the world around us,” said Alden. “More importantly, it made me realize that we all have a part in conservation efforts.”

For Alden, the short course has enhanced his skills in biodiversity field surveying and laboratory processing. Alden dreams of becoming a teacher and expressed confidence that the knowledge and skills that he learned in the course will come in handy when the time comes for him to teach.

Jake Binaday, also a former trainee and a BS Biology graduate from Bicol, said that taking the short course in April 2015 led him to

pursue herpetology. “Even before I took the short course, I was already a nature lover,” he explained. “I’ve already had several experiences in biodiversity field surveys, but the short course offered me a chance to work with experts in different fields.” Jake also said that the hands-on training has helped him in doing field work.

Overall, the Biodiversity Short Course provided learners an experience relevant to their future endeavors in the field. In fact, even schools located as far as Manila, Pampanga, Quezon, and Bicol send their students to MNH to take the short course as it is already an intensive program that provides relevant training. The techniques and concepts taught in the short course can also be applied once the students work on their theses.

The program makes for an engaging educational experience, one that prepares future scientists. By getting out there and getting dirty, the participants have a better appreciation of nature and a better attitude in pursuit of its study.

The Youth Summer Program and Biodiversity Short Course are training grounds for the youth. Both engage the future agents of biodiversity and environment conservation, ushering in change for the environment through education.



Caring, from cradle to cane

BY MARY FRANHET ESPERIDION, DAISY V. PELEGRINA, AND MARK JAYSON E. GLORIA

Inspired intentions. This encapsulates the public service agenda of the College of Human Ecology (CHE). The beneficiaries may not be living on the fringes of society, but they are equally marginalized, even invisible.



CHE is taking a different track by implementing public service initiatives that address a whole spectrum of needs in terms of age and psychosocial conditions, and coping with these needs from the context of family and community.

For a time now, it has helped children and the elderly - considered two of the most vulnerable groups of society, and children with exceptional needs. CHE is also known for a public service program that addresses nutrition issues through an integrated approach.

PLAYGROUPS, THE BEGINNING OF "REAL COMMUNITIES"

Day care at the Child Development Laboratory (CDL) teaches children to socialize through play. In 2013, Prof. Rhea Bailey, a faculty member at the Department of Human and Family Development Studies (DHFDS), reimagined the approach and introduced the "Mariang Makiling Playshop."

The Playshop promotes learning and friendships, and facilitates conscious parenting through play. Playshop supplements classroom instruction and interaction, and promotes hands-on activities among pupils together with their family members.

Playshop's emphasis on arts and crafts activities, outdoor adventures, free play, field trips, and household chores enables children to develop wholesome habits. It teaches pupils to reduce their dependence on electronic gadgets, to engage with people, and to enjoy the environment. True enough, parents like Vanessa Liwanag-Librero have noticed their children's improved socialization skills through the approach.

Prof. Bailey hopes that the Mariang Makiling Playshop would be the start of creating many small playgroups in different parts of Laguna and eventually, in the country. "We want communities to really engage with each other - conversing, laughing, and doing things together," she said.

CARING FOR THE ELDERLY SINCE 2011

CHE has also taken one more less-traveled road to pay attention to the needs of the elderly, making UPLB the

first state university on record to ever do so in the country. The UPLB Elderly Development Program (UPLB EDP), formerly known as the Elderly Day Care Laboratory, stemmed from studies on the elderly conducted by Dr. Renato Torres, which revealed that majority of the Filipino elderly are still functional but with unmet bio-psychosocial needs.

Dr. Torres, a medical doctor, an assistant professor at CHE-DHFDS, and the program leader of the UPLB EDP designed the program at the prodding of Dr. Luis Rey I. Velasco and Dr. Sue Liza Saguiguit, then UPLB chancellor and CHE dean, respectively. Despite limited resources, it was launched on Sept. 3, 2011.

Since then, the EDP has been providing periodic health and wellness activities and services for senior citizens of nearby communities. It is also a venue for volunteerism for students and staff, and a learning laboratory for human and family

Improvement (BIDANI), promoting nutrition-in-development to almost 800 barangays in seven regions of the country. One of its three strategies, called Participative Nutrition Enhancement Approach (PNEA), provides direct nutrition intervention to prevent malnutrition among children aged 0-24 months.

PNEA also promotes a nutritious food not only for children, but also for elders and mothers. Called the KALINGA mix, it is a low-cost, flour-like mixture of rice, mungbean, and sesame seed that is high in energy, protein, and carbohydrates.

According to Belinda Lalap, university extension associate and PNEA coordinator, this mix is now being used in supplementary feeding programs in BIDANI's partner municipalities like Los Baños and Nagcarlan in Laguna.

FACING THE NEEDS OF THE EXCEPTIONAL

Meanwhile, DHFDS recently set up a new resource center, the Center for Families of Children with Exceptionalities (FaCEs), to address the needs of families of children with exceptionalities. FaCEs aims to advocate research, policy making, collaborative programs, and activities that promote family welfare and well-being of children with special needs.

"Having a child with exceptionality brings about a lot of challenges to the family," said Prof. Ria Sanchez, chair of the DHFDS. "The Department believes that like the child, the family itself needs support to further understand the condition of their child, to cope with the demands of having a child with exceptionality, and to be empowered in helping improve the quality of life of their child and the family as a whole."

Indeed, human development is business that concerns everybody and should be everybody's concern. And CHE, with its commitment to understand all its complexities, is helping the helpless through their vulnerabilities - from cradle to cane.



Indeed, human development is business that concerns everybody and should be everybody's concern, as well. And CHE, with its commitment to understand all its complexities, is helping the helpless through their vulnerabilities - from cradle to cane.

development studies. In the long run, EDP aims to be a model program for improving the quality of life of the elderly Filipinos and their communities.

LONG-TIME PROGRAM

Meanwhile, CHE continues to implement on its 40th year the Barangay Integrated Development Approach for Nutrition

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