# SMART executives meet WD Dar for possible collaboration



**SMART Executives receiving memento on the meeting with Dr. Dar.** (From left. INANGLUPA EVP Sonny Domingo, Pres. William Dar, SMART Head, Community Partnership Darwin Flores and Manager for Community Partnership Jill Lava)

**Quezon City** - SMART Executives recently visited the office of INANGLUPA INC. to discuss possible collaboration to make farmers smart using ICT tools in collaboration with state universities and other stakeholders.

For example, when a farmer wants to know the amount of nitrogen needed based on the color of the leaves, a camera shot from an ICT tool that will be provided to farmers will immediately tell him how many bags of urea he should buy during the day.

INANGLUPA will be adopting the GreenSim and GreenPhablet developed by ICRISAT under the leadership of Dr. William Dar until his retirement December of last year. As President of INANGLUPA, Dr. Dar will now modernize Philippine agriculture through these ICT tools that will be farmer friendly which are also shock proof and practically unbreakable under field conditions.

This will now open the rural market for telephone companies to break away the elitist use of telephones to practical use, which has been the vision of SMART, Mr. Darwin Flores explained to the INANGLUPA Executives.

A possible pilot area for this collaboration is the province of Nueva Vizcaya thru the leadership of Gov. Ruth Padilla and Deputy Speaker Carlos Padilla because of their interest in soil rejuvenation and in knowledge sharing project after a short visit at ICRISAT Campus in India last year.

The Knowledge Sharing and Innovation Program of ICRISAT now operates like an open university for farmers, explained Dr. Guntuku Dileepkumar. It can then install such network to make Philippine farmers smart in their practice of modern farming and will soon visit the Philippines to assist INANGLUPA. SMART and other partners that will establish the network as a business with corporate social responsibility.

Dr. Dileepkumar thru skype from India will explain the architecture of GreenSim and GreenPhablet to SMART executives sometime this month.

In the same manner that lessons in pipe irrigation or "fertigation" can be explained to farmers groups thru the GreenSim and GreenPhablet. Smart money for example can be transferred for the farmers to buy what they need in farming thru the same tools including the transfer of funds from the proceeds of the commodities sold for them thru an IMOD (Inclusive Market Oriented Development) strategy which will also be introduced in the Philippines by INANGLUPA.

Dar said that along with these technologies and strategies, INANGLUPA will generate and accept proposals to reshape Philippine agriculture as he proposed during the 2nd National Congress of the Philippine Association of Agriculturists (PAA) to which all agricultural workers in government are members.

# **Editorial**

# To Reshape Philippine Agriculture...

We must look to agriculture as a major way towards true economic development that will be sustainable for a developing country like the Philippines.

The on-going crisis in the Middle East and even Africa will mean the decline of the service sector. The manufacturing sector continuous to be on a stand still because of increasing energy cost even us the price of oil seems to be going down.

Meanwhile, **rural industrialization** to create employment in the countryside will remain to be a dream for as long as cheap electricity is not available where needed and when needed. Agriculture still is the number one in creating employment in the countryside.

"Agriculture remains our greatest hope". This was the title of an editorial of Tempo along with the Bulletin last January 7. And the way to go other than the leadership provided by a rice research institution which is the International Rice Research Institute (IRRI) located in the Philippines is to harness research to benefit the farmers as shown by the newly retired Director General of ICRISAT (International Crops Research Institute for the Semi Arid Tropics).

Dr. Dar is the founding Chairman and President of a newly organized social movement, the INANGLUPA to get Philippine agriculture moving. We now have him back in the country and is now one of us.

If agriculture is the hope, then there must be many  $% \left( n\right) =\left( n\right)$  reasons for hoping.

The reason could be that there are other ways and not depend on the government to prime agricultural development.

The reason could be that there are people who care about agricultural development to benefit the poor particularly the smallholder farmers.

The reason could be that there are systems initiated by the poor to help the poor.

The reason could be that there are those across the seven seas that looks on us with favor to develop our people and our economy through agri-industrialization.

The reason could be that there are practical and down to earth technologies to move heaven and earth for productivity.

The reason could be that there are simple ways to do it like analyzing the soil and advising the farmers the best varieties to plant and the proper soil nutrition needed.

The reason could be just harvesting the rains with simple catchment basin and contour farming.

The reason could be just organizing the smallholder farmers to mechanize and have the economies of scale by clustering their farms to have common service facilities.

The reason could be teaching small business management to the farmers and volume marketing to get the best price.

The reason could be not following a central plan but just implementing an appropriate plan with an appropriate technology.

The reason to hope for could be the FOUR PILLARS of INANGLUPA MOVEMENT which are **Inclusiveness** or including the farmers in any plan, **Science-based** or approaching the plan with a scientific basis, **Resilient** or that which is adaptable and **Market-oriented** or that which can pay for itself and bring more profits after productivity. *VLD* 

# Science with human face: Filipino makes it work in the World



It started to rain as William Dar, the Filipino head of an India-based global agricultural crop research institute, took the dais to say goodbye after 15 years of service.

In the moderately dry southern state of Telangana in India, rain is scarce and precipitation is considered God's grace.

Dar, a farmer's son and a former Philippine agriculture secretary, engineered a complete turnaround for the International Crop Research Institute for the Semi-Arid Tropics (ICRISAT), redefining its mission to truly serve agrarian families in the world's dryland tropics that cover 55 countries in Asia and sub-Saharan Africa.

As raindrops pelted the ornate canopy over the venue of ICRISAT's 42nd anniversary celebration on Dec. 12, 2014, Dar told his colleagues: "Now rain is coming. That's a blessing from the Lord. [A] blessing because we need water all this time and I hope that this is an indication that the future is bright for all of us."

After completing his three-term leadership at ICRISAT, Dar said he was ready to weave his magic on and bring back the agency's motto: "Science with a human face" to the country of his birth.

"I am retiring to the private sector to do for Filipino farmers what I have done in other countries," Dar, who hails from Ilocos Sur province, told the Inquirer, adding that he has established the "Inanglupa (Motherland) Movement" to attempt to replicate his success at ICRISAT in the Philippines.

Before Dar assumed the post of director general of ICRISAT in 2000, the organization was considered a "deficit institution."

With donors suffering "fatigue" and the institute slowly losing direction, ICRISAT was in quite a bad shape when Dar took on the challenge of keeping afloat what most members of the Consortium of International Agricultural Research (CGIAR) Centers considered a "sinking ship."

# 'Surplus institution'

But in 15 years at the helm, Dar achieved the virtually impossible, turning a "deficit institution" into a "surplus institution," with his brand of science.

Dar was able to quadruple the income and investments poured into ICRISAT by its partners and donors of \$22 million to the current \$85 million. ICRISAT's top three donors outside the CGIAR system are the Bill and Melinda Gates Foundation, the government of India, and the US Agency for International Development (USAID).

"Before our scientists researched for the sake of researching. They used science for the sake of science. But we changed all that. We started refocusing our efforts [on] research that would actually benefit farmers," Dar said.

"We [at ICRISAT] defied approaches of the past, bringing in new approaches that we needed to do agricultural research for development, not research for research's sake. Not science for science's sake," he said.

#### Farmer's son

The redirection entailed a new core value for ICRISAT, "Science with a human face." It was after all the motivation for the establishment of the nonprofit research institute that conducts studies on highly nutritious and drought-tolerant crops—chickpea, pigeon pea, groundnut, sorghum and pearl millet—as well as on agricultural management practices to reduce poverty, hunger, malnutrition and environmental degradation in the world's dryland tropics.

Dar hails from Santa Maria town in Ilocos Sur, where he and his siblings were raised in farming and taught by their parents the importance of earning their keep by selling produce from the family's 2-hectare land.

He obtained a bachelor's degree in agricultural education in 1973 from then Mountain State Agricultural College (now Benguet State University). In his book "Feeding the Forgotten Poor," Dar writes, "The thought of going to engineering or medicine, two most popular streams even then, never crossed my mind. I was a farmer's son and wanted to know more about a farmer's work."

# Remarkable ability

Dar received in 1976 his master's degree in agronomy and in 1980 obtained his doctorate degree in horticulture at the University of the Philippines in Los Baños, Laguna province, on a scholarship from the Philippine Council for Agriculture, Forestry and Natural Resources Research and Development.

In 1998, then President Joseph Estrada invited Dar to join his Cabinet as agriculture secretary and in Jan. 11, 2000, he was named the fifth director general of ICRISAT, headquartered in Patancheru in Telangana, India, by the institute's governing board.

In his speech, ICRISAT's financial officer Rajesh Agrawal said, "The leadership quality required for an institution like us (ICRISAT) is not only a great knowledge of science and great appreciation of science but also the other functions of management ... He (Dar) has the remarkable ability to identify which are the other critical components required to be able to make ICRISAT successful, whether it is human resource or finance or innovation or partnerships, and to be able to put that together into a meaningful thing."

## **New ideas**

He added: "ICRISAT did a great job in the '70s and the '80s, '90s but come the end of the century, at that time, donors were experiencing fatigue in terms of what is new now. What do we fund? What is a new idea? And that is where I think his (Dar's) contributions in the last 15 years have been tremendous."

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# **Feature**

# **Modernizing Asian rice production**



In 1968, Sicco Mansholt (1908-95), the European commissioner for agriculture, sent a memorandum to the Council of Ministers of the European Community concerning agricultural reform. This plan became popularly known as the "Mansholt Plan." The plan noted that, despite costly policies of price and market support, and despite increases in production, farmers' standard of living was still way behind that of other sectors of society.

## Europe's farm reformation

At that time, the average farm size in Europe was 11 hectares. Twothirds of the farms were less than 10 hectares, though it was noted that,

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According to Agrawal, Dar revitalized and redefined ICRISAT's agenda through partnerships with private organizations as well as big, medium and small seed companies, the establishment of agribusiness incubators and the hybrid parents research consortium and agricultural studies specifically focused on benefiting farmers.

Among endeavors initiated by ICRISAT during Dar's tenure were the Agricultural Research for Development (AR4D) initiative; Harnessing Opportunities for Productivity Enhancement (Hope) of sorghum and millets project; Tropical Legumes II (TL-II) project; Village Dynamics in Southeast Asia (VDSA) initiative; Inclusive Market-Oriented Development (Imod) project; Agribusiness and Innovation platform; establishment of centers of excellence for genomics, transgenic research, climate change research for plant protection, and information and communications technology innovations for agriculture.

# Fearless in taking risks

Dar was also instrumental in the development of the sustainable community-based natural resource management model Bhoochetana, or land rejuvenation, which is combined with watershed technology to enable poor Indian farmers to prosper, and in the establishment of the ICRISAT Development Center to ensure that large-scale science-based technologies benefit small farmers.

"To be able to see ahead of others, that 'Look this is going to make sense' and he (Dar) did precisely that. He seized the opportunity. (He) didn't fear taking the risk ... and you can see that in [a] variety of areas, ICRISAT is considered a pioneer compared to other institutions," Agrawal said.

In his farewell speech, Dar said: "We (ICRISAT) defied those that have been established as methodologies. We saw to it that the products that we generate, the varieties that we breed would have to reach the smallholder farmers in a big way ... We have to see to it that the products of science, the technologies we develop must reach the doorsteps and the farms of smallholder farmers of Asia and sub-Saharan Africa."

He said ICRISAT made innovations because "business as usual is no longer tenable."

"with modern techniques, one man can cultivate 30 to 40 hectares of crop land." Labor had steadily been migrating out of agriculture and "half of the persons who run a farm are more than 57 years of age." There was a lot of concern about whether young people would still be willing to keep farming.

The plan also recognized some issues on the changing role of women: "Elsewhere, every effort has been made...to liberate women from the more onerous and unpleasant forms of work...yet the farmer's wife finds more and more that she has to do a man's fulltime job!"

Thus, Mr. Mansholt suggested that production methods changethey should be modernized, and small farms should increase in size.

The latter was the cornerstone of his plan: "The new structure envisaged rests, essentially, on enterprises of adequate size." Between 1970 and 1980, the plan faced controversy because it encouraged nearly five million farmers to give up farming so that the remaining farmers could increase their farm size. However, the plan included a social component such as vocational training and welfare programs so that it would be easy for farmers to take up new jobs outside farming.

## The Asian situation

So, why dwell so much on this Mansholt Plan? Despite its being controversial and the differences in location and time, some conditions of rice farmers in Europe then and those in Asia today are strikingly similar. Asia has about 140 million rice farms with average sizes of around 1 hectare only. Returns from rice farming are generally low, only US\$200-600 per hectare per season.

Even with a farm size of 2 hectares and two rice crops a year, income from rice farming averages only \$800-2,400 per year. So, how can any family live off the income from rice farming?

"The strategy framework we put in place, inclusive and market-oriented, this mantra of science with a human face, will bring further this institute forward and I will see to it that the same can be translated in various countries of the world and I will do that in my next journey in the Philippines," he said.

## Four 'pillars'

Dar introduced four "pillars" of agriculture that he developed through his 15 years of experience in ICRISAT and vowed to apply them in the Philippines through Inang Lupa Movement and help the country's agrarian

The first pillar, he said, is inclusiveness, where farmers are made part of the process to create solutions for agricultural development.

The other pillars are science-based agriculture, resilient agriculture in response to climate change, and market orientation where agriculture must be viewed as a business and the focus should be on how to make farming profitable and attractive to the youth.

# Key value

"My lifetime career has been in agriculture. Based on my experiences, my vision is to be able to help nurture an inclusive, science-based, resilient and market-oriented agriculture to help dryland communities worldwide. Sustainability is a key value across these four pillars," he stressed.

Dar vowed to share his management and technical expertise and knowledge with Filipino farmers to transform the country's rain-fed and unproductive farmlands into productive, sustainable and climate-smart farms through Inanglupa Movement.

The movement aims to enhance the food and nutrition security as well as increase the productivity and income of small Filipino farmers through soil rejuvenation, sustainable and integrated natural resource management, the use of improved cultivars and hybrids, and pushing for reforms in the agriculture sector.

He ended his speech by saying: "So concluding this journey with ICRISAT, with you, the last 15 years I hope to leave behind a legacy benefiting millions of farmers in India and Africa and other dryland countries of the world." (Jeannette I. Andrade - Inquirer.net)

# **ICRISAT ICT program with Smart & Globe** networks to help farmers



Nueva Vizcaya Gov. Ruth Padilla is hoping to tap local telecoms giants Smart and Globe to help launch the International Crops Research Institute for the Semi-Arid Tropics' (ICRISAT) ICT innovations for agriculture, specifically its Green SIM and Green Phablet for smallholder farmers.

According to recently retired ICRISAT director general Dr. William Dar, who just completed an unprecedented three-terms spanning 15 years as head of the India-based ICRISAT, Gov. Padilla plans to enlist the cooperation of Smart and Globe to implement an ICT innovations for agriculture program specially created by ICRISAT's IT expert Dr. Guntuku Dileepkumar.

Gov. Padilla had recently visited ICRISAT's facilities in this southern Indian province to learn about the science-based work being done by ICRISAT which could be used and applied to help Nueva Vizcaya's farmers.

Additionally, Dr. Dar said, Gov. Padilla also expressed keen interest in ICRISAT's irrigation system called Bhoochetana that would help address farm water requirements especially during the dry summer months.

Dr. Dileepkumar and his team in ICRISAT have developed a Knowledge Sharing and Innovation (KSI) program that is aimed at transforming research results into data, information and education services that could be shared to smallholder farmers through the quickest and latest technology offered by cellphones and tablets with the growing availability of broadband services

According to Dr. Dileepkumar, who is fondly tagged as ICRISAT's own Bill Gates, the traditional means of disseminating agricultural data, information and assistance through agricultural extension workers has shown its limitations in reaching smallholders farmers located in a widespread area and in a timely manner.

On the other hand, with the increasing availability of cellphones and tablets and broadband services in rural and even remote areas, research data and information gathered by ICRISAT could now be more easily shared with farmers.

Through several platforms, Dr. Dileepkumar explained, ICRISAT could share open data and knowledge solutions as well as ICT-mediated extension systems and capacity building activities.

Farmers could access ICRISAT's research and data primarily through KSIConnect-http://ksiconnect.icrisat.org/ - which highlight the most interesting projects, cutting edge research and fascinating success stories in the form of open information and education video resources, face-to-face virtual training and learning sessions and virtual expert-farmer interactions.

Talks by experts are also live streamed and recorded for offline viewing.

An AgEd Open Courseware platform offers a research infused curriculum providing lifelong learning opportunities to students, faculty members, extension agents and smallholder farmers.

Likewise KSI also offers farmers and other stakeholders its open access and open data repositories which hold numerous publication and records and enable access to open data to the global community.

The Green Phablet powered by the Green SIM is an ICT mediated extension system (with mobile and web apps, voice advisory services, participatory video extension methods) which brings out the best of affordable technologies, knowledge solution, availability of quality inputs, credit and insurance at the doorstep of smallholder farmers.

However, the Green SIM and Green Phablet, Dr. Dileepkumar emphasized, must be anchored on a public-private partnership that would involve private telcos, the government, NGOs, civil society organizations and the smallholder farmers. (Marianne V. Go - The Philippine Star)

Modernizing Asian rice...from p3

In recent years, labor migration from rural to urban areas has accelerated tremendously in many parts of Asia. Usually, the ablebodied young men migrate while the women and the old stay behind. But, despite labor outmigration, farm size has been getting smaller and the number of farms is increasing.

So, just like Europe in the 1960s, we have to wonder about the future of rice farming in Asia. Since prospects of earning a decent income from rice farming are few, who will want to produce our rice tomorrow?

## A proposal for modernization

So, maybe it's time to develop a "Mansholt Plan" for Asia's rice sector. The structural transformation we're witnessing in Asia offers great opportunities for rice farming to be vibrant and profitable. Many examples of progress are already there, but these need further support.

## Consolidation

Increasing farm size (consolidation) will have to be the cornerstone of any transformation. Even if yields increase dramatically, no one can obtain a decent livelihood from farming 1 to 2 hectares of rice area.

However, many land markets in Asia are "locked," so different options for putting more land into single management units (besides buying or renting) must be explored.

Some ways of increasing "virtual" farm size are already in progress. For example, China is experimenting with something called "village farming." Vietnam is exploring a concept of individual farmers managing large tracts of land together in their "small farmers, large farm" program. Mechanized farm operations are increasingly outsourced so that large tracts of land can be run by contractors. In this way, economies of scale are realized.

## Mechanization

The use of farm machines has to increase for higher labor efficiency, or at least make it on a par with the productivity in other sectors of the economy. In Asian rural areas, labor is becoming scarcer, which goes with having more costly labor. This makes investing in mechanization more attractive. Already, we see a rapid rise in mechanized transplanting, sowing, land levelling, and harvesting. Some new business models of the private sector facilitate the introduction and operation of farm machines.

# Intensification

Finally, yields and resource-use efficiencies simply have to go up. With resources (water, energy, and labor) becoming scarcer, it is paramount to produce "more with less." Yields need to go up to meet the ever-rising demand for food without bringing new land into production. In addition, we need to come up with a more sustainable and environment-friendly way of growing rice.

Like the original Mansholt Plan, we need a social program to facilitate the transition. Smallholder famers should find it easy to leave agriculture. Some investment should be made in vocational training for retooling those who want to leave farming, and in training on modern production technologies for those who want to stay. Also, we need to stimulate rural nonfarm enterprises so that farmers and agricultural laborers can stay in rural areas and not need to migrate to the already overcrowded cities. (Bas Bouman, reprinted from Rice Today)

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