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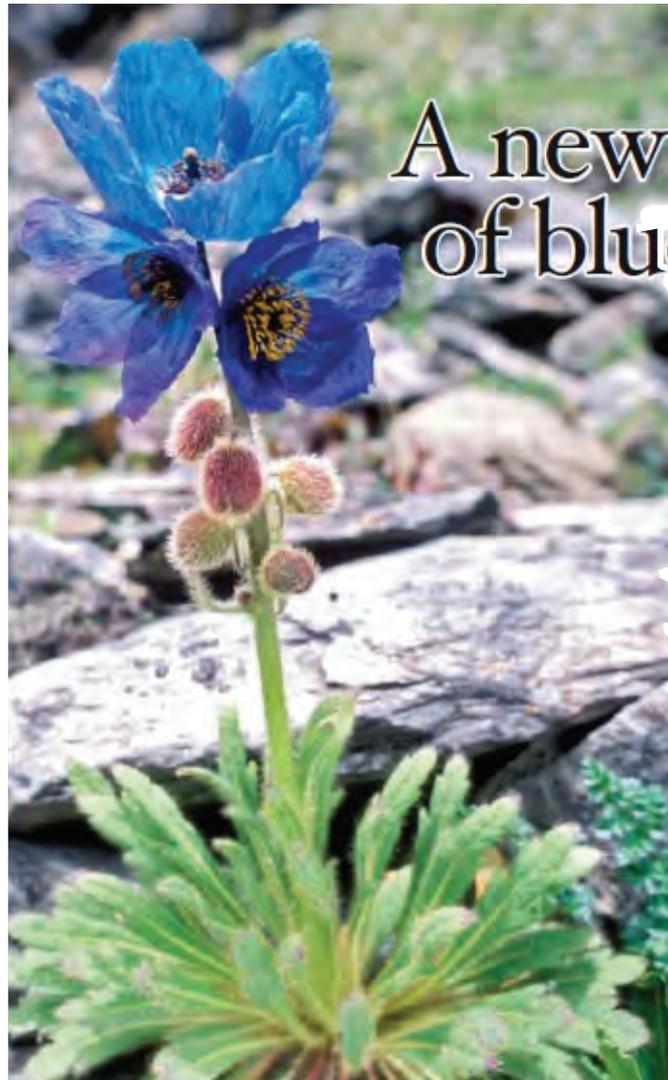
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A new species of blue poppy

Ugyen Tshering/ICS

Botanists, Yoshida from Japan and Christopher Grey Wilson from Europe examined the details of the photographs of the Bhutanese plants and compared them with those of Nepal's *Meconopsis discigera* and concluded that the two plants are distinguishable as different species.

The Bhutanese flower was distinct from *M. discigera*, as the flower color is blue-purple, not pale yellow and its shape is dish- or cup shaped and not bell-shaped. There is also a difference with the obconic-cylindric and not barrel-shape of the fruit capsule.

In mid August 1995, Yoshida followed the Jhomolhari Trek in west Bhutan as a trek leader and found plants of *Meconopsis* with a typical dark red stylar appendage but with some fallen blue-purple petals. These plants were found in the vicinity of Tso Phu Lake growing on unstable screes.

One of members of the trek revisited the area around Tso Phu in July the following year and took photos of the plants in flower. Since then, many other trekkers

The new species, *Meconopsis bhutanica*, up to now confused with *M. discigera*

In what could be both the discovery of a new species as well as a correction of historical botany facts the Bhutanese blue poppy has been declared as a different species from its yellow colored cousins found in Sikkim and Nepal. The Bhutanese plants were named separately as blue-purple flower *Meconopsis bhutanica*.

According to the press release issued by National

Biodiversity Center, until recently it was thought that the Bhutanese blue poppy found mainly in the highlands was part of the *Meconopsis discigera* species found in Sikkim and Bhutan.

The flower is a unique and rare one that grows at a high altitude on rocks and moraine dams. It produces a series of leaves over the years and then only flowers. This beautiful highland flower has four to five petals.

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A new species of Blue Poppy

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followed the Jhomolhari Trek observing en route this strange and attractive blue poppy. The report says that numerous photographs of this species are now available, although sadly, little additional herbarium material. By examining many photos of the plants taken by trekkers, more differences between those of east Nepal and west Bhutan were recognized. This has been in spite of the current restriction on the collection of plant material in Bhutan.

Meconopsis bhutanica was first collected by Roland E Cooper on 27 July 1914 in flower and on 28 September in fruit, near the

head of Thimpu Chu above Barshong at an altitude of 4,000m. These specimens were, however, ill-preserved and it proved very difficult to examine the details of flowers and leaves. The famous four-member British team that explored Bhutan in 1949 (Frank Ludlow, George & Betty Sherriff and JH Hicks) collected the species four times at different stages

Toshio Yoshida is a photographer and amateur botanist based in Chiba, Japan Christopher Grey-Wilson is a botanist, horticulturist and writer

The report says that from a horticultural point of view, members of this flower group have great potential. However, like so many high

Himalayan alpine they require exacting conditions in cultivation. Primarily they need cool moist summers and dry winters.

In the wild, plants are protected under a deep layer of snow during winter months, while in summer the atmosphere is kept moist by the monsoon which suppresses temperatures, especially at altitude. Although seed *M. bhutanica*, has been introduced on a number of occasions over the years, plants have not persisted in cultivation for any length of time.

Both species are monocarpic and take several years to reach flowering maturity. Seed is set only under ideal conditions, and

plants can be easily lost if they fail to set seed if one unfavorable season follows another.

However, gardeners find these types of plants a challenge and will try to perfect their cultivation whenever seed is available. Many Himalayan *Primula* and *Gentiana* species are equally demanding. The report says that what is certain is that these high altitude species of *Meconopsis* are among the most beautiful alpine to be found anywhere in the world.

This latest discovery published in June 2012 will further add to Bhutan's reputation as a global biodiversity hot spot with a host of plant and animal life.

EU to support Bhutan under Global Climate Change Alliance

Tshering Doma/ICS

Thimphu, November 30: A Financing Agreement (FA) to formalise the European Union's (EU) support to Bhutan under the Global Climate Change Alliance (GCCA) was signed between the EU and the government.

The Officiating Secretary of the Gross National Happiness Commission signed the FA in the presence of the EU Ambassador to Bhutan, His Excellency Mr. João Gomes Cravinho and the Agriculture and Forests Minister, Lyonpo (Dr.) Pema Gyamtsho.

Under the GCCA program, the EU will provide approximately Nu 300M (Euro 4.30M) as a sector budget support to the Ministry of Agriculture and Forests. The program

will enhance resilience of Bhutan's rural households to the effects of climate change. It will also ensure climate change readiness of the Renewable Natural Resources (RNR) sector by mainstreaming climate change and ensuring that the steps are taken towards increasingly addressing climate change adaptation at the multi-sectoral level.

According to a spokesperson, the operational implementation phase will start after the FA signing and will have duration of 48 months.

The GCCA is an initiative of the EU to strengthen dialogue and cooperation on climate change with developing countries most vulnerable to climate change and have the least resources to adapt such as the least



Photo by Ahimur, ICS

The Agriculture and Forests Minister, Hon'ble Lyonpo (Dr.) Pema Gyamtsho and His Excellency Mr. João Gomes Cravinho after signing the Financing Agreement

developed countries and small island developing states. The GCCA was launched in 2007 by the European Commission. The EU has been a strong development partner for Bhutan since the 1980s.

Besides discussing on

organic products and its certification during the signing, Lyonpo also informed the Ambassador about the RNR sector's 11th five year plan which aims at achieving self-reliance not only in agriculture but in other crops as well.



Japanese grant to enhance food security in poverty areas

Tshering Doma/ICS

Thimphu, October 12:

The Ministry of Agriculture and Forests (MoAF) led by Hon'ble Secretary, Dasho Sherub Gyeltshen and the Japan International Cooperation Agency (JICA) led by Chief Representative, Mr. Tmoki Nitta signed a minutes of discussions on the 2KR program 'Grant assistance for food security for underprivileged farmers' at the MoAF conference hall.

One of the main highlight

of this collaboration is to increase the agriculture production by bringing more agriculture land under cultivation while also reducing farm labour shortage and rural poverty in the country.

Following a request from the Royal Government of Bhutan, a team from JICA conducted a study and discussed with the concerned officials on the project implementation.

Both the parties have agreed that the 2KR project in 2012 will cover the whole

country through increase in crop production such as rice, maize and wheat particularly in the poverty areas.

The project will be implemented by the Agriculture Machinery Centre (AMC) of the ministry. According to the Program Director of AMC, 'Within the project, the ministry has also requested 350 nos. of power tillers and 360 nos. of single reversible plow along with few other spare parts.' The machineries will be given to those farmers who have less

opportunity to acquire them to help them increase food production on their own. The actual budget of the project is not yet known.

Mr. Tmoki hopes that the program would serve as a big milestone in improving the agriculture and rural sector in Bhutan.

2KR programs was started in 1977 to provide fertiliser, agricultural machineries and equipment and assist food production in the developing countries which are striving to achieve self-sufficiency in food.

MoU between Taj Tashi and Organic Producers

NOP

Thimphu, 31 October: The Ministry of Agriculture and Forests in its objective to promote organic agriculture in the country initiated the establishment of a formal relationship between organic producer groups and hotel. Two organic producer groups namely Druk Organic Growers Cooperative (DOGC) at Lumitsawa, Punakha and Talung Yak Sungchorp Detshen (TYSD) from Haa signed a MoU with Taj Tashi, agreeing to supply the required quantities of selected vegetable and Gouda cheese to Taj Tashi on a weekly basis at a mutually agreed price. To start with, it was agreed that few products would be identified for supply such as peas, potato, lettuce, celery, beans, zucchini, ferns and asparagus from the DOGC and Gouda cheese from the TYSD.

The production and supply of the products will be done under the guidance of National Organic Program

(NoP) following the Bhutan National Organic Standards (BNOS 2011). The Bhutan Organic Assurance System, a local system of guaranteeing organic for the local market, will be executed in these producer groups and their products will be marketed under the Bhutan Organic Mark. The use of the Bhutan Organic Mark is being initiated to provide a unique identification for organically managed farms and wild crafted products from Bhutan. This mark is available to organic farmers registered with the NOP and producing following the BNOS.

The DOGC and TYSD are the first ever groups to establish such a formal relationship with a hotel to market their produce. Such initiative would help promote marketing link between producer groups (Farmers Groups/Cooperatives) with local consumers especially hotels and resorts. Taj Tashi is the first hotel to have come forward for such

initiative. Mr. Ravi Nischal, GM, Taj Tashi, said, "We are delighted to partner with the village community at Lumitsawa and Talung under the support and guidance of NOP and Dept. of Agricultural Marketing and Cooperatives (DAMC). I am certain that our support will go a long way in providing sustainable development to these communities".

Adopting a village and initiating home stays for guests are also some of the other possible thoughts which may be initiated in the future. Taj Tashi has also expressed interest in getting involved in the education of the children of the community. This may be

the first example for many such relationships to start participating in the local economy development.

The National Organic Program (NOP) under the Department of Agriculture is the only national program coordinating the production and promotion of organic agriculture and related activities in all 20 Dzongkhags. NOP also collaborates with DAMC in linking the producers (FGs/Cooperatives) to the end markets. NOP is also in the process of linking with Bhutan Agriculture and Food Regulatory Authority (BAFRA) for certification of organic products for export as and when necessary.

New permit form for visiting protected areas of Bhutan available online

Visit www.moaf.gov.bt



‘Poor Man’s timber’ thrives well

Ugyen Tshering/ICS



Such clumps of bamboo are seen growing abundantly

Amidst rife reports of bamboo dying in other parts of the country, those in Goshing gewog in lower Kheng of Zhemgang are thriving vigorously. Communities there remain ever expectant of the steady flow of cash income from sale of bamboo often referred to with various names such as green gold, poor man’s timber and tallest grass.

Every 207 households in the gewog has a clumps of bamboo planted in their backyard which are growing great and green. In addition, bamboo is seen growing healthy in the forests adjoining the communities.

Although yet to prove scientifically, residents of Goshing gewog believe that the bamboo is reviving after it died few years ago. According to one resident, Choidhan, bamboo in the gewog died for reason unknown. He said, “One summer, the plant flowered and died unanimously.” He shared a belief among the

villagers that bamboo flower every 50 years and die but to revive on its own.

Goshing Gup, Rinchen Lethro said the bamboo revival comes at a right time when the Chamcharchu Hydroelectric Project phase I & II in Digala of Phangkhar gewog is ready to kick off. “A piece of bamboo fetches Nu. 50,” said Gup Sangay Lethro. He added that the gewog will be able to supply most of the bamboo needs for the project.

Though not confirmed, people say atleast three species of bamboo is thriving well in the area. It includes those locally known as Shuzhing, Saidhing and Jasai.

Two of the earlier is the local species which before experiencing mass dying, thrived well. However, the latter one is one recently introduced from the neighbouring Indian states. Shuzhing and Jasai are planted and raised in the backyard while Saidhing

grows in the government reserved forests and those private land in the proximity.

Bamboo in Goshing has a wide variety of uses but all for subsistence use. From construction to cooking, it has been a part of their culture and consumption for centuries. New bamboo culms, or shoots, are edible and have been used in their cuisines for many years. Besides, it is also used for making traditional archery equipment, fencing materials, making cups and other containers and furniture.

However, bamboo in Goshing is used as primary construction materials. It serves as scaffolds, house frames, roofing materials. Bamboo is also a very popular material for flooring.

According to online sources, Bamboo has become a popular eco-friendly alternative to using hardwood as building material. Because of its rapid growth and short life-cycle, bamboo is one of the most

renewable natural resources in the world, and it can be harvested on a regular basis without causing significant damage to its surrounding ecosystem.

Studies have shown that unlike hardwoods, bamboo plants achieve their full height and girth in just one growing season, which lasts between three and four months. Bamboo shoots spend the first year stretching upwards, after which they begin to dry and harden and begin sprouting branches and leaves. After their second year, the shoots continue to harden even more, shedding their young sheath layers and becoming fully mature bamboo plants.

Bhutan enrolled itself as member of the International Network for Bamboo and Rattan (INBAR) in 2010 and as its first activity, Department of Forests and Park Services, having received the gesture of its newest membership from INBAR, built an engineered bamboo house which they claim is earthquake resistant and cost effective option at Tingtibi in Zhemgang.

Given the vast availability of the bamboo resources in Goshing gewog for building modern, safe and affordable house, the gewog is one viable option for the authorities to consider their next bamboo treatment intervention. Encouraging more use of the bamboo in the gewog goes in perfect sync with the fact that people there already use it for construction of houses, making safe and affordable house for people living in high poverty incidence area and the timber shortage in the country.

Bhutan's National Butterfly not endemic to Bhutan

Ugyen Tshering/ICS

Until November 2 this year, Ludlow's Bhutan Glory (*Bhutanitis Ludlowii*), the National Butterfly of Bhutan was believed to be an endemic butterfly species occurring only in small pockets of Trashiyangtse Dzongkhag and nowhere else. Except for areas such as Tobrang and areas north of Tobrang to the international boundary, Tarphe, Pangkhar, Longkhar, Dramar and Barigang under the Bumdeling Wildlife Sanctuary, Trashiyangtse, the butterfly was supposedly never recorded in any other parts of the world.

This was until recently on November 3, the sighting of the Ludlow's Bhutan Glory was reported from the Eaglenest WLS in western Arunachal Pradesh, North Eastern (NE) part of India. The report confirming its occurrence in the area was published by the Indian Foundation for Butterflies.

The report claims that, based on the images taken by Pijush Dutta, represents the first valid record of the butterfly outside Bhutan.

They also acknowledged that besides it being an important addition to the Indian butterfly fauna, the species is now known to be endemic to eastern Bhutan and the West Kameng area of western Arunachal Pradesh in NE India.

However, they didn't rule out the likelihood of species to be discovered also in western Bhutan and further east in Arunachal Pradesh if these areas were to be surveyed intensively for the species.

Forestry official with Wildlife Conservation Division (WCD) of Department of Forests and Park Services (DoFPS) expressed his elation over such a report. "With their presence confirmed in other places, the risk of species extinction is dwindled," said WCD's forestry officer who

was closely involved with research and survey of the Ludlow's Bhutan Glory in the Country.

Sonam Wangdi said, "We only believed the butterfly could be endemic to Bhutan but never confirmed it." This, he said, is because they believed it is possible to find the butterfly in other parts both within and outside the country." And for that matter, Arunachal Pradesh, he pointed out, shared proximity to Trashiyangtse with similar climatic conditions; vegetation type and altitudinal range favourable for this particular species of butterfly to thrive. "So, it is no surprising to hear about the Ludlow's in Arunachal Pradesh," Sonam said adding that even back home, they still believe it may be found in few other places.

The publication also states that this species is believed to be very rare, although it may be locally common. It says that not much is known about its phenology, flight

period and elevational range. What little is known is only from the species description (Gabriel 1942), and from the recent rediscovery in 2009 by Karma Wangdi and subsequent surveys in 2011 by a team of Bhutanese and Japanese lepidopterists (Harada et al. 2012). "In Bhutan, *B. ludlowii* and *B. lidderdalii* have not yet been observed flying together. However, in India, both *B. ludlowii* and *B. lidderdalii* are now known to fly at the same elevation in the same microhabitat and valley," states the post further adding that this sympatric occurrence is significant.

According to their observation, the species is known to occupy evergreen forests and forest openings at the elevation of 2,000-2,500 m masl. It is at least bivoltine, flying from July to October. Indian lepidopterists call it 'Mystical Bhutan Glory.'



Ludlow's Bhutan Glory found in India



Monitoring visit to Bird Flu outbreak areas in Chukha Dzongkhag

Singye Wangmo/ICS

Chukha, 1-2 November:

To monitor the status of the ongoing bird flu containment activities after the recent outbreak of bird flu in October a visit was carried out in Chukha Dzongkhag by the Director General (DG) of the Department of Livestock (DoL), Mr. Karma Dukpa and the Executive Director (ED) of the Bhutan Agriculture and Food regulatory Authority (BAFRA), Mr. Karma Dorji. They were accompanied by officials from the Head offices, staff on bird flu containment duty, Information & Communication Services (ICS), Tsimasham Regional Livestock Development Centre (RLDC), Dzongkhag and field offices and staff of Central Laboratory Office in Phuentsholing.

The tour also provided opportunity for Mr. Karma Dukpa, Director General of DoL to familiarise with various offices and activities under the Department of Livestock. He assumed the post of Director General, Department of Livestock in June this year. Chukha dzongkhag has seen the maximum number of bird flu outbreaks totalling five outbreaks since the initial outbreak in Feb 2010.

On 1 Nov, 2012 the team visited the Regional Livestock Development Centre (RLDC) at Tsimasham. En route to Phuentsholing, a meeting was held with the Staff of the RLDC, Dzongkhag Livestock Officials and Officials of BAFRA. The Officiating Program Director, Dr. Basant

Sharma, presented the profile of the RLDC and Mr. Padam Gurung, Dzongkhag Livestock Officer presented the livestock activities under Chukha Dzongkhag. The Director General acknowledged the hard work and sincere efforts of the field staff in realising plans and programs of the five year plans. He highlighted the problems of increased feed prices and approached being studied by the Ministry of Agriculture and Forests (MoAF) to overcome the problem. He also stressed the importance of groups and cooperatives formation in collaboration with Department of Agricultural Marketing and Cooperatives (DAMC) for promotion of farm enterprises.

The Executive Director of BAFRA highlighted the need for collaborative approaches between BAFRA and DoL staff to strengthen the system as a whole for increased livestock production and for strengthening of bio security to ensure safe food for all Bhutanese. The point was raised based on the reported incidences of illegal import of food items and live animals and their products. The ED stressed the importance of familiarising with livestock Acts, rules and regulations including rules on Tshethar animals (animals saved from slaughtering) by all the concerned agencies and individuals. After the meeting the team also visited the Calf Rearing Centre at Wangkha.

In the evening a Consultative Meeting on the Status of bird flu outbreak status of the activities leading to bird flu

containment was presented to all the stakeholders by the Incident Operation Center (IOC) Commander, Dr. Basant Sharma to all the stakeholders. He acknowledged the support received from the Dungkhag, Royal Bhutan Police (RBP), Department of Livestock and BAFRA staff and the Department of Disaster Management under the Ministry of Home and Cultural Affairs.

The Executive Director, BAFRA conveyed the appreciation from the Incident Command Chair, Hon'ble Secretary, MoAF to all those involved in the bird flu containment activities. He also urged to strengthen the Standard Operating Procedures (SOP) and encouraged the use of hotlines for any suspected cases of outbreak. The meeting discussed the need for future precautionary measures especially when it happens repeatedly in same places.

On 2 Nov, 2012, the team met with the Sampheling Meday Gonor Tshogpa. The DG, DoL, briefed the farmers on livestock plans and programs for the next five years. He stressed the importance of dairy product diversification and value addition for viable commercial venture through groups and cooperatives formation.

The ED, BAFRA, raised the concern on bio security and said if the farmers could produce enough for domestic consumption, the country would become much safer in terms of food related diseases which at times come together unknowingly with

the imported food. He also sought the cooperation of farmers and the local people in reporting any incidences of illegal imports of plants and animals and outbreak of animal diseases in their neighborhood by calling toll free number of BAFRA and DoL at 155 and 124 respectively.

The farmers expressed their gratitude for the visit by the team saying that such visits gave them an opportunity to discuss their problems and issues. The farmers reported their concern on the rising feed prices and sought government intervention. The farmers also sought help in selling the excess milk.

In the afternoon, the team visited Bhutan Brewery Pvt. Limited and Zimdra Food Pvt. limited to see if the firms are operating as per the standard operating procedures besides visiting BAFRA's Quarantine station, the Livestock Central Store and the bird flu outbreak vehicle disinfection site at Richending.

Meanwhile, the outbreak has been successfully contained with the concerted efforts of all the stakeholders. This was highlighted in a status report presentation meeting held at the Ministry's Conference Hall on November 8.

The team comprised the Director General of Livestock, Executive Director of BAFRA, senior officials from the Head offices, staff on bird flu containment duty, Dzongkhag and field offices and staff of the Central Laboratory Office in Phuentsholing.



“Feeding the world”: Will there be enough food for nine billion people in 2050?

Chencho Gyeltshen/ICS

October 16, 2012: World Food Day in Bhutan was celebrated at Buli Middle Secondary School (BMSS), under Nangkor geog in Zhemgang Dzongkhag.

To meet the peoples need for food and maintaining its system sustainable for now and in the future has emerge as a major challenge to the global. According to one of the comprehensive web news resource, by 2050 the world's population will have grown to nine billion, and with increases in flooding globally and more frequent, long lasting droughts, the ecosystem is becoming increasingly strained which may not let the world for adapting to create sustainable and secure food system.

Agricultural cooperatives—key to feeding the world” was the formal wording of this year's 2012 theme which is usually announced officially by the Food and Agriculture Organisation (FAO) every year. It has been chosen to highlight the role of cooperatives in improving food security and contributing to the eradication of hunger.

World Food Day (WFD) is observed by United Nations (UN) member countries every year on 16th October as the foundation day of FAO. This year is the 53rd anniversary of FAO. Bhutan has been observing this day ever since it became a UN member.

In Bhutan, WFD is usually celebrated in remote schools, which have the School Feeding Program funded

by World Food Programme (WFP), and is a member of the School Agriculture Programme (SAP) under the Council for RNR Research of Bhutan (CoRRB) of the Ministry of Agriculture & Forests (MoAF). CoRRB is the focal agency representing the government for coordinating the event in collaboration with the FAO Office in Bhutan.

This year (October 16, 2012), the day was marked at Buli Middle Secondary School (BMSS), under Nangkor geog in Zhemgang Dzongkhag. Buli MSS is 36.6 km away from the Zhemgang and Gelephu highway (Dakpai). The School was initially established in 1983 as a primary school for students of Nangkor geog only which was located on a marshy plain near the village of Buli. The Ministry of Education has relocated the school to its present site at Tongshingpong which has a strategic and beautiful location with an area of 25 acres. The school was upgraded to middle secondary in 2010 under the policy of expansion of education system in the country. The school is a fully fledged boarding school, with classes ranging from pre-primary to ninth grade with 520 students from the three upper Kheng geogs of Nangkor, Bardo and Shingkar.

The day was marked with participation of farmer groups from various chiwogs (villages) of Buli, Kilikhar, Tama, Berti and Dagpai under Nangkor

geog display and sale of their farm products while various school students under Nangkor geog participated in literary competitions on the global theme. Awards for the best school in farming practice under SAP and best literary competition among various levels of schools in Bhutan were also awarded during the one day event.

In his opening remarks, Dr. Tashi Samdup, the Director of CoRRB, informed the gathering that there are one billion people in the world who are under poverty line which even includes our country; hence it is very important for every one of us to understand the significance of observing this day; it is observed to create awareness and educate the populace how the governmental organisations and international organisations like FAO and WFP are working towards feeding hungry people and mitigating the poverty issues.

Dasho Karma Drukpa, Dzongdag of Zhemgang Dzongkhag graced the event as Chief Guest. The other participants included the teachers of Buli MSS, senior officials from the World Food Program, Ministry of Education, Ministry of Agriculture and Forests, RNR staffs from nearby geogs, officials from Zhemgang Dzongkhag and geog administration officers.

The WFD event coordinator in Bhutan, CoRRB had organised the event last year at Wanakha Lower Secondary School, Paro Dzongkhag on the theme “Food Prices –

From Crisis to Stability”. The school for observing next WFD 2013 will be announced soon.

Following the WFD event, a “Participatory Research and Extension Workshop” was organised at the Research and Development Centre, Bhur in Gelephu under Sarpang Dzongkhag. The team consisting of the Director and other senior officials from CoRRB attended the workshop. Other participants included the Programme Director of RDC Bhur and his team, the Programme Director of the National Aquaculture Centre, Program Director of the National Poultry Development Centre. The workshop was organised mainly to discuss and be acquainted with the constraints and issues faced by the research officials during carrying out their mandated tasks. The Director informed the gathering that although CoRRB cannot address all the constraints and issues at once, CoRRB will at least look into the possibility of solving it gradually. The workshop was chaired by the Director.

The team also visited the National Centre for Aquaculture and National Piggery Development Centre at Jampeling in Gelephu followed by School Agriculture Farming at the Sarpang Middle Secondary School and National Poultry Development Centre in Sarpang and had “face to face” discussions with the field.



Workshop on contract farming

Tandin Dorji/ICS

Thimphu, 10 December: Stakeholders from the various agriculture sectors, financial institutions, private entrepreneurs and the government met during the workshop on Financial Inclusion and Contract Farming to discuss and come up with improvements for the development of rural areas through Public Private Partnership (PPP) and contract farming. Contract farming has been the topic of interest in most of the developing countries, but in spite of all the interest, not many have been successful.

Among other challenges, awareness on contract farming has been the major issue in Bhutan. The workshop was

jointly conducted by the Department of Agricultural Marketing and Cooperatives (DAMC) and Council of RNR Research of Bhutan (CoRRB) to create awareness about contract farming and to foster understanding between the farmers, bankers and the cooperates and mainly to encourage stakeholders to develop a vision for contract farming in line with the GNH philosophy.

His Excellency the Minister Khandu Wangchuk, Ministry of Economic Affairs who graced the workshop as the Chief Guest expressed that as of now we import more than what we export. It is to the agriculture sector to improve the balance of payment. He also shared that a proper trend in exporting to be developed to mark the

quality of the products.

His Excellency the Minister Dr. Pema Gyamtsho, Ministry of Agriculture and Forests shared that there is an urgent need to develop a mechanism to ease farmers access to credit from financial institutions and also work the repayment method considering that they generate income only after they harvest.

The DAMC shared that more than 2700 acres of land has been brought under contract farming and 2335 job opportunities have been created till date. But despite all the effort lack of awareness limits the development of contract farming. Contract farming is an opportunity for the farmers to evolve from

subsistence farming to commercial farming.

Resource person Ms. Isabelle Antunes presented a documentary film portraying the successful partnership between the tomato producers and processing plant in Senegal, West Africa so that the example could help reflect upon and find solutions to overcome the challenges in Bhutan. Following which, discussions aiming to facilitate exchanges and mutual understanding between stakeholders were held.

The workshop was organised with financial support from Bhutan Development Bank Ltd. and Savings Banks Foundation for International Cooperation (SBFIC).

Fruit processing plant owned by farmers springs back to life

RNR-RDC Wengkhaz

The Dungsam Gongphel Tsogpa on November 2 this year has started orange squash production for the first time in Pemagatshel which was inaugurated by agriculture department's director general Tenzin Dhendup and Pemagatshel Dzongdag Goling Tshering.

The juice production was made possible through the Integrated Fruit Processing Plant (IFPP) which was initially established in 2007. The establishment of the plant was done by the National Post Harvest Centre (NPHC) and the Pemagatshel Dzongkhag

Agriculture sector, mainly for the production of orange pulp so that orange growers benefit directly from sale of farm produce to the plant. Accordingly, a farmers group Dungsam Gongphel Tsogpa was formed with ten members, which began buying small size oranges for pulping at about Nu. 6 per kg. However, the plant could not effectively function mainly due to inconsistent supply of oranges as farmers preferred to take most of their produce either to the auction yards in Samdrupjongkhar or sell their produce in bulk to orange exporters providing better price.

The Ministry of Agriculture and Forest in order to enhance the farm based agro processing facility has intervened through agencies such as the National Post Harvest Centre, Department of Agriculture and the Department of Agricultural Marketing and Cooperatives (DAMC). These agencies began linking the IFPP with the Bhutan Agro Industries Limited (BAIL) at Wangchuktaba as a market for pulp and begin using the plant for juice production. With equipment for orange squash production worth Nu. 3 million supported by DAMC and technical

assistance provided by the National Post Harvest Centre, BAIL and Dungsam Gongphel Tsogpa, with this new arrangement will now buy oranges for Nu.10 per kg and produce pulp and sell to BAIL at 24/kg. BAIL will produce the squash. Since the pulp production and squash is seasonal, the plant can also be accessed by farmers to avail agro processing technical assistance provided by NPHC. This plant will benefit farmers of Pemagatshel and other citrus growing geogs in the eastern region.



New Bio-prospecting Laboratory Inaugurated

Penjor /ICS

22 November 2012, Serbithang, Thimphu: The strengthening of national capacities particularly in developing a sound scientific knowledge base of our rich biological diversity and tapping the opportunities from biodiversity for effective utilisation of our biological resources in a sustainable manner is a high priority. Towards this, a new Bio-prospecting Laboratory was established at the National Biodiversity Centre (NBC), Serbithang, Ministry of Agriculture & Forests (MoAF). NBC was set up to strengthen measures that will enable the country to benefit from its rich biological resources and encourage people-centric conservation.

His Excellency Lyonpo (Dr.) Pema Gyamtsho graced the inaugural ceremony of the Laboratory as the Chief Guest. Speaking at the opening function, His Excellency informed the gathering that the Bio-prospecting program was started in the 10th FYP to build national capacity to understand the value of our biological resources and to explore measure to generate benefits from these resources. Lyonpo also mentioned that it has become important to secure tangible benefits from conservation in the face of emerging challenges such as fast economic growth, increasing rural-urban migration, expanding urbanisation, increased need for forest resources, human wildlife conflict etc which impacts biodiversity conservation in one way or the other. He also highlighted that with the establishment of this laboratory, our national

capacities will be enhanced in the field of bio-prospecting and it will give birth to “Bhutanese Scientists” in the long run who will make discoveries which could be of benefit not only to Bhutan but to the rest of the world.

Hon'ble Chief Guest being shown around the new lab.

According to Dr. Tashi Yangzome Dorji, Program Director, NBC, the Bio-prospecting program will conduct exploration and research on biological resources of the country for natural product development and bio-discovery as well as implement the Access Benefit Sharing (ABS) regime. NBC was established in 1998 as a non-departmental agency under MoAF to strengthen conservation initiatives and coordinate biodiversity conservation and sustainable utilisation programs in the Country.

In line with the strong conservation and sustainable utilisation mandate of the centre, the PGR program was established in 1998 and now houses the National Crop Genebank under the Ex-Situ conservation of crop genetic resources program. It currently hold more than 1200 accessions of traditional races of cereals, legumes, oil seeds and vegetables and the process of inventory, characterisation, documentation and collection of seeds from various agro-ecological zones of Bhutan is still ongoing.



Hon'ble Chief Guest being shown around the new lab

In order to conserve the genetic pool of native animal breeds, the Animal Genebank was established in 2005 and it currently holds over 3500 doses of semen from local poultry and sheep breeds for research and long term use. Characterisation studies of production parameters and other useful economic traits will be studied through DNA mapping and selective breeding in the near future. The conserved germplasm of the traditional genetic resources will serve as a genetic pool for enhancing food security especially in the face of changing climate and other emerging threats. NBC also coordinates the on-farm conservation of crop as well as animal genetic resources through the in situ conservation programs for crop and animal genetic resources in collaboration with the line Departments, RNR-RDCs and the Dzongkhag RNR sectors.

In terms of the botanical program, the National Herbarium was established in 2005 and carries out taxonomic works and coordinates plant taxonomy

related studies to identify conservation priority species in the country. Currently it houses more than 10,000 collections of Angiosperms, Gymnosperms, Pteridophytes and Bryophytes and 300 collections of Insect fungi.

A Royal Botanical Garden was established in 1999 to commemorate the Silver Jubilee Celebration of the 4th Druk Gyalpo. The garden hosts a living collection of about 1500 species of plants and focuses mainly on native plants. Work is underway to increase its capacity to initiate a plant rescue and restoration program as well as revenue generating initiatives.

The funding support for the bio-prospecting lab was given by Bhutan Trust Fund for Environment Conservation (BT FEC).

Hon'ble Secretary, National Environment Commission, Director, SAARC Forestry Centre, Director, BT FEC, Program Director, ICS, Division Chiefs and officials from across the Ministry were also present for the inaugural ceremony.



Bhutan+10 conference on “Gender and Sustainable Mountain Development in a Changing World”

Thimphu, October 14-19, 2012: Around 200 hundred delegates from the Hindu-Kush Himalaya mountain region gathered for a Bhutan+10 conference on ‘Gender and Sustainable Mountain Development in a Changing World’ organised by the International Centre for Integrated Mountain Development (ICIMOD) in collaboration with the Ministry of Agriculture and Forests (MoAF) and the National Commission for Women and Children (NCWS), Bhutan.

A decade after ‘Celebrating Mountain Women’ conference in 2002, this year’s Bhutan+10 at Hotel Taj Tashi reflected on the gains, best practices, emerging concerns and persistent challenges that women are facing in achieving gender equality in the mountain region. The conference also set the agenda for gender transformative change in the post Rio+20 world and

beyond the Millennium Development Goals.

Addressing the opening ceremony, the Chief Guest, Hon’ble Chief Justice of Bhutan, Lyonpo Sonam Tobgye said ‘Women are agents that help us build social capital and who contributes towards strengthening the fabric of our societies.’ He called for legal remedies and other measures to address discrimination against women. Also present were Hon’ble Heikki Holmes, Minister for International Development, Norway; Hon’ble Lyonpo Thakur S. Powdyel, Minister for Education, Bhutan; Hon’ble Lyonpo (Dr.) Pema Gyamtsho, Minister for MoAF, Bhutan and Dr. David Molden, Director General of ICIMOD and other dignitaries.

On the opening day, the ICIMOD study on ‘Gender and Biodiversity Management in the Greater Himalayas’ and an important report on Women’s Participation in the 2011

National Elections in Bhutan were also released.

The participants were divided into four different groups. The first group visited the women’s vegetable producer group in Paro (the same women’s group who started playing a previously totally male dominated game, khuru which is an outdoor team sport of darts with around 20 metres between the two A5 sized end-to-end targets). The other groups visited the Tarayana Foundation, the Folk Heritage Museum, the National Commission on Women and Children and the Community Forest of Kabisa village in Thimphu respectively. The visits helped them to understand the traditional Bhutanese life, group’s forestry practices and governance structure.

According to a press release, the five day conference included an informative and engaging high level panel of ministers from Afghanistan, Norway, Pakistan and Bhutan including a debate on the

pros and cons of affirmative action and quota system. A second high-level panel reflected on the outcomes of the United Nations conference on Sustainable Development (Rio+20) in terms of gender aspect. The conference saw six plenaries and eighteen parallel sessions which ended with strong messages renewing the focus on gender equality. It also provided a vital networking opportunity where new friendships, linkages and bilateral relations were forged that will last into the next decade.

Most importantly, the conference ended with the announcement of an important new global network on Women, Gender, Environment and Mountains (WGEM) which will ensure that researchers, practitioners, policy makers, and grassroots women are connected on a regular basis, both virtually and through regular face-to-face meetings. A time capsule was prepared containing the participants’ hopes and wishes, only to be opened after a decade.

The Bhutan+10 conference declaration, launched by Lyonpo Thakur S. Powdyel calls for better integration of mountain perspectives in all sectors and scales of international development, sufficient human and financial resources for gender analysis and transformative change, affirmative action, recognition of women and men as active players on a level playing field, and the promotion of wellbeing and happiness in mountain countries.





Wrap-up meeting for AMEPP PCR and MAGIP

Tshering Doma/ICS

Thimphu, November 30: A team from the International Fund for Agricultural Development (IFAD) presented the project completion report (PCR) for Agriculture, Marketing and Enterprise Promotion Program (AMEPP) and mid-term report (MTR) for Market Access and Growth Intensification Project (MAGIP) in a wrap up meeting held at the Ministry's Conference Hall.

The meeting was chaired by Hon'ble Lyonpo (Dr.) Pema Gyamtsho, Ministry of Agriculture and Forests. Also present were the representatives from the Ministries of Home and Cultural Affairs, Finance, Works and Human Settlement, Gross National Happiness Commission, Bhutan Development Bank Limited and the Netherlands

Development Organisation (SNV) along with the project staff of AMEPP and MAGIP.

The finding was based on their two-week field visit from 6 till 20 November 2012 in the six eastern Dzongkhags of Lhuentse, Mongar, Pemagatshel, Samdrup Jongkhar, Trashigang and Trashiyangtse.

The PCR presented the project achievements in terms of on-farm production, marketing and enterprise promotion and rural financial services and infrastructure development. As per the PCR survey 2012, 87% of the households reported increase in cereal production; 47% increase in the households reported food sufficiency while 94% of the households reported to have improved assets as compared to 2006. Besides, the report also highlighted increase in

the production of chicken, eggs, milk, major grain crops (potato and orange) and improvement in roads, irrigation systems and farmers' knowledge. With the project implementation, 95% of the 1,034 farmers now have a reliable source of income as compared to 35% in 2006.

According to a spokesperson, the project costing US\$ 19.553 million benefited around twenty-two thousands poor households in the east.

The team also highlighted MAGIP's progress for one and half year in terms of farm roads, irrigation, market, poultry farms and financial disbursement among others. The report stated the work progress on seven roads and one irrigation scheme besides

undergoing plans on nine roads and six irrigation schemes. The project also provided power tillers farmers group and dairy equipment such as churners and deep freezers have been supplied to the dairy groups besides other achievements. Further, the report mentioned the extended project period by 18 months i.e. till December 2016.

The floor also discussed issues such as marketing, migration, monitoring and reporting system. They felt necessary to improve the project monitoring and reporting system at the ground level among others.

Lyonpo expressed his appreciation to the project team for making the significant impact in terms of poverty and socio-economic development in the east.

MoU with Samtse Farmers Group

Tenzin Drugyel/DoA

A Memorandum of Understanding (MoU) was signed between the MoAF and Charo Tshongdrel for the processing and marketing of rice in Samtse Dzongkhag under the ABSD Rice Productivity Improvement Program. It is a multipartite agreement on contact farming model to improve rice productivity under the ABSD initiative.

Tashi Wangchuk representing Charo Tshongdrel, with Hon'ble Secretary Dasho Sherub Gyaltsen in centre, and Dorji Dhradhul, Director

DAMC extreme right. Also in the picture DoA's Ganesh Chettri and Tenzin Drugyel.

The Charo Tshongdrel will establish a modern rice mill in Phuentsholing and procure surplus paddy either from the individual farmers or farmer groups of Samtse as per the contract agreement. The Department of Agriculture (DoA) shall provide all necessary technical services to the farmers to enhance their rice productivity and production while the Department of Agriculture Marketing and Cooperatives (DAMC) shall assist in facilitating group formation and providing related marketing services.

Refresher course for artificial insemination

Yamnath Acharya, RLDC-Wangdue

Zhemgang, November 19-December 2: With the motto 'Revitalising to enhance performance', refresher training for the artificial insemination (AI) technicians of the west central region was conducted at the Rural Development Training Centre (RDTC).

Fourteen AI technicians attended the training organised by the Regional Livestock Development Centre (RLDC), Wangdue. A team of competent resource persons led by the Animal Reproduction Specialist, Yusipang, imparted theory lessons and intensive practical training on AI

techniques for fourteen days. The participants came up with excellent results in both the written and practical exams.

The training was expected to enhance the performance of AI technicians and support breed improvement in their respective areas which is crucial for increasing milk production. In addition, the participants were briefed on the national cattle identification system. The purpose and technique of using controlled intra-vaginal delivery release-bovine was also introduced to the participants.

The participants hoped to perform better in the field of AI with the useful knowledge gained during the training.



Schools - major absorbents of local vegetables

Yet another school in east joins hands with the farmers' group producing local vegetables agreeing to buy all their products. This time around, the school will also buy dairy products, come this February.

The Jampeling Higher Secondary School under Kanglung geog of Tashigang and the Rongthong farmers' group signed a supply contract at the end of last month. According to the supply contract, the farmers will deliver vegetables and dairy products to the school from February 2013 onwards. This is the seventh school in Eastern Bhutan to sign such an agreement under the IFAD-funded Market Access and Growth Intensification Project (MAGIP). In the eastern Dzongkhags, boarding schools alone require 109 MT of vegetable per months, an enormous income opportunity for local farmers.

DAMC's Thinlay Wangchuk said, "Schools believe local vegetables are healthier than the imported vegetables which they have mostly been buying till now." He added that such change in school's perspective towards

local vegetables contributes to the development of the communities. He said, "The beauty of these kinds of contract is that farmers have a guaranteed market with a guaranteed price."

The Rongthong farmers can now sell 2400 kg of vegetables every month. It comes as a boon to them especially in the backdrop of a situation where farmers usually have to transport their produce for at least a few hours if not a whole day to sell in the nearest market. "This is an attractive deal."

The other six schools which have recently signed supply contracts with local farmer groups are Lhuentse Higher Secondary School, Tangmachu Middle Secondary School, Gyelposhing Higher Secondary School, Tashitse Higher Secondary School, Nangkor Higher Secondary School, Pemagatshel Middle Secondary School. The total value and quantity of vegetables of these contracts add up to more than 230 MT and nearly Nu. 3.5 million for 10 months of supply in 2013. However, in winter, when the schools close for their

vacation, supply will have to be halted.

Mr. Bhim Raj Gurung, Marketing Counselor, Regional Agricultural Marketing and Cooperative Office (RAMCO) of DAMC said, "With the government's priority for Bhutan to become self-sufficient in vegetable production by mid-2014, the interest of both schools and farmers to come to an agreement for supplying agricultural products has greatly increased." This, he said, is a viable form of contract farming for Bhutan. The Regional agricultural Marketing and Cooperative Office have planned to facilitate another seven contracts between schools and farmer groups. With two schools, which RAMCO facilitated to linking earlier, with support of FAO and CoRRB, will soon bring the total number of contracts to 15."

Mr. Dhendup Drukpa, District Agriculture Officer (DAO) of Tashigang committed during the signing ceremony to provide a greenhouse to the farmer group. "Supplying food for students on a weekly basis is a large responsibility,

and therefore we will support the farmers group," said DAO.

The Vegetable Value Chain Programme –East under MAGIP supported more than 1300 households in the six Eastern Dzongkhags in 2012 to produce and market vegetables. RAMCO is the main implementer and SNV Netherlands Development Organisation provides technical assistance. The current number of clusters of farmers under the programme will be increased from 29 to 44 in 2013. Next to contributing to Bhutan's self-sufficiency in vegetables, it also has aim to export vegetables in the long run. Not many people are aware that western Bhutan is increasingly exporting vegetables to West Bengal during the summer months. Because of the heat and humidity in the Indian plains during the monsoon, it is difficult to produce vegetables and prices increase, and cooler areas like Bhutan can capture that marketing opportunity. The mentioned programme aims to establish a similar vegetable export in the east.

BAFRA Review and Plan Sensitisation Workshops

Review and Plan Sensitisation Workshops are being held in the BAFRA offices of the eastern Dzongkhags, headed by the Executive Director accompanied by division chiefs and focal officials for food, agriculture and livestock sectors from 17 November, 2012. Till date, Mongar, Lhuentse, Trashiyantse and Trashigang Dzongkhags have already been covered. For BAFRA officials in Haa, Punakha,

Wangduephodrang, Gasa, Trongsa and Bumthang Dzongkhags, such discussions had been already conducted in October 2012.

The main objectives of the workshops are to review the progress of the 10th Five Year Plan (FYP) and sensitise the field officials on the priorities and strategies for the 11th FYP. The workshop also puts activities of the organisation in a developmental perspective linking outcomes

to the Sectoral Key Result Areas (SKRAs) and National Key Result Areas (NKRAs) which are further linked to the pillars of GNH. Further, stock of RNR and food related activities of the Dzongkhags were updated as required for strategic planning of resource allocation and activities.

Besides, the issues and constraints pertaining to the implementation of activities in the field were

also discussed. Amongst all, the staff shortage, lack of mobility and office space were some of the key issues being raised by the BAFRA field offices.

Similar workshops will be held for the BAFRA offices of Pema Gatshel, Samdrup Jongkhar, Sarpang, Tsirang and Dagana Dzongkhags during the next few days. The remaining Dzongkhags will be covered in the next phase.



Second Asian Ministerial Conference affirms the 'Thimphu Affirmative Nine-Point Action Agenda on Tiger Conservation'

Ugyen Tshering/ICS

Thimphu, October 22-24: Building on the pledges of the St. Petersburg Declaration, the Ministers or the Heads of Delegations of Tiger Range Countries (TRCs) who met at the Royal Convention Centre in Thimphu from October 22-23, identified the Thimphu Affirmative Nine-Point Action Agenda on Tiger Conservation Thimphu, Bhutan, valid up to 2014.

The TRC countries include the People's Republic of Bangladesh, the Kingdom of Bhutan, the Kingdom of Cambodia, the People's Republic of China, the People's Republic of India, the People's Republic of Indonesia, the Lao People's Democratic Republic, Malaysia, the Republic of the Union of Myanmar, Nepal, the Russian Federation, the Royal Thai Government, and the Socialist Republic of Vietnam.

The action agenda was in conformation of the declaration made at the International Tiger Forum held in 2010 in Russia whereby they declared their collective political will to take all action necessary to prevent the extinction of wild tigers. They have set the goal of doubling the numbers of wild tigers globally by 2022 and endorsed the Global Tiger Recovery Program (GTRP) as a road map to reach that goal, supported by international partners to

mobilise needed external resources.

The leaders of the government of the 13 TRCs have been charged with implementing the GTRP and its constituent National Tiger Recovery Priorities. They congregated at Thimphu, Bhutan to reflect on advances thus far, enhance the action agenda through 2014 and re-emphasise their political will for tiger conservation demonstrated at the International Tiger Forum.

"Progress in reversing the wild tigers' decline towards extinction has been significant based on the actions undertaken by TRCs," states the Thimphu Affirmative Nine-Point Action Agenda on Tiger Conservation. It further states that, "Nonetheless, the threats to wild tigers and their natural habitats are seen increasing." The tiger landscape, according to the Action Agenda, is economically and politically undervalued and their importance to human well-being poorly recognised.

The Thimphu Nine-Point Action Agenda includes actively strengthening the front line staff through enhancing rewards, recognition and resources. This will be done by increasing number of staff, institutional capacity, skills, tools, technology, infrastructure, operating costs and insurance against loss of life and injury.

Participants of the second

Asian ministerial conference on tiger conservation also declared to diligently conserve tiger habitat, both inside and outside protected areas, against current and future threats.

The engagement and benefit sharing of conservation with communities will also be enhanced.

The participants also agreed to enhance and mainstream collaboration among TRCs, in management of transboundary landscapes and corridors, combat illegal trade, and eliminate illicit demand.

As per the agenda, the TRCs with low tiger density will receive support to launch tiger restoration programmes besides significantly accelerating the flow of national and external funds to support actions on the ground.

In the Thimphu affirmative, the ministers or the heads of the delegates also stated the need to develop new partnership with business and industry, instill comprehensive national pride, and awareness strategies and initiatives, and come up with an action plan for two years, along with indicators for monitoring the tiger conservation progress.

The Hon'ble Minister for Agriculture and Forests, His Excellency Lyonpo (Dr) Pema Gyamtsho at the conference said, "While we may not magically reach the number of doubling

tiger numbers by 2022, the initiative to reach the goal itself, is important."

"The issuance of this declaration is an indication that there's so much goodwill and political will to preserve the tigers," said Hon'ble Lyonpo. He shared his confidence of the achievement of global tiger recovery program.

The Program Director of Global Tiger Initiative, Keshav Verma, said the declaration is an indication of convergence of political will and support to action plan by TRCs.

He said that, although GTI is not a window for financing, it would always solicit funds and render support to TRCs.

The conference of the congregation of Ministers or head of delegates of 13 Tiger Range Countries, donor communities, tiger enthusiast and other stakeholders was graced by the Chief Justice of Bhutan, His Excellency Lyonpo Sonam Tobgay with Her Royal Highness Ashi Kezang Wangmo Wangchuck as the Guest of Honour.

The conference was organised by the Department of Forests and Park Services of the Ministry of Agriculture and Forests in collaboration with Global Tiger Initiative.



Community and Private Forests gifted to people

Sonam Wangchuk and
Dago, Samtse

16 November, Samtse:

In what could be a befitting gifts for the tihar festival of the southern communities, the Samtse Dzongkhag Administration handed over the Community Forest (CF) ownership certificates and Private Forest (PF) certificates to the beneficiaries on 15 November, 2012.

Tihar festival is popularly known as “Bhai-tika”- a festival of brothers and sisters, when sisters give tika (a coloured powder placed on forehead), and mala (a necklace of flowers or flower leis) to brothers along with wishes for long life and prosperity.

At the final day of the festival, four CF and 15 PF beneficiaries in Samtse received their ownership certificates from Chencho Norbu, Director General of the Department of Forests and Park Services (DoFPS) in a simple ceremony. The executive members of the Community Forest

Management Group (CFMG) received a set of approved management plan, hammers, and record keeping books associated with CF management.

At the certificate awarding ceremony, the Chief Guest, in his address to the executive members remarked, “CFs enable communities to manage and use certain areas of forest for meeting your own needs such as timber, firewood and non-wood forest products”. He highlighted that CFs also ensures active participation of the community in the face of conservation and protection of nature that situates sustainable management and conservation of natural resources at the forefront of development. The Director General also said that CFs enable the beneficiaries to generate income through equitable sharing of benefits and costs, which is vital both for economic and social development.

To the PF owners, he addressed, “PF can gainfully utilise the

fallow and unproductive privately owned lands,” urging them not to look PF exclusively on an utilitarian and commercial point of view but also yield timber resources on a sustainable basis both ecologically and economically.

The CFMGs who received their certificates during the occasion includes two CFs under Samtse Gewog viz; Bukay-A Dham CF, and Rong-Queng CF of Lamitar, and two CFs under Sa-ngachoeling Gewog viz; Sahakari CF, and Suraksia CF. This includes 152 households that will manage 235.57 hectares (582.11 acres) of forest land, which is expected to boost the income generation of the CFMG members from the sustainable management and utilisation of resources.

Currently, Samtse Dzongkhag has 33 approved CFs covering an area of 2383.26 hectares (5889.16 acres) forest land involving 1308 households while, there are 44 approved PF registered owners covering a total area of 62.56 hectares

(154.58 acres).

The program is in line with Social Forestry and Extension Division’s pursuit of people centered forest management regime. The CF has brought major positive impacts in building social capital in terms of strengthening social cohesion, witnessed drastic reduction of illegal activities, in addition to significant decrease in number of forest fire incidences. Such a program has also helped revamp degraded land by bringing under plantation, needless to mention enhanced access to forests products through shortening of delivery procedures.

After the certificate award ceremony, the team led by the Director General, officials from DoFPS, Territorial Division and the Dzongkhag jointly visited the Bamboo Model House. The Bamboo house was constructed by the Dzongkhag Forestry Sector in close collaboration with Pakpey CFMG with technical support by SFED and funded by RGoB.

Climate SMART Village

CoRRB

Thimphu, 27 November 2012: The Council for RNR Research of Bhutan (CoRRB) in collaboration with Chubu University, Japan is developing a collaborative research project “Climate SMART Village” to address the challenges posed by climate change in the RNR sector.

The water sheds of Punatsangchhu, Sarpangchhu and Maukhola have been identified as research sites. The project aims to facilitate

and sustain international cooperation on research and education in biodiversity, ecosystems, natural resources management, integrate watershed management, social and institutional design, IT enabled participatory planning and geospatial cyber-infrastructure. Some of the activities identified for the project are installation of FIELD SERVER for data collection for monitoring, Development of web-based GIS application

for land use monitoring; disaster management and e-commerce; iii. Monitoring of behavioral patterns of wildlife predation on farm (crop and livestock); Testing of UAV for ecosystem and real time monitoring; and integration and up-scaling existing education collaboration with College of Natural Resources (CNR) and the Royal University of Bhutan (RUB), etc. The project output is expected to provide models and technological

options resilient to climate change for local farming communities, planner and policy makers. The project would initially be for a period of five years starting from 2013.

The project plans and activities were presented to the executives of the Ministry of Agriculture and Forests by the project formulation team from Chubu University led by Professor (Dr) Hiromichi Fukui on 27 November, 2012 in the MoAF conference hall.



Vegetable production campaign in Dzongkhangs

Namgay Thinley, DoA

The Director General of Department of Agriculture (DoA) accompanied by division chiefs and other officials met the heads of the Dzongkhag administrations, local governments leaders, farmers's representatives, Dzongkhag/Gewog agriculture staff and officials of RNR central programs and agencies in their weeklong tour to Sarpang, Dagana and Chukha dzongkhags.

With an objective to budge from subsistence to commercial market-oriented farming and to eventually achieve self sufficiency in vegetable production by the 2014 end, the DoA is initiating a series of program and activities. Creating awareness among farmers on the importance of large scale cultivation and group marketing is considered a key component in attaining vegetable self sufficiency.

Prior to meeting with the local leaders and farmers, the team convened meeting with staffs of Dzongkhag/Gewog Agriculture Sector and other RNR Central Programs and agencies. Director General briefed the field staff on objectives of their visit to Dzongkhangs. The primary objective was to share and discuss the Department's policies and strategies with the field staff and create awareness on importance of vegetable commercialization in potential vegetable growing gewogs. In his address to the field staff, the Director General emphasized on need of paradigm shift in M&E and progress reporting system. The Director General explained

that supports and services to farmers should not stop at input delivery and therefore should not be reported them as achievement.

These, he said, are means to achieving real targets reflected in the resulting productivity, production and the income. He stressed that all technical supports (seed, soil management, plant protection, farm machineries, or postharvest handling) should go beyond merely delivering them. He reiterated that the volume of production and income generated by farmers at the end is the main achievement and should be reported accordingly. During the meeting, the District Agriculture Officers reported on the key achievements and field issues that hinder implementation of programs and activities.

Addressing the gathering comprising of heads of the dzongkhag administration, local leaders and farmers representatives, the Director General highlighted on the importance of increasing all agriculture produces and improving marketing system with an ultimate goal to achieve national food self sufficiency. He briefed that the so called 'Rupe Crises' has stimulated government and farmers to invest in agriculture farming, and that everyone should capitalize on this opportunity. He reiterated that it's the responsibility of the Ministry of Agriculture and Forests and farmers across the country to make



Director General (DoA) and Sarpang Dzongda launching the commercial vegetable cultivation at Sershong Gewog

the food available round the time at affordable prices and any economic crisis in future should not impede the availability and so the prices of food in the country. He stressed that the need of the hour is enhancing vegetable cultivation and advised farmers to upscale their production. The Director General encouraged the farmers to take individual-led production and group-led marketing approaches to reap the maximum benefits from the available resources. He also briefed the gathering on cumulative benefits of optimum utilization of farm machineries in the community and understanding the unit cost of production for all major vegetables and involving agriculture experts in the whole process of growing vegetables.

The ultimate goal, he reminded, is to motivate farmers to go beyond subsistence farming and that the government is ready to provide all possible support towards this. The officials from the DOA, DAMC and

central programs clarified some issues raised by farmers and local leaders. Local leaders and farmers' representatives pledged to render their full support in the Ministry's initiative of attaining vegetable self-sufficiency.

The Director General and the team launched the commercial vegetable cultivation at Sershong in Sarpang, Goshi in Dagana and at Rametey in Chukha Dzongkhag. The local leaders and other officials also participated in practical sessions of vegetable transplantation.

While in Sarpang the officials also visited Renewable Natural Resource Research and Development Centre (RNRRDC) and Regional Centre of National Seed Centre in Bhur and Regional Office and Go-down of Food Corporation of Bhutan (FCB). The team also visited Head Quarter Office of FCB in Phuentsholing and witnessed the auctioning of potatoes and vegetables in the auction yard.



UWICE's Board of Governors meeting endorses several proposals

Ugyen Tshering/ICS

Thimphu, November

30: In its second sitting yesterday at MoAF conference hall, Thimphu, the Board of Governors of Ugyen Wangchuck Institute for Conservation and Environment (UWICE) under the chair of Hon'ble Prime Minister of Bhutan, His Excellency Lyonchhen Jigmi Y. Thinley endorsed the transition plan, panel of advisors, implementation of Himalayan, Environmental, Rhythms, Observation and Evaluation, System (HEROES), establishment of ecological research preserves and expanding linkages.

The meeting began with a formal welcome to the Hon'ble Chair and the members of the board of governors by the Hon'ble Minister of Agriculture and Forests, His Excellency Lyonpo. (Dr.) Pema Gyamtsho. This was followed by a presentation made to the members by the Director, Ngawang.

In the presentation, indicating their need to go autonomous, the institute sought approval from the board which was endorsed as the transition plan. However, the board instructed the institute to closely engage with Royal University of Bhutan. As per the plan, to facilitate the transition to autonomy, an independent review should be carried out in 2015. Furthermore, the possibilities for the institute to develop into an international NGO focusing on conservation and environmental research should also be considered during the transition phase. In addition, developments in such front should be presented in the next board meeting.

In addition to the panel of advisors, the Board yesterday also endorsed the operationalization of Himalayan, Environmental, Rhythms, Observation and Evaluation, System (HEROES). As per the presentation made during the

board meeting, this will be a community and schools' based monitoring program of temperature changes, snowfall and rainfall events, phenology and river flows.

The Board also approved the establishment of ecological preserves covering representative ecosystems and altitudinal clines at the Royal Manas National Park, Phipsoo, Toorsa, Jigme Dorji National Park, Wangchuck Centennial Park, Shingkharlauri, Sengore and Kheybeythang to monitor long term changes in climate, animal populations and water quality.

Under the ecological preserves, researchers of UWICE will monitor animal populations through the deployment of camera traps in the preserves at varying altitudinal locations. Furthermore, the Board also approved the monitoring of charismatic animal populations (i.e. Snow Leopards and Tigers) through GSM radio-telemetry to be used for research, education,

conservation and fund raising purposes. To this end, the Institute will also launch a web portal to showcase Bhutan's biological diversity called: 'Eyes on Wild Bhutan'.

In the meeting, the Board also instructed the institute to undertake research on the areas of Cordyceps biology, habitat conservation and social changes in addition to balck-necked crane's habitat assessment and conservation in Bomdeling, on a priority basis.

Meanwhile, His Excellency the Prime Minister also launched a guide to the Nymphalids of Bhutan, and introduction to the moths of Bhutan and the report on the impacts of cordyceps collection.

The meeting was attended by, Vice Chancellor of Royal university of Bhutan, Offtg. Secretary of MoAF, SAARC Forestry director, Tourism Council of Bhutan Secretariat's director, Offtg. directors of Hydro-met Services, DoFPS, CoRRB

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