CIRDAP is a regional, intergovernmental, and autonomous institution, established in July 1979 at the initiative of the countries of the Asia-Pacific region and the Food and Agriculture Organisation (FAO) of the United Nations with support from several other UN bodies and donors. Its member countries include Afghanistan, Bangladesh (Host State), Fiji, India, Indonesia, Iran, Lao PDR, Malaysia, Myanmar, Nepal, Pakistan, the Philippines, Sri Lanka, Thailand and Vietnam.

The main objectives of CIRDAP are to: (i) assist national action; (ii) promote regional cooperation; and (iii) act as a servicing institution for its member countries for promotion of integrated rural development (IRD) through research, action research, pilot project, training, and information dissemination. Amelioration of rural poverty in the Asia-Pacific region has been the prime concern of CIRDAP. The programme priorities of CIRDAP are set under four Areas of Concern: 1) Agrarian Development; 2) Institutional/Infrastructural; 3) Resource development including human resources; and 4) Employment. Within these Areas of Concern, the thematic areas identified are: Poverty alleviation through participatory approaches with emphasis on social sector development (e.g. health, education and nutrition); Employment generation through microcredit support, infrastructure development and local resource mobilisation; Gender issues; Governance issues; and Environmental concerns for sustainable rural development.

Operating through designated Contact Ministries and Link Institutions in member countries, CIRDAP promotes technical cooperation among nations of the region. It plays a supplementary and reinforcing role in supporting and furthering the effectiveness of integrated rural development programmes in the Asia-Pacific region.

About CDD

CIRD Development Digest (CDD) is published four times a year (March, June, September and December). The purpose of the CDD is to highlight various facets of IRD in the Asia-Pacific region. Any uncredited article or information appearing in the CDD may be reproduced without prior permission but with due acknowledgement and a copy to the Editor. The designations employed and the presentation of materials in CDD do not imply the expression of any opinion whatsoever on the part of CIRDAP concerning the legal status of any country, city or area, or of its authorities or boundaries. News items, viewpoints on IRD and related issues are welcome. All correspondence should be addressed to the Editor.

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Review Committee finalises the Strategic Plan for CIRDAP

CIRDAP has initiated the preparation of a strategic paper on Strengthening CIRDAP as recommended by the policy bodies meetings held in Nadi, Fiji in 2013 and guidelines/suggestions made during the 31st Technical Committee Meeting (TC-31) held in Kuala Lumpur in 2016.

Director General in consultation with CIRDAP Staff has prepared a detailed Term of Reference (TOR) as a guideline for preparation of the strategic plan.

In order to accomplish the activity on time and to prepare a quality policy paper for submission in the forth coming Technical Committee and Executive/Governing Council, Director General constituted a four member committee headed by Dr. Durga P. Paudyal, former Director General, CIRDAP.

The other members are: Dr. Somporn Hanpongpantha, IRD expert of CIRDAP, Dr. S. Vijay Kumer, former Secretary, Government of India, and Dr. Salehuddin Ahmed, former Governor of Bangladesh Bank as Advisors.

The Review Committee on Strategic Plan for CIRDAP: Vision 2017-2020 met for the 3rd time during 15-16 January 2017 at CIRDAP headquarters, Dhaka. After extensive discussion taking into consideration the challenges of CIRDAP, the Committee finalised the report and handed over to the DG, CIRDAP.

Meeting with Senior Programme Specialist of SAC

Dr. Tayan Raj Gurung, Senior Programme Specialist (NRM), SAARC Agriculture Centre (SAC) visited CIRDAP headquarters located in Dhaka on 16 March 2017 and had a meeting with Director General of CIRDAP. They discussed regarding CIRDAP-SAC forthcoming joint programmes.

Meeting with Director General of BARD

Director General of the Bangladesh Academy for Rural Development (BARD) Mr. Muhammad Maududur Rashid Safdar visited CIRDAP on 02 March 2017 and had a meeting with the Director General of CIRDAP. They discussed the forthcoming TC-32 Meeting to be held during 3-6 May 2017 in BARD, Comilla, Bangladesh.
Study Visit to Barefoot College, India

A four member team, led by Mr. Akber Hossain, Project Director [Joint Secretary, Rural Development and Cooperatives Division (RDCD), Ministry of Local Government, Rural Development and Cooperatives (LGRD&C), Government of Bangladesh] of the One House One Farm and accompanied by Ms. Eva Benita A. Tuzon, Director (Pilot Projects Division), CIRDAP, Mr. Nazir Ahmad, Deputy Project Director [Deputy Secretary, RDCD] and Mr. Bipine Chandra Biswas, Assistant Chief, RDCD, visited Barefoot College located in Tirona, India during 27 February-3 March 2017.

The study visit was supported by the Government of Bangladesh in collaboration with CIRDAP and Barefoot College. The purpose of the visit was to assess the impact of access to energy, i.e., solar energy on socio-economic and environmental aspects of sustainable development.

There is an alternative learning system introduced by Barefoot College for rural community members who at day time spend working on the farm or doing off-farm livelihoods as briefed by a technical staff of the Barefoot College. Therefore, the significance of using solar lanterns for learners, who generally gather around 6:00pm to 9:00pm to study, has direct implications to rural productivity.

Further, the team was brought to the workshop room. There were 39 women-learners, coming from different countries, setting up a solar device unit at their workshop-study tables. The team also interviewed few of the students who were from different part of Africa and South America. The students have shown the team that poverty can be overcome through alternative capacity building where instinctive desire to learn can be drawn out among people.

Moreover, the Barefoot College has recently opened its gender equity and development initiative through its barefoot En riche [Enterprise, Education and Empowerment by and for rural women] project. It was an amazing experience to witness how an innovative capacity development design can bring or alter the temporariness of poverty, if people are given a fair chance for a decent job and access to education.

The team was also introduced to the women Barefoot Solar Cook-Engineers’ Society, the first registered association of women who complete the full fabrication of parabolic solar cooking system that can cater to eight households. The parabolic solar cooking system is an option addressing the use of fossil fuel as a contribution to climate change mitigation.

It was also introduced to the team about the activities of engagement of rural handicap and under privileged person, especially the women in making different handicrafts for income generation which was also very inspiring to the team.

The team discussed with the staff members regarding the engagement of solar mamas from Bangladesh who had been trained up here during 2013 and 2015 and still have no scope to engage themselves in livelihood activities utilizing their knowledge learnt from this college.

The team, finally, had a revisit of the value of puppetry as a medium for effective communication amidst the advancement of information and communication technology. It remains as
A four member team, led by Mr. Akber Hossain, Project Government, Rural Development and Cooperatives One Farm and accompanied by Ms. Eva Benita A. Tuzon, Director (Pilot Projects Division), CIRDAP, Mr. Nazir and Mr. Bipine Chandra Biswas, Assistant Chief, RDCD, February-3 March 2017.

The study visit was supported by the Government of College. The purpose of the visit was to assess the impact of environmental aspects of sustainable development. Therefore, the significance of using solar lanterns for learners, who generally gather around 6:00pm to 9:00pm to study, has direct implications to rural productivity.

There were 39 women-learners, coming from different countries, setting up a solar device unit at their workshop-study tables. The team also interviewed few of the students who were from different part of Africa and South America. The students have shown the team that poverty can be overcome through engagement of information and communication technology. It remains as a medium for effective communication amidst the advancement to engage themselves in livelihood activities utilizing their engagement of solar mamas from Bangladesh who had been introduced to the team about the activities of the Barefoot College.

The team discussed with the staff members regarding the income generation which was also very inspiring to the team. It was noted to go back to the main proposal which includes the issues of food safety and standardization to market ends.

The study visit provided the team an empirical knowledge of parabolic solar cooking system is an option addressing the use of solar energy for cooking system that can cater to eight households. The Cook-Engineers' Society, the first registered association of solar mamas' community service-livelihood from installation, repair and maintenance of solar-home system.

**Joint Partners Meeting on Agro-Food Processing**

A joint partners meeting on Agro-Food Processing took place at CIRDAP headquarters on 16 February 2017 among CIRDAP, IFIC Bank, BASIC Bank, Trust Bank and Daffodil International University (DIU). The representatives discussed building the business model on Pro-poor Women Food-processing in the meeting.

The following decisions/discussions were made in the meeting:

- CIRDAP will facilitate for the resource persons.
- DIU will bear the machine cost as being the principal owner.

- Regarding the selection of women-entrepreneurs’ group, the assumption was that DIU trains women entrepreneurs selected by the DIU-Banks who will be replicating the model from DIU. The bankers come on board for financing to meet the fixed cost requirements, working capital.
- DIU will decide about the project site.
- It was noted to go back to the main proposal which includes value chain, i.e. from product development that includes the issues of food safety and standardization to market ends.
- It was assigned to take information from PhilMech and/or make a field-visit; recall the commitment of the Philippines regarding the cluster agro-processing linking entrepreneurs to market.
A four member team, led by Mr. Akber Hossain, Project Cooperatives Division (RDCD), Ministry of Local Government, Rural Development and Cooperatives and accompanied by Ms. Eva Benita A. Tuzon, Ahmad, Deputy Project Director [Deputy Secretary, RDCD] and Mr. Bipine Chandra Biswas, Assistant Chief, RDCD, visited Barefoot College located in Tirona, India during 27 February-3 March 2017.

The study visit was supported by the Government of Bangladesh in collaboration with CIRDAP and Barefoot College. The team was shown how parabolic solar cooking system is an option addressing the use of information and communication technology. It remains as an important material culture that preserves art and a social medium for effective communication amidst the advancement of economic and environment aspects of sustainable development. The role of the Barefoot College cannot be overestimated. In the programme, Ms. Tuzon symbolically handed-over the CIRDAP crests to OECD Korea Policy Center and OECD Secretariat-Paris with 15 country-flags not just a form of gratitude but carrying the cause of the Centre under the new leadership, Director General, Mr. Tevita G. Boseiwaqa Taginavulu.

In the programme, Ms. Tuzon mentioned in the panel discussions about the significance of CIRDAP which is being able to lead on regional cooperation and rural development, and work for prosperous rural communities in the Asia-Pacific region. For the policy making bodies of CIRDAP, a future replication of the APG Forum in partnership with OECD Korea Policy Centre-Public Governance Programme and OECD Secretariat may be considered.

The following decisions/discussions were made in the meeting:

- Regarding the selection of women-entrepreneurs' group, the DIU trains women entrepreneurs to market ends.
- Women Food-processing in the Philippines regarding the cluster agro-processing linking market ends.
- DIU will bear the machine cost as being the principal owner.
- It was noted to go back to the main proposal which was also very inspiring to the team.
- It was also introduced to the team about the activities of Cook-Engineers’ Society, the first registered association of women food-processing in the Philippines.
- In coordination with Oxfam-Bangladesh on 15 March, 2017.
- A joint partners meeting on Agro-Food Processing took place at CIRDAP headquarters on 16 February 2017 among CIRDAP, Ministry of Local Government, Rural Development and Cooperatives. If it is considered, RDCD may propose for similar study visit to the IFEZ as part of the capacity building component of the scaling-up of One House One Farm Project in collaboration with CIRDAP. The visit will definitely provide new insights on understanding better policies on rural-urban planning.

The team discussed with the staff members regarding the income generation which was also very inspiring to the team. The team was brought to the workshop room. There the team witnessed how an innovative capacity development design can be drawn out among people. The students have shown the team that poverty can be overcome through the approach towards inclusive development. Those who were not able to attend any regular or formal school due to poverty are given an opportunity for making their aspiration realized, e.g. engaging themselves in livelihood activities utilizing their trained up here during 2013 and 2015 and still have no scope.

The field visits to the Compact Smart City [Incheon Urban Planning Center], the IFEZ Center, and the IFEZ U-City Operation Center were worthy -- for consideration as an agenda in time for the meeting on 28 March, 2017 called by the Rural Development and Cooperatives Division (RDCD), Department of Agriculture, Ministry of Local Government, Rural Development and Cooperatives. If it is considered, RDCD may propose for similar study visit to the IFEZ as part of the capacity building component of the scaling-up of One House One Farm Project in collaboration with CIRDAP. The visit will definitely provide new insights on understanding better policies on rural-urban planning.

Ministry of Local Government, Rural Development and Cooperatives. If it is considered, RDCD may propose for similar study visit to the IFEZ as part of the capacity building component of the scaling-up of One House One Farm Project in collaboration with CIRDAP. The visit will definitely provide new insights on understanding better policies on rural-urban planning.

PPD Director talks in the APG Forum as Panel Discussant

As invited by OECD KOREA Policy Centre, Ms. Eva Benita A. Tuzon, Director (Pilot Projects Division) participated as Panel Discussant in the Asian Public Governance (APG) Forum on Regional Development for Inclusive Growth held from 22 to 23 March 2017 in Seoul, Korea.

Ms. Tuzon mentioned in the panel discussions about the significance of CIRDAP which is being able to lead on regional cooperation and rural development, and work for prosperous rural communities in the Asia-Pacific region. For the policy making bodies of CIRDAP, a future replication of the APG Forum in partnership with OECD Korea Policy Centre-Public Governance Programme and OECD Secretariat may be considered.
International Round Table Meeting on Agricultural Insurance - A Climate Change Adaptation Tool in the African, Asian and Pacific Regions

Centre on Integrated Rural Development for Asia and the Pacific (CIRDAP) in collaboration with African-Asian Rural Development Organization (AARDO) and Malaysian Agricultural Research and Development Institute (MARDI) organised an international round table meeting on “Agricultural Insurance - A Climate Change Adaptation Tool in the African, Asian and Pacific Regions” at MARDI, Selangor, Malaysia during 06-10 February 2017.

The objectives of the programme were to review and assess different models, share the experiences of insurance programmes, and formulate guidelines and recommendations for policy-makers through introducing agricultural insurance programmes in the Africa, Asia and Pacific regions.

At the inaugural session on 7 February 2017, Dr. Sharif bin Haron, Director General, MARDI welcomed the delegates and guests, wherein addresses were delivered by Mr. Tevita G. Boseiwaqa Taginafulau, Director General, CIRDAP and Eng. Wassfi Hassan El-Sreihin, Secretary General, AARDO. It was officially opened by Ybhg. Dato’ Azizan bin Mohammad Sidin, Deputy Secretary General, Ministry of Rural and Regional Development (KKLW), Government of Malaysia. The opening session was graced by various dignitaries including Diplomats of some of the participating countries stationed at Kuala Lumpur as well as the authorities of MARDI.

Three keynote presentations were delivered highlighting the status of agri-insurance in the African and Pacific regions during the business sessions by experts from Nigeria, Sri Lanka and Singapore. It set the tone of the Roundtable leading to the country presentations delivered by 22 delegates from both AARDO and CIRDAP member countries. Following the country presentations, the participants were divided into three groups to brainstorm and deliberate on various aspects of agri-insurance in the wake of Climate Change. On 9th February, the Roundtable culminated with a set of recommendations applicable for participating countries of African, Asian and the Pacific regions based on unique mix of their respective varied experiences.

The Roundtable was attended by a total mix of 34 participants with diverse experiences from 24 AARDO and CIRDAP member countries, namely, Bangladesh, R O China, Fiji, Ghana, India, Indonesia, I R Iran, Jordan, Lao PDR, Lebanon, Malaysia, Mauritius, Morocco, Myanmar, Nepal, Nigeria, Oman, Palestine, Philippines, Sri Lanka, Sudan, Thailand, Vietnam and Zambia. Besides, four experts, two each from AARDO member countries, namely, Nigeria and Sir Lanka, and two from Alliance Re, Singapore attended the Round Table as facilitators and moderators.

In the valedictory session, the closing remarks were delivered by the Chief Guest, Dr. Rozan Abu Dardak, Director, Strategic Planning and Innovation Management Centre of MARDI as well as by the representatives of the Secretary General, AARDO and Director General, CIRDAP respectively. Certificates were handed over to the participants by the Chief Guest.
CIRDAP-NIRD&PR Collaborative International Training Programme on Rural Technologies for Inclusive Growth

Rural technologies for inclusive growth would lay emphasis on the introduction of appropriate technological inputs for improving the productivity and quality of farm and non-farm sectors, introduction of new livelihood options, skill enhancement and capacity building, better use of local resources with concurrent energy and eco-management, development of management and entrepreneurial skills, introduction of new and innovative technologies those have been developed by young and rural entrepreneurs etc. There is a huge scope for delivering such interventions as these have been amply demonstrated by experts in several cases. It is envisaged that rural technologies would go a long way in creating concrete and tangible socio-economic benefits for the rural people through providing new technological solutions, training for capacity and skill development, and support for their implementation.

In this context, CIRDAP in collaboration with the National Institute of Rural Development and Panchayati Raj (NIRD&PR) organised an international training programme on Rural Technologies for Inclusive Growth from 12-22 February 2017 at NIRD&PR, Hyderabad, India. The programme was attended by 17 mid and senior level officials from 11 CIRDAP Member Countries (CMCs).

The objectives of the programme were:

- To enable the participants reviewing the existing rural technologies critically and their management practices in developing countries;
- To equip participants with the skills of project design and management of rural technology projects;
- To explain the process and importance of entrepreneurship development in rural technology projects; and
- To expose the participants to the best practices in rural technology projects through study visits in India.

The programme contents were as follows:
- Strategies and Approaches of Appropriate Rural Technologies
- Innovations/Innovators of Rural Technologies in Farm And Non-farm Sectors including Solar, Bio-Mass, Wind Energy
- Entrepreneurship Development
- Logical Frame Work and Project Design for Rural Technology Projects
- Social Mobilisation and Community Design
- IEC Strategies and Methods
- Role of Women in Rural Technology Projects
- Role of Non-Governmental Organisations (NGOs), Community based Organisations (NGOs), People’s Representatives, World Bank, Asian Development Bank etc. in Rural Technology Projects.
- Public, Government and Private Partnerships
- HRD Approaches for Capacity Building of Rural Technology Professionals
  - Appropriate Cost-effective Rural Housing Technologies including Sanitation

The training included a combination of lectures-cum-discussions, panel and case discussions, appropriate mix of various participatory training methods through mock exercises and audio-visual presentations, inter and intra group discussions and experience sharing.

Afterwards, a study visit was organised to expose the participants to the best practices in Rural Technologies including entrepreneurship development. The participants documented lessons from the best practice villages and draw...
appropriate suggestions for pursuing similar programmes in their respective countries. These documented lessons were consolidated as Back Home Action Plans (country wise assignments/reports) for implementing the same in their respective countries. Also, the Back Home Action Plans were shared by participants through presentations in the classroom for a greater learning.

The Director General of CIRDAP Mr. Tevita G. Boseiwaqa Taginavulau and the Director General of NIRD&PR Dr. WR Reddy were present in the valedictory session. In his remark, DG CIRDAP thanked the Government of India for its generosity in organising relevant training programmes every year for the benefit of CIRDAP member countries. He also mentioned how Alvin Toffler, the futurist author says that, “The illiterate of the future will not be the person who cannot read. It will be the person who does not know how to learn.” Dr. Reddy stressed on the importance of the role of rural technologies in accelerating development of rural areas. He also shared the information on the Rural Innovators Conclave which is being organised by NIRD&PR from 23-27 March 2017 and invited the participation from all CIRDAP Member Countries.

The programme was coordinated by Dr. P. Siva Ram, Dr. Y. Gangi Reddy and Dr. R. Ramesh from NIRD&PR and Dr. Vasanthi Rajendran, Director Training a.i., from CIRDAP.
A four member team, led by Mr. Akber Hossain, Project College. The purpose of the visit was to assess the impact of learners, who generally gather around 6:00pm to 9:00pm to medium for effective communication amidst the advancement trained up here during 2013 and 2015 and still have no scope income generation which was also very inspiring to the team. Engagement of rural handicap and under privileged person, witnessed how an innovative capacity development design can rural women project. It was an amazing experience to gender equity and development initiative through its barefoot cooking system that can cater to eight households. The women who complete the full fabrication of parabolic solar women’s project. The team was also introduced to the women Barefoot Solar.

The following decisions/discussions meeting.

- AARDO and Director General, CIRDAP
- OECD Secretariat may be considered.
- CIRDAP will facilitate for the
- Project Development Programme and OECD Secretariat may be considered.

The study visit provided the team an empirical knowledge of \("\) between rural and urban development, understanding the need for action and its potential to drive growth. \("\) AARDO and Director General, CIRDAP

The valedictory session of the training programme was held on 23 March 2017. Dr. V. Usharan, IAS, Director General, National Institute of Agriculture Extension Management (MANAGE), Hyderabad, India, was the Chief Guest. The Director General, MANAGE mentioned that the countries are developed where human resource is developed. She emphasised on concentration on planning of human resource development at national level. She mentioned collective vision is important for development of human resource. She said there is necessity of training for human resource development. She hoped better performance would come out from the participants in their respective work place. The participants were awarded with certificates by the Chief Guest.

All the participants appreciated NIRD&PR and CIRDAP organising the programme successfully. Majority of the participants mentioned that the training programme was very effective and very useful for them. They were very satisfied with the programme contents, programme methodology, administrative and logistics and staff assistance and behaviour.

ITEC Fellowships offered by Government of India

As a kind gesture for regional cooperation in promoting human resource development of CIRDAP Member Countries (CMCs), the Hon’ble Minister of Rural Development, Government of India (GoI) and the Chairperson of the GC-19 declared in the inaugural session of the 19th GC meeting that Government of India would offer 20 Indian Technical and Economic Cooperation (ITEC) fellowships to CMCs every year.

The Ministry of External Affairs, Government of India, the sponsor of the ITEC Fellowships to CMCs for 2017-18, will publish the ITEC Training Courses Brochure for 2017-18.

Applicants may be advised to visit the website at https://www.itecgov.in.
CIRDAP GIS Centre Inaugurated

A Centre on Geo-informatics Applications in Rural Development (CGARD) was inaugurated in CIRDAP on 21 January 2016 at the CIRDAP International Conference Centre, CIRDAP headquarters, Dhaka. The Ministry of Rural Development, Government of India has sponsored the establishment of this state-of-the-art Geospatial Application Centre at CIRDAP.

The CGARD, widely known as GIS centre, is expected to support the governments of CIRDAP Member countries including Bangladesh and India to use GIS as a tool for informed decision making, better planning and management of resources to achieve socio-economic growth.

In the inauguration programme, Mr. Amarjeet Sinha, IAS, Secretary (RD), Ministry of Rural Development, Government of India, graced the occasion as Chief Guest while Mr. Ananda Chandra Biswas, Additional Secretary, Rural Development & Cooperative Division, Ministry of LGRD&C, Government of Bangladesh (GoB) was present as Special Guest. Mr. Atal Dulloo, IAS, Joint Secretary (IC), Government of India and Dr. W.R. Reddy, Director General of National Institute of Rural Development and Panchayati Raj (NIRD&PR), Government of India, also attended.

The CGARD was inaugurated by Mr. Amarjeet Sinha. A training programme on Geo-informatics Applications for Rural Development for Officials of Ministry of LGRD&C, GoB and Re-designed web Portal for rural development (www.infoRD.org) were also inaugurated by Mr. Ananda Chandra Biswas, and Mr. Atal Dulloo respectively.

In his remarks, Mr. Amarjeet Sinha said that Government of India has the privilege to sponsor the establishment of this state-of-the-art Geospatial Application Centre for CIRDAP. He strongly believes that this Centre will support the CIRDAP Member countries (CMCs) in the use of GIS as a tool for informed decision making, better planning and management of resources to achieve socio-economic growth. He also said, “I would like to reaffirm India’s commitment to CIRDAP which has been playing a significant role as a ‘think tank’ of CMCs during the last three and half decades in the areas of broad based economic growth, inclusive and sustainable rural development by promoting the regional cooperation to achieve the common goal of eradicating poverty in the Asia Pacific region”. “I hope this Centre on Geo-informatics Applications would strengthen our mutual effort for rural development in the region”, he added.

Acclaiming India’s kind support in establishing the Centre at CIRDAP, Dr. Prosanta Kumar Roy said that CIRDAP Member countries can take support from this centre to take measures for accomplishing digital and inclusive society that recognizes people’s ability and empowers them for future nation building. He also mentioned that “With the advent of digital information and the rise of internet, the development of geospatial information has changed substantially allowing for dissemination of information in real time. We must fully utilize the potential of spatial technology for economic development, social change and management of our scarce resources. The limitless possibilities of GIS can benefit the people of this region enormously”.

Expressing sincere gratitude to the Government of India for generously sponsoring the establishment of CGARD, Director General of CIRDAP Mr. Tevita G. Boseiwaqa Taginavulau said in his welcome address that this establishment is a milestone for CIRDAP. It has potential to contribute in disaster management, health management, business...
development, forest resource management, land resources management and agriculture services, ocean resource management, rural development planning and monitoring etc. He also introduced an African Proverb that says - if you want to go fast, go alone. If you want to go far, go together. In CIRDAP, we believe we must go together and grow together and work together for an inclusive and fair world to live in. Lastly, He thanked all for being present in this inauguration programme.

CIRDAP – NIRD&PR Training Programme on Geo-informatics Applications in Rural Development for Bangladeshi Officials

CIRDAP – NIRD&PR jointly organised a training programme on “Geo-informatics Applications in Rural Development for Bangladeshi Officials” during 21-23 January 2017 at CIRDAP ICT Centre, Dhaka. A total of 18 Government Officials of Bangladesh participated in the training programme.

Dr. V Madhava Rao and Dr. T Phanindra Kumar from NIRD&PR, India were present as resource persons. They took sessions on Introduction to Geographical Information Systems; Satellite Remote Sensing and Global Positioning System; Geo-informatics Application in Rural Development (including Land Use and Land Cover Studies; Wasteland Management; Water Resources Management; Road and Connectivity Management; Forestry Management; Coastal Zone Management; Disaster Management; Agriculture Management; Settlement Planning; Monitoring of Development Projects; Impact Assessment of Development Programmes; Local Level Planning; Rural Energy Planning; Climate Change Studies); Open Source GIS Software Exposure; Hand Holding and Practice Session on GIS; and Open Source Image Processing Software and GPS Exposure.

In the valedictory session, Director General of CIRDAP remarked that we are living in a digital age. It is an initiative of CIRDAP to develop technically qualified manpower for
The CGARD was inaugurated by Mr. Amarjeet Sinha. A number of officials from Government of Bangladesh and Rural Development and Panchayati Raj (NIRD&PR), India were present as Special Guest. Mr. Atal Cooperative Division, Ministry of LGRD&C, Government of Bangladesh (GoB) was present as Special Guest. Mr. Atal Cooperative Division, Ministry of LGRD&C, Government of Bangladesh (GoB) was present as Special Guest. Mr. Atal Cooperative Division, Ministry of LGRD&C, Government of Bangladesh (GoB) was present as Special Guest. Mr. Atal Cooperative Division, Ministry of LGRD&C, Government of Bangladesh (GoB) was present as Special Guest.

The Ministry of Rural Development, CIRDAP GIS Centre Inaugurated state-of-the-art Geospatial Application Centre at CIRDAP. Dr. Prosanta Kumar Roy said that CIRDAP GIS Centre Inaugurated state-of-the-art Geospatial Application Centre for CIRDAP. I hope this Centre on Geo-informatics Management; Disaster Management; Agriculture Management; and to promote collaboration and knowledge sharing and thus exchange cross-cultural understanding on disaster risk management and to promote collaboration and knowledge sharing and thus exchange cross-cultural understanding on disaster risk management.

CIRDAP - RGNIYD Collaborative International Exposure Visit cum Training on Disaster Management in India

The Centre on Integrated Rural Development for Asia and the Pacific (CIRDAP) and the Rajiv Gandhi National Institute of Youth Development (RGNIYD) jointly organised an International Exposure Visit cum Training on Disaster Management for a group of students of Dhaka University at RGNIYD Campus in Chennai, Tamil Nadu, India from 10 to 14 January 2017.

The training was attended by a total of 18 participants, comprising of 16 students and two faculties, Institute of Disaster Management and Vulnerability Studies (IDMVS), University of Dhaka. Mr. M.H Kawser Rudro, AICO, CIRDAP also accompanied the team as CIRDAP representative.

The main objectives of the programme were to enhance the knowledge of the participants on the concepts and critical issues of disaster management and mitigation through presentation, discussion and exposures visits; and to promote collaboration and knowledge sharing and thus exchange cross-cultural understanding on disaster risk management between Bangladesh and India so that disaster risk management is integrated into community, local, and rural development strategies.

In the technical session, the participants attended expert’s lectures on 'disaster vulnerability assessment and risk reduction' by Mr. Vignesh, PhD Scholar, Centre for Natural Hazards and Disaster Studies, University of Madras; 'Institutionalizing the Risk Reduction And Management' by Dr. P. H Kalesh, Asst. Professor, RGNIYD; 'Role of Local Government In Disaster Management' by Dr. K. Gireesan, Associate Professor, RGNIYD; 'Youth Engagement in Disaster Risk Reduction' by Dr. R. Anitha, Faculty, RGNIYD; 'Community-based Disaster Risk Reduction' and 'Climate Change induced Disasters' by Dr. R. R. Krishnamurthy, Professor, Department of Applied Geology, University of Madras.

Participants were taken to several field visits including 'Iruka Tribe Women's Welfare Society' to understand role of women in disaster management; 'Indian Institute of Madras' to know the importance of ICT for streamlining disaster response management; and 'Nemmeli Panchayat' to get exposure on effective community based disaster management. On the third day, the participants attended practical session at National Disaster Response Force which is a specialised paramilitary force constituted for the purpose of specialist response to a threatening disaster situation.
CIRDAP bides Farewell to ICD Director

CIRDAP bade adieu to its professional staff Dr. Vasanthi Rajendran, Director (ICD and Training a.i.). She was separated from the services at the end of her contract on 18 March, 2017. She joined CIRDAP on 29 March, 2011 as Director (ICD). She was from India.

Quarterly CAL E-abstract Service

E-abstracts for March 2017 issue covering the period from January to March has been sent to the insider and outsider stakeholders of CIRDAP for easy access of current literature on Rural Development (RD) and Poverty Alleviation (PA). “CAL E-abstract” is a compendium of newly published articles (abstracts and citation) related to PA and RD in the Asia and Pacific region. These e-abstracts are compiled quarterly and collected from journals available in open source journals and subscribed journals, and made them available through e-abstract services for CIRDAP’s staffs and professionals as well as CMCs.

Staff Participation

Two nominated persons from CIRDAP viz. Engr. Md. Waliul Hasnat, Computer Programmer and Mr. Pradip Aich, Assistant (Library) participated in a workshop on “Technology Day with Trimble” jointly organised by the Overseas Marketing Corporation (Pvt.) Ltd. and Trimble Inc. USA on 30 March, 2017 at Westin Hotel, Gulshan-2 Dhaka.

CIRDAP celebrates International Day of Forests

CIRDAP celebrated International Day of Forests on 21 March 2017 in order to raise awareness on the importance of forests for ecosystem of the planet. The programme took place at CIRDAP garden in its premises. Director General of CIRDAP along with other professional and general staff attended the programme.

In his remark, Director General of CIRDAP highlighting the theme of 2017 [i.e. Forests & Energy] mentioned that forests pump out the oxygen what we need to live. Forests where nearly all known species live. They are the main source of nature’s powerhouse and a vital resource for renewable-energy demand. They protect us from natural calamities. He also mentioned that forest are the main source of medicine and still a key source of breathable fresh air. Forests were the supermarkets of our forefathers. If we keep forests like before, these will become precious asset for us.

Afterward, the programme followed by tree plantations in the CIRDAP garden and a refreshment.
Two Programme Associates join CIRDAP

Ms. Farhana Yasmin joined CIRDAP as Programme Associate (Training Division) on 26 February 2017. She has obtained her Masters degree in Sociology from University of Dhaka. Prior to joining CIRDAP, she served in BRAC above four years as Associate (Human Resource and Learning Division) and worked for the Orascom Telecom Ltd. (Banglalink) as Care Line Officer. She has experience on training management, research methodology and data analysis.

Ms. Nishat Farzana, a Masters degree holder in Development Studies from University of Dhaka, joined CIRDAP as Programme Associate (Pilot Project Division) on 26 February 2017. Before joining CIRDAP, she worked for the Centre for Entrepreneurship Development (CED) of BRAC University as Researcher. She has experience on research methodology as well as skills in using various statistical tools of quantitative social science research, economic analysis and randomized evaluation.

Invitation for Articles

Asia-Pacific Journal of Rural Development (APJORD), a half-yearly academic journal, is a flagship publication of CIRDAP. It is devoted to the issues and discussions on rural development, primarily in the Asia-Pacific region.

The journal provides a platform for the academicians, policymakers, NGOs, research scholars and others interested in integrated rural development (IRD), to exchange and share ideas, opinions, field observations, and empirical findings on various facets of rural development.

APJORD focuses on poverty issues and rural transformation, keeping in view the programme priorities of the Centre, e.g. agrarian development, institutional/ infrastructural development, resource development including human resources, and employment.

Articles are invited for publication in APJORD. All articles are subject to peer review. Articles between 4000-5000 words are preferred. Articles should be sent by e-mail to apjord@cirdap.org. Notes to Contributors is available on CIRDAP website: www.cirdap.org

Typescripts should be submitted in duplicate on A4 size paper, typed written on one side in double space, with margins of at least 2.54cm. Statistical tables, illustrations and charts should be submitted on separate sheet and their positions indicated in the text.

APJORD follows the Chicago Manual of Style for preparing article. A note to the contributors is available at the back page of any issue of the Journal or can be found at our web site www.cirdap.org.sg. For further details please contact the Editor, APJORD.

Help Enrich the CDD

An open invitation to contribute news and write-ups

CIRDAP Development Digest (CDD) is published four times a year (March, June, September and December). The purpose of the CDD is to highlight various facets of RD in the Asia-Pacific region. In addition to the regular news updates on the Centre’s activities, CDD regularly publishes news items, viewpoints on various aspects of RD and related issues from around the region.

Rural Development Institutions, Practitioners and Academia are humbly requested to provide us with valuable feedback and also to send their views, news and thoughts on various aspects of rural development. CIRDAP would welcome such contributions to the CDD with proper accreditation. All correspondence should be addressed to the Editor (infocom@cirdap.org or vasanthi@cirdap.org)
Exposure Visit to Vietnam

CIRDAP DG Mr. Tevita G. Boseiwaqa Taginavulau together with Dr. W.R. Reddy, Director General of the National Institute of Rural Development and Panchayati Raj (NIRD&PR), India made an exposure visit to Vietnam during 22-24 February 2017. It was the first visit of present DG CIRDAP to the Link Institution and Contact Ministry of CIRDAP located in Vietnam.

The objective of the exposure visit was to be familiarized with the best practices of Vietnam in livestock, agriculture and enterprises. During exposure visit, they had meetings with Senior Officials of the Ministry of Agriculture and Rural Development, Department for Processing of Agro-Forestry -Fishery Products and Salt Industry, and Institute of Policy and Strategy of Agriculture and Rural Development. During meetings, DG CIRDAP also briefed about activities undertaken by CIRDAP, including resetting platform for change and updating actions for strengthening CIRDAP: Vision 2017-2020. There were two field visits organised for them to Big C and Metro in Vietnam.

Meeting with Vice Chancellor, University of Dhaka

Director General of CIRDAP called on Professor Dr. A A M S Arefin Siddique, Vice Chancellor, University of Dhaka on 13 February 2017 at his office in University of Dhaka. During the meeting, they discussed matters of mutual interest, especially about the possibilities of undertaking joint collaborative programmes. DG, CIRDAP exchanged views regarding how to strengthen the existing friendly ties between Bangladesh and Member Countries of CIRDAP. Vice Chancellor thanked DG, CIRDAP for his visit to the University.

Chief Executive Officer, TFNet meets DG

A team led by Dr. Mohd Desa Haji Hassim, Chief Executive Officer, International Tropical Fruits Network (TFNet), Malaysia, visited CIRDAP on 09 February 2017 and had a meeting with the Director General of CIRDAP, where Ms. Eva Benita A. Tuzon, Director (Pilot Projects Division) was also present. In the meeting, they discussed possible collaboration between two organizations in mutually agreed areas.

TFNet is an independent and self-financing global network established under the auspices of the Food and Agriculture Organization (FAO) of the United Nations (FAO) with the mandate and role to promote sustainable global development of the tropical fruit industry in relation to production, consumption and trade.

Special Lecture by DG CIRDAP at DU

DG CIRDAP Mr. Tevita G. Boseiwaqa Taginavulau delivered a special lecture for the Students of Institute of Disaster Management and Vulnerability Studies (IDMVS), University of Dhaka (DU) on 13 February, 2017.

IDMVS organised the special lecture and orientation programme for a new batch of students. In his remarks, DG CIRDAP stressed the importance of youth in national building. He urged the students to improve their knowledge and skills in order to work for the people and contribute for a just inclusive world.

The programme was attended by Professor Dr. Nasreen Ahmad, Pro-vice Chancellor (Academic), Professor Farid Uddin Ahmed, Dean Faculty of Social Sciences, University of Dhaka, while Professor Dr. Mahbuba Nasreen, Director of Institute of Disaster Management and Vulnerability Studies chaired the programme which was followed by a cultural event. Students, who participated in CIRDAP-RGNIYD Collaborative International Exposure cum Training on Disaster Management on 10-15 January 2017 in Tamil Nadu, India, shared their experience and thanked CIRDAP and RGNIYD for organising such programme.
Landless Farmers make Sandy Land Green in Bangladesh

Many sandy chars of Teesta, Dharla and Brahmaputra rivers have turned green as thousands of landless char farmers are growing pumpkin on those chars in Lalmonirhat, Kurigram, Gaibandha, Nilphamari and Rangpur.

Landless farmers at Dharla Char in Kurigram Sadar upazila said they are given training on using char land for farming crops, especially pumpkin, by a non-governmental organisation (NGO) Practical Action Bangladesh (PAB), which also provides technical and input support. Earlier, they did not use char sandy land as they thought no crops could be cultivated on such land, but PAB showed that they were wrong, they said, adding that chars give them bumper production of crops every year.

Atiar Rahman, 55, of Brahmaputra river char in Chilmari upazila, said he and many other landless farmers have been farming pumpkin in sandy char lands for the last few years. “I have cultivated 300 pumpkins on 24 decimals of land this year. My target is to produce 500 to 700 pumpkins weighing about 2,500 to 3,500 kgs.

Delowar Hossain, 63, of Teesta river char in Lalmonirhat Sadar said they dig a hole two to three feet deep and put organic fertiliser in it for farming pumpkin in chars, adding that a regular supply of water is needed. “We get technical and input support from PAB but not from the government. If the government provides support to us we can use more idle char lands every year," said Nurul Islam, 58, of Teesta river char at Kaunia upazila.

Kurigram District Coordinator of PAB’s Extreme Poverty Programme SM Mutakabhirul Haque said they provide seeds, fertiliser, irrigation water and training to landless char farmers for growing crops in abandoned chars. “Each of the 2,100 beneficiary farmers is cultivating pumpkin on 24 decimals of char land, and 130 chars are covered with pumpkins now,” he added. Assistant Director of the Department of Agriculture Extension (DAE) in Rangpur Shah Alam said at least 10,000 landless char farmers are engaged in pumpkin farming on the chars in the Teesta, Dharla and Brahmaputra river char areas in five districts. About 35,000 to 40,000 tonnes of pumpkins are produced in these chars every year.

Pumpkin farming brings solvency to the landless char people, Shah Alam said, adding that they also grow other crops in the char areas during the dry season.


Seasonal Work Employment Opportunities for Rural Settlements in Fiji

Fijians in rural settlements nationwide are also eligible for seasonal work employment opportunities. This was highlighted by the Minister for Employment, Hon. Jone Usamate during his meeting with the Tavua Advisory Councils and community members in Tavua College.

“It will be the responsibility of the Advisory Councillors to oversee the selection of the three primary nominations as pilot workers from their respective settlements and submission of names to the Provincial Administrator’s Office,” Minister Usamate said.

Some community members from the rural settlement have been deployed for seasonal work last year and again this year, and my ministry has been receiving positive reports about their performance. “Workers Asish Chand of Navua and Krishnil Mudaliar of Sigatoka kick started seasonal work deployment in New Zealand this year and they have impressed their employer since then.”

Minister Usamate stressed to the Councillors that they must select people who could become door openers and able to work in agricultural farming work. “If we send the right people for seasonal work, Fiji’s quota will automatically intensify through their good performance which is the main strategy for more job opportunities,” Minister Usamate said.

In the same forum, the Minister Usamate also addressed other employment related issues specifically on the terms and conditions of employment, bogus employment agencies and services provided by the National Employment Centre.

Organic Farming Industry in India

Organic farming has been an integral part of agricultural practices across the world for quite a long time now. The sustainable practice of producing and harvesting foodstuffs like fruits and vegetables without using any type of chemicals has always garnered both appreciation and interest from many. These days, people from all walks of life are more than ready to invest in healthy and chemical-free produce that can benefit their overall health in the long run, and are doing their bit to promote healthy living within society.

In India, where the agriculture industry is the biggest in terms of human resource and total farming area, organic farming has been the most natural method of growing crops using natural fertilisers and manures like cow dung and organic compost. Following the green revolution and introduction of modern technology during the early 1960s in this sector, the Indian agriculture industry managed to transform for the better. It gradually witnessed a shift from traditional farming methods to introduction of synthetic fertilisers in an effort to safeguard and guarantee the safety of crops from various pests, diseases, and crop destroying insects.

These policies and initiatives ensured faster production of crops and accelerated the development of modern farming methods. Nevertheless, the usage of various chemicals & pesticides during different stages of farming and packaging made such products highly contaminated by the time it reached end-consumers; and posed great danger to their overall well-being.

Why we need to start focusing and creating more awareness around organic farming?

In recent times, it has been observed by many industry insiders that certain farmers have begun to rely on unethical farming practices to increase production of crops. According to 101 India – an online youth-focused news portal, it was recently reported that some vegetable farmers use silicone sprays, coloured dyes, and injections to keep the produce ‘fresh’ prior to selling them to customers. In the video report, a farmer is seen demonstrating how he, and many other vegetable vendors use silicone sprays to make unsold vegetables retain freshness by delaying the ageing process.

The eye opening report also revealed how most green vegetables are given their bright green colour with the use of Malachite green, an industrial dye. Products were also shown to be injected with the oxytocin hormone to make them grow overnight by accelerating the maturing process. Furthermore, despite being aware of the harmful side-effects of such products, the farmers revealed that they had to rely on such methods in order to earn enough to feed their families. They also said that most customers tend to avoid buying vegetables which look old, but are actually fresh.

Sikkim – India’s first fully organic state

Following some comprehensive policy implementation and rigorous efforts, the Indian state of Sikkim has been officially named the first fully organic state in the country in 2015. The geographically diverse, yet landlocked region also became India’s cleanest state following the enactment of certain rules & guidelines, which regulated the use of plastic bottles and Styrofoam goods across the region.

The move to make this state completely organic came following the introduction of the ‘Sikkim Organic Mission’ project back in 2003. This was done in an effort to eliminate usage of harmful chemical fertilisers and pesticides, apart from creating awareness among farmers about the benefits of organic produce. Following this development, some state government officials across India have begun to design and implement various policies that can benefit the organic farming industry in the long run.

For example, the National Centre of Organic Farming under the ministry of agriculture and farmers welfare has announced an initiative called the National Project on Organic Farming (NPOF) – a Central sector scheme that has been continuing since the 10th Five Year Plan. The main objective of this initiative is to promote organic farming across the country via technical capacity building of all the major stakeholders, including human resource development, transfer of technology, and promotion & production of quality organic and biological inputs. Apart from that, this governing body also plays a vital role in creating awareness and publicity for this sector through print and electronic media.

What’s more, with India becoming a prominent startup hub, many new players have entered the organic foods market in an attempt to exploit the growing opportunities available within this segment.

Emergence of new players in the Indian organic farming space

Over the past couple of years, it has been observed that the organic farming sector in India is entering a transformation stage due to an increase of new ventures that have begun to disrupt the market with their one-of-a-kind offerings. In an effort to promote a healthier lifestyle, these players are playing a pivotal role by providing consumers with naturally grown wholesome organic produce.

Although these players have cropped up in various megacities across the country, the biggest concentration of such startups was found to be situated in the city of Bangalore (Bengaluru). Known as the IT hub of India, Bangalore’s multicultural and tech-savvy youth population is one of the key reasons why this city has become a fertile breeding ground for several organic farming startups. Driven by an ever-increasing urban population, Bangalore is gradually witnessing a rising demand
for organically grown food stuff – a trend that shows no signs of slowing down anytime soon.

**Future of organic farming in India**

According to an industry insider, India currently holds a prominent position among 172 countries that actively practice organic agriculture globally. At present, the country is home to more than 6,50,000 organic producers, 699 processors, 669 exporters, and 7,20,000 hectare under cultivation. However, with only a meagre 0.4 per cent of total agricultural land area designated for organic cultivation, it is evident that this industry still has a long way to go in terms of growth.

Moreover, since the organic food segment is still at a nascent stage in India, both the government and private players will have to develop a strong policy framework that can benefit all involved. For now, it can be safely concluded that the organic farming industry in India holds immense potential to grow, provided it receives steady investment, and benefits from both existing and new initiatives, which can further its growth.

**School Dropout becomes Indonesia's most 'Prestigious Farmer'**

“Education, by itself, does not determine a person’s success,” said Turjangan. The 46-year-old resident of Manggisan village in Batang, Central Java, admits to dropping out of school at age 13 due to financial constraints.

On Aug. 17 last year, he was selected as Indonesia’s most ‘prestigious farmer’ after winning regional awards in Batang and Central Java. The Agriculture Minister Amran Sulaiman personally handed out the award to the accomplished farmer. Turjangan’s path to success has been potholed with challenges. As a young teenager, he traveled to Salatiga in Central Java with an equivalent of Rp 60,000 (US$4.5) in his pocket, and used it to set up a toasted bread stall on the roadside. “With that initial capital I sent all my younger siblings to school, until they graduated in Salatiga,” he said during a workshop on organic fertilizer at his home.

In later years he became a floor-cleaner at the Wawasan newspaper office in Salatiga, with a salary that barely kept him alive. Despite other job offers coming in, he stayed on just so he could learn the inner workings of the press. “I’m not well educated, so wherever there is knowledge I want to take hold of it,” said Turjangan. “When I see something I don’t understand I chase it. I will pay for it. My orientation is business—finding the right formula is not easy, it takes a lot of peeping around.”

In 2000, Turjangan took his hoe to half a hectare of land. He became leader of a local agricultural collective, and the indefatigable farmer started peeping around for solutions to two big problems: agricultural waste, and the cost of chemical fertilizers. He found his answer in biogas—a technology that converts livestock manures into a gas for fuel, and produces a liquid fertilizer as a by-product.

According to this father of two daughters, many communities in Indonesia are disrupted by agricultural waste. The stench of poorly handled cow manure seethes in the villages; the problem is hated, and avoided. “People rarely care about waste, but if we can make something of it, we should take care of it,” he said.

Turjangan’s search led him to become heavily involved with farmer’s federation Qariyah Thayyibah in Salatiga, where he regularly held meetings with the organisation’s 15,000-odd members, encouraging them to shift to organic farming practices. “The overuse of chemical fertilizers reduces soil fertility; it also contributes to water pollution and can harm the farmer directly.” During these years, Turjangan dabbled as a supplier to traditional medicine company Sido Muncul, began lecturing at the university STAIN in Salatiga near to where he used to be a hawker, and in 2012 received a national award from the Energy and Natural Resources Ministry for his work with biogas.

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**School Dropout becomes Indonesia's most 'Prestigious Farmer'**

By S Madhusudhan. The FnBnews.com.
January 14, 2017. India.

**In 2014, he entered his fertilizer into a competition carried out by the technology innovation foundation INOTEK. He won, and came home with $10,000. Turjangan now makes his line of organic liquid fertilizer from rumen, the half-digested grass taken from a cow’s stomach after slaughter. His market stretches from Aceh in the west to Merauke in the east, and his company Lestari Makmur Nusantara is known to turn over Rp 975 million a month. “My only capital has been recklessness,” Turjangan laughs. “But Insys Allah I can do it. I developed my own formula. When I got my [national organic certification] it was something they’d never seen before. You can make fertilizer using biogas, with rumen, with anything really, so long as it’s standardized and the lab results are consistent. The question is: how can we not fall asleep, but always keep learning?”**

Today, Turjangan is teaching a workshop on organic fertilizer in his own warehouse. Behind him are ten giant 5,300 liters yellow drums, churning out tons of light-brown liquid for a range of different purposes. The smell of his finished product is sweet and fragrant, thanks to the addition of molasses, and
a precise process of fermentation. Turjangun’s giant leap into organic farming is not taken blindly. When asked about the future of organic farming, he refers to President Joko "Jokowi" Widodo’s promise outlined in the Nawacita—or ‘nine hopes’ agenda—to build 1,000 organic villages across the archipelago nation.

Agriculture Minister Amran Sulaiman has also recently encouraged the development of organic farming. “We will support [organic farming] because it is healthy, very popular, and the export demand is extremely high,” said Amran during a World Food Day event in Boyolali back in October 2016. Amran also revealed that the production of organic food in 2016 grew 67 per cent compared to 2015.

The Director of Investment for Indonesia’s state-owned enterprise PT Popuk Indonesia Holding Company has too made a statement in favor of organic farming. On Dec. 23, 2016, Guzrizal wrote that, “The national capacity for organic fertilizer is still way below the demand, especially if we want to match it to our balanced fertilizer ratio of 5:3:2.” This ratio—5 parts organic fertilizer to 3 parts NPK to 2 parts urea—has been proposed by the government, and would see a boom in organic fertilizer if realized.


Water Crisis Formidable Challenges in Nepal

Ultimately, national leadership must be made fully aware that insensitivity towards national water management is a perfect recipe for security risk in the long term. There are conflicting claims on whether humans can do anything about climate change or not. But because of our reliance on natural resources for living and economic progress, developing nations like Nepal suffer the most. Rapidly melting glacial lakes, ever expanding barren hills and shortage of water in the most of the usual population centers are some of the significant but late indications blinking as an alarming climatic traffic light. It is a ticking time bomb that in the long term can incubate formidable security challenges.

Scientists believe global warming has contributed to the rise in temperature. Hence, the polar ice is melting and the sea level is rising. Since Nepal relies on water flowing from snow fed mountains in the north it will undoubtedly be hard hit. We have no choice but to face the climate change squarely. However, we must do everything humanly possible to ease the suffering of the Nepalese people and safeguard their right of security guaranteed by the constitution.

It will be relevant for Nepal to stimulate our leadership’s appetite for change in attitude in formulating a needful comprehensive strategy on water that will enhance food security and ensure human security. Lush green near nap-of-the-earth flight and frequently encountering blue ponds and lakes of varied size made to think about Nepal, the second richest country in inland water resources in the world.

As of now for every ordinary people, Nepal can be characterized as a nation where a justice seeker like the late Nanda Prasad Adhikari has to wait in the mortuary shelf posthumously for justice, doctors like Govinda KC have to sit for fast unto death to be heard and social entrepreneurs like Mahabir Pun denied support for innovation.

No leaders or relevant officials have time to ponder on my less than a thousand word narration flagging a necessity to create a comprehensive long-term strategy to manage 220,000 billion cubic meters of water. But ultimately, national leaders must be made fully aware that insensitivity towards national water management is a perfect recipe for security risk in a longer term. Therefore, they must be responsible for creating a comprehensive strategy and held accountable on what they do and fail to do about national waters. Honestly, let us seek a single leader for whom our descendants would proudly be quoting him saying, “Not one drop of water shall cross Nepal without first serving the Nepalese people”.

Nepal needs to work on a war footing to save the pristine nature and precious water. It is obvious, when water from the Melamchi hits our tap, it would ease the thirst of Kathmandu residents, but what about the rest of the nation? “A stitch in time saves nine” so let’s open a right trajectory by changing our collective attitude to create a comprehensive strategy on water management and confront the climate change. Let’s keep water as a symbol of peace and prosperity—not a reason of insecurity and instability.


Home Gardens in Pakistan: A Sound Approach to Food Security

Food security is pivotal for good health of human beings with rich nutrition, but changes in climate patterns are shrinking the food and have left some institutions at pains to pave the way for solutions to it; at this point Home Garden (HG) comes out with one of its solutions along with other new modern scientific techniques.

In this contemporary era of technology, some institutions around the world were making all-out efforts for gaining access to scientific as well state-of-the-art techniques and terming HGs as one of the sound approaches to food security.

Asia-Pacific Network (APN) for Global Change Research, a regional platform, is also one of its 22 member countries, coping with the challenges of global change and sustainability in the region. APN funded-project titled, “Vulnerability of Home Garden Systems to Climate Change and its impacts on Food Security in South Asia” has provided
a deep understanding of fresh veggies to the people with opportunities of household income. Recently, APN in collaboration with University of Peradeniya, Sri Lanka, organised a South Asia Media Visit to Kandy, Sri Lanka for Journalists of eight countries to highlight Home Gardens value. According to the above study, “The home gardens in study areas showed resilience to climate change and had a considerable contribution to household food security.”

Home Garden is a term used for an agro-forestry system, combining multiple farming components such as crops, trees, shrubs, herbs, livestock and occasionally fisheries.” It is said that Home Gardens’ total area in South Asia is about 200 million hectors and over 80 per cent of home gardens in the region (South Asia) are extremely small with an average size of 0.6 hectares (the size of a small football field), the APN document added.

According to data available on the website of Ministry of National Food Security and Research, Pakistan, the agriculture sector contributes 21.4 per cent to the GDP and employs 45 per cent of the labour force.

One in three Pakistanis does not have a regular and assured access to food. The most vulnerable are children, particularly girls, women and the elderly, especially among the lower income groups”, it adds. The slow process of technological innovations and the poverty, food security and food safety remain major challenging issues in the country. Apart from other major looming issues on food security, agricultural lands in Pakistan, particularly in urban centres, are also being converted into housing projects by cutting short local cultivation of vegetables which is depriving people of healthy veggies. In some parts of the country, growers are cultivating vegetables with contaminated water and introducing chemicals to grow foods quicker, which is creating health problems for the people.

Home Garden Systems and awareness about their importance are the need of the hour to meet the demand of healthy veggies for the people in the country. Research institutions, policy makers and all those who are connected directly or indirectly with the agriculture and food security should focus on the new and scientific techniques to improve the food security in Pakistan. According to World Food Programme (WFP), the food security means when: “People are food secure when they have availability and adequate access to food all the time to maintain a healthy and active life.”

The proper planning for home garden systems in the urban areas of the country can bring a positive change to the lives of the people in terms of healthy foods.


Seeds of Innovation

Historically seen as the lifeblood of economic prosperity, agriculture is at a crossroads as soaring global demand for food exposes the limitations of traditional farming. However, advances in technology, production techniques and farming know-how are starting to bear fruit in the drive for food security. Demand for agricultural products is rising rapidly given the increasing world population and higher meat consumption per capita as societies become more affluent. The Food and Agriculture Organisation of the United Nations estimates that the world population will increase by 35 per cent to 40 per cent to 9.7 billion people in 2050. Globally, meat consumption per capita is estimated to increase by 12 per cent annually.

Given this projected growth, demand for agricultural products will climb significantly, considering that one kilogram of meat requires 2-7 kg of farm products as feed. A case in point is China, which has switched from being an exporter of grains to importing 40 per cent of its domestic grain requirements in 2015.

“With the world population predicted to grow by 40 per cent between now and 2050 and 80 per cent of that growth expected to come from Asia and Africa, helping smallholder farmers who account for 80 per cent of local food production to increase their productivity and income is an absolute necessity [in terms of] food security, nutrition and health,” Bert van der Feltz, president of East-West Seed ROH Limited, said.

Research and technology (R&T) can help mitigate challenges facing the agricultural sector, such as an ageing population and increasingly erratic weather, but sufficient R&T investment must be made in order to generate fruitful outcomes, he said. “Only with changes in cultivation techniques and more productive seeds can we solve the challenge of food production to meet rising demand in consumption,” van der Feltz said.
Founded in 1982 in the Philippines, East-West Seed is one of the 10 largest vegetable seed companies in the world, with operations in major Southeast Asian countries including Thailand. In 2016, the company ranked first on the Access to Seeds Global Index for Vegetable Seed Companies and on the Regional Index for Eastern Africa.

The company invests between 11 per cent and 15 per cent of its annual turnover in research and technology development. East-West Seed’s research combines conventional breeding techniques with new technologies, such as the use of molecular markers and tissue culture, to help breeders develop and select seeds with the best characteristics. Hatthaya Arunnothayanan, molecular genetics laboratory manager at Hortigenetics Research (Southeast Asia) Limited in Chiang Mai, said the marker-assisted selection process is used in genetic purity assessment and trait genotyping of seeds to assist the selection of plants in a breeding programme. To help identify specific genes, scientists use molecular or genetic markers to improve the efficiency and precision of plant breeding.

Applying biotechnology has shortened the seed development time to between three and four years from seven to eight years earlier, said Hatthaya. In addition, it ensures pure-line seeds for plant cultivation and prevents seed-borne diseases. Similarly, DNA molecular selection technology is being used by Singapore’s Temasek Life Sciences Laboratory to zero in on desired traits and breed new, improved crops. One of its flagship innovations is Temasek Rice, which took eight years to develop. It is a resilient breed capable of withstanding extreme weather conditions and producing higher yields.

Despite an increasing shift toward the industrial and services sectors, Thailand, as a major agricultural producer in Southeast Asia, should not overlook developing its agricultural industry as it can be a foundation for more economic growth, said van der Feltz, noting how the Netherlands has successfully built its farm sector into a hugely profitable industry.

**New Farming Innovations**

Another important way to bolster food supply involves increasing technological intervention at the farm level. Mobile communication technology can disseminate real-time information on weather conditions, dedicated advice on nutrient and water management, and sharing of best practices in farming via mobile applications.

Rural e-commerce platforms such as Alibaba’s Taobao Village, which connects farmers to consumers across China and promotes farm development through cloud computing, big data and rural finance, could become the blueprint for similar developments in other Asian markets. While agriculture will continue to be an important part of Asean economies as they strive to achieve food and nutrition security for their populations, technology is an essential tool to open up new prospects, according to Maureen Mecozi, head of communications and information of the World Vegetable Center. “While field production may become more mechanized and consolidated, and thus require less labor, the need for people to work in value addition — in making and marketing new food products — will likely rise,” she said. Urban production of vegetable crops can also provide jobs for city dwellers. There is a lot of opportunity for entrepreneurs interested in serving particular market niches — for instance, producing high-quality, safe vegetables for hotels and hospitals, she said.

Upon zooming over an oil palm plantation, it generates data including aerial maps and three-dimension land contour models. This data is fed through an artificial intelligence system, which generates a report on tree health and land optimization. Given all these features, farmers can allocate fertilizer and other resources to areas that need the most care, reducing cost and waste.

Having a strong network of farmers’ associations also help a great deal, as Taiwan has shown, said Mecozi. “There are more than 300 of these associations across the island. Farmers join together to purchase inputs, rent machinery and set up packing and processing facilities. They are especially good at marketing and branding products from specific areas.”

Thailand also has potential to boost crop yields and agricultural export value using agricultural technology, according to the Economic Intelligence Center (EIC) of Siam Commercial Bank. It recommends systematic development in terms of encouraging farmers to both increase yield per rai and match crop requirements with land conditions.

“Agriculture-related businesses can help increase understanding of new technologies among farmers to accelerate adoption rates,” said the EIC. “Simultaneously, Thailand’s agricultural tech startups have opportunities to develop inexpensive systems that are more suitable for Thai crops and weather conditions.”

**Insufficient Research and Technology**

While the rising share of agricultural Research and Technology (R&T) spending in Asia is being driven largely by investment from China and India, other countries have a lot of catching up to do. A lack of R&T highlights an underlying problem, especially when natural resources are becoming scarce and population growth is moving in the opposite direction.

Thailand is a case in point. Lower rates of technology adoption in the Thai agricultural sector have kept yields per rai low. The average corn yield in Thailand is 644 kilograms per rai compared with 1,691 in the US, where farmers
embrace more agricultural technology, according to the EIC. The R&T budget allocated to the Thai rice industry, the country’s most important crop, is 15 times less than that of Vietnam, a major competitor. “One of the reasons Thailand’s farmers shy away from agricultural technology is that most agricultural plots are small-scale, making more advanced technology not worth the investment,” said the EIC.

Van der Feltz concurs that there is “insufficient” R&T in Thailand’s agricultural industry, though it is perceived that the country’s agricultural R&D is fairly good compared with other Asean countries. Wichai Laocharoenpornkul, General Manager for Thailand at East-West Seed Co Ltd, said technology would inevitably play a greater role in Thailand’s agricultural development.

There is also the issue of disparity in technological transfer between large agricultural conglomerates and small-sized farm producers, with the latter far behind in terms of R&T and innovation, said former natural resources and environment minister Prapat Panyachatrak, who operates the Petch Lanna Farm in Lampang province. Other challenges include the greying population, which is reducing labor availability in the farming sector. Meanwhile, climate change increasingly threatens cultivation, as seen in the devastating effects of drought in recent years.

In the case of Thailand, attitudes toward farming are also a persistent challenge. University graduates prefer careers in fields such as information technology, finance or the medical sector as opposed to being employed in agriculture, possibly because of social stereotyping, said van der Feltz.

The threat of climate change, which is happening mainly in the tropical regions, is looming large over agricultural production in Asia. One study estimates that the yield potential in China for major crops — rice, wheat and maize — could fall by 15-25 per cent from the 2000 baseline by 2050, according to a Rabobank economic report. Yields are expected to decline in tropical regions such as South and Southeast Asia through at least 2100. According to one estimate, relative to 1990, rice yields in Southeast Asia are projected to fall some 50 per cent by 2100, said the report, noting that climate factors would accentuate the already declining growth in cereal production.

“Agricultural pests adapt as the climate changes, in some cases expanding their ranges, or increasing the number of populations they produce in a season or year,” said Mecozzi. “Climate change also alters how crop diseases spread or persist. It is important to monitor these adaptations so they can be addressed promptly with improved crop varieties and production methods.”


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**Food Security at Risk in Vietnam due to Climate Change**

More solutions are urgently needed to ensure Vietnam's food security as climate change has transitioned from a risk to a nationwide reality, said an agricultural Deputy Minister.

Vietnam is still considered an agricultural country, with approximately 70 per cent of the population living in rural areas which are highly susceptible to climate change, said Agriculture and Rural Development Deputy Minister Le Quoc Doanh at a regional conference on food security held in Hanoi.

“Vietnam is one of the countries most vulnerable to climate change in the world, having to face several natural disasters nationwide like drought and salt intrusion along with abnormally prolonged cold spells and floods,” he said.

The two-day conference, jointly organised by Vietnam’s Ministry of Agriculture and Rural Development and the Netherlands’ Ministry of Economic Affairs, has discussed ideas of innovation and co-operation to promote the practice of climate-smart agriculture. The agricultural sector, faced with tremendous climate change challenges, must embrace new farming ideas. The Government, for example, allowed nearly 100,000ha of salt invaded fields along the coastline to be transformed to aquaculture areas, Doanh said.

Farmers in Ninh Thuan Province, meanwhile, turned to grow apple, grapes or garlic instead of rice to adapt to the harsher drought in the region. It is neighbouring Binh Thuan Province also dropped rice to grow the more valuable dragon fruit. “Such measures by and large have helped Vietnam to ensure the food security in the times of climate change,” he said. It was hoped that participants (of the conference) will bring out new ideas and solutions to promote the climate-smart agriculture.

# Calendar of CIRDAP Activities during April - August 2017

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<th>Date</th>
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<td>22-26 May 2017</td>
<td>Regional Workshop on Sufficiency Economy Philosophy</td>
<td>Bangkok &amp; Chachoengsao</td>
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<tr>
<td>April/May 2017</td>
<td>Field Visit to the Rural Development Academy (RDA) on Agro-tourism</td>
<td>Province, Thailand</td>
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<td>14-18 August 2017</td>
<td>Workshop on Cold Chain and Logistics Management for Agri-Food Products</td>
<td>Bogra, Bangladesh</td>
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<td>August 2017</td>
<td>Regional Workshop on Development of a Regional Project on Community based Non-wood Forest Products and Enterprise: A Sustainable Business Model</td>
<td>Fiji</td>
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