

Report

On

5 Days Skills Training on Low Cost Appropriate Technology

Organised By

THE STATE INSTITUTE OF RURAL DEVELOPMENT

THE MEGHALAYA BASIN DEVELOPMENT AUTHORITY (MBDA)

In Collaboration With

**THE STATE COUNCIL OF SCIENCE TECHNOLOGY &
ENVIRONMENT (SCSTE)**

SHILLONG COLLEGE EXTENSION CAMPUS, MAWKASIANG

&

THE CONSORTIUM OF RESOURCE PERSONS (CoRP)

Date: 15TH – 19TH February 2021

*Venue: Shillong College Extension Campus, Mawkasiang
East Khasi Hills*



BRIEF NOTE ON SHILLONG COLLEGE EXTENSION CAMPUS, MAWKASIANG

Shillong college established in 1956 is one of the premier institutions of the state of Meghalaya. Since inception it has seen an unprecedented all-round growth and development. The college is well known as one of the institution in the state that promotes not only academics but also curricular activities notably in sports, community participation, cultural activities and entrepreneurial skills and competencies. With the passage of time, the college has opened an extension campus at Mawkasiang village for physical education and related courses as well as centre of knowledge for the village people of Mawkasiang village.

The main focus of introducing and imparting this training programme was to empower the youth of Mawkasiang and adjacent villages by providing opportunities like skills trainings. The objectives of the programme were to equip the community by providing skills training which will enhance their livelihood and to ensure economic development for uplifting the community.

The advantages of these technologies are that the materials used are all readily available, some for free and others at minimal cost, user and environmental friendly and easy to construct or make.

The participants were both Males females, altogether, 21 of them registered for the training.

Day 1: Inauguration

The Five days Skills Training programme was organised at Shillong college extension campus, Mawkasiang. The Programme is jointly organised by SCSTE, SIRD, CoRP and Shillong college. The Training programme was inaugurated by Shri. T. Kharkongor Headman of Mawkasiang village in the presence of Shri. C.P Syiem Programme Officer SCSTE, Shri. S. Khanshandi Lecturer Shillong College, **Shri. R. Pyngrope** president CoRP, the Resource Persons headed by Shri. Shanborlang Wanniang, the village executive members and the youth of the village. The Training programme was inaugurated on the **15th February, 2020**.

The inaugural function began with the welcome note by Shri. R. Pyngrope. On the outset, he welcomed the Guests to the function that includes Shri. T. Kharkongor the village headman and the village council members, Shri. C.P Syiem, Shri. S Kharshandi, the Resource persons and the participants. In his speech, he stressed on the vision and purpose of the training and challenged all the members, especially the participants, to take this training as a lifetime opportunity and give their best in these 5 days of learning and interaction. He advised them to avail all resources and information from the Resource Persons who would be training and guiding them by contributing their valuable time and knowledge in the particular field. He also assured them that by the end of the training they would be able to have a broader and clearer vision, and envisage the outcome of the programme for their community.

Shri R. Pyngrope also highlighted the various types of technologies that were to be demonstrated and displayed throughout the training.

Shri. C.P Syiem in his message highlighted the different technologies propagated by the State Council of Science Technology & Environment. The office of SCSTE aims to ensure effective utilisation of Science & Technology for all round development of the state, building up the existing skills of the farmers on production and value addition through training and capacity building exercises. The technologies propagated by SCSTE are based on known scientific principles which have been modified through field testing in order to suit the local conditions, local needs, culture and traditional ways of the people and which have a potential for uplifting and improving the day to-day life of the people.

Shri. S. Kharshandi spoke at length on the objective of setting up the college extension campus. The campus will serve as the resource centre for the village youth particularly in promotion of physical education. Different programmes and training will be conducted at the campus for the benefit of the village people. He thanked the office of the State Council of Science Technology & Environment for extending hand in organising the five days skills training on low cost appropriate Technology. He appreciated the resource team of SCSTE and CoRP for their willingness to spent their time and effort for imparting knowledge to the youth of the village.

Shri. T. Kharkongor in his speech acknowledges the contribution of the management of the Shillong college for the welfare of the village. The existence of the extension campus has brought name to the village. As the college has brought programme to the village in convergence with MBDA, SIRD and SCSTE, he exhorted the youth / participants to take the training into heart so as they will benefit after the end of the training. To make his message clear, he cited lots of examples and parables. Many people are willing to invest money to purchase expensive gadgets including mobile phones so that the gadgets can serve several purposes. Likewise, he encourages them to invest their time and effort in learning during the course of the training.

The inaugural function was concluded with the vote of Thanks proposed by the Rangbah dong Umroh.

Post inaugural function, the training programme began with the division of groups and presentation on the schemes of SCSTE presented by Shri Shanborlang Wanniang, Resource Person SCSTE.

THE SESSIONS ARE TAKEN AS SCHEDULED IN THE FOLLOWING TABLE

Date/ Day	Session I	Session II	Session III	Session IV	Session V	Session VI	Session VII	Session VIII
15/02/21 Day 1	Theory IC	Theory RWH	Theory LCCS	Theory TWF	Theory TWS	Practical RWH	Practical RWH	Practical RWH
16/02/21 Day 2	Theory SGT (VC)	Theory SGT (VC)	Theory SGT (OGP)	Practical SGT (OGP)	Practical RWH	Practical RWH	Practical RWH	Practical RWH
17/02/21 Day 3	Theory BV	Theory Nonsoil	Practical Nonsoil	Practical SGT (VC)	Practical SGT (VC)	Practical SGT (OGP)	Practical SGT (OGP)	Practical RWH
18/02/21 Day 4	Practical IC	Practical IC	Practical IC	Demo LCCS	Theory PP	Practical PP	Practical RWH	Practical RWH
19/02/21 Day 5	Theory SGT (BP)	Theory SGT (VF)	Practical SGT (BP)	Practical SGT (VF)	Theory SGT (BT)	Practical SGT (BT)	Practical RWH	Practical RWH

IC = Imprved Chulha, RWH = Rain Water Harvesting, LCCS = Low cost Cold Storage, TWS = Twinpit sanitation, VC = Vermi composting, OGP = Organic growth promoter, BV = Bamboo Vinegar, VC = Vermi composting, BP = Bio pesticides, BT= Bait Trap

BRIEF NOTE ON THE TECHNOLOGIES INTRODUCED IN THE TRAINING

IC= Improved Chulha: This is an improved design of cooking stove which reduces the consumption of firewood and smoke emission. It is cost efficient because the materials used for making it are readily available and is affordable. It is made of cement or soil, sand, cow dung, husk, CGI sheet and planks. It is designed with double pot-holes and another chamber for smoking meat, chilly etc. Some of the advantages of this technology are low construction cost, easy and minimum time for construction and smoke free which keeps the house and utensils clean. Improved Chulha is suitable for rural and low income group of people.

TWS= Twin pit sanitation: Twin pit sanitation is safe, hygienic, healthy and user friendly. It is constructed with two pits separated by an impervious wall to percolate water. The wall of pits resemble honey comb through which the water seeps in, and the two pits are connected with pipe or brick channel. It takes 5 years to fill a single pit, and when the first pit gets filled the second pit is used. This technology is suitable for rural areas because the materials used for construction is locally available. Also, the waste from the old pit can be used as manure. Thus TS provides improved and enhanced living condition even for the rural poor.

LCCS= Low Cost Cold Storage: This technique is designed to preserve farm products. One of the farmers' plights is the non-availability of storage for vegetables and fruits which leads to huge loss in their income. Low cost cold storage does not require either electricity or specialized manpower. It is designed in such a way that it works on the principles of direct evaporative cooling. Easily available materials like bricks, river sand, bamboo, straw and water are used for its construction. This technology is useful especially for small farmers, who usually are forced to sell their products at low prices.

RWH= Rain water Harvesting: Rain Water Harvesting is a technique through which rainwater is collected through proper channel. Here, rooftop water is being collected into a water tank, poly or cemented tanks for storage and subsequent use for domestic purposes. In this method, a provision for water filtration medium is attached by using sand, charcoal, coir and pebbles. Cemented or Poly tank, PVC pipes etc. can be used for constructing the reservoir. This method is ideal for solving water scarcity problem and is eco and user friendly. It is also cost effective because it involves only one time investment.

SGT= Sustainable Green Technology: In Sustainable Green Technology, resources are treated or used in such a way that it does not have any long-term adverse effect on the environment. It also helps to reduce emissions, conserves water, reduces the threat of waste due to waste recycling and reduces consumption of energy as compared to other conventional technologies. The techniques that were introduced under SGT are given below.

- ❖ **Organic Growth Promoter (OGP):** This is a type of liquid fertilizer which contains the enzymes from rotten vegetables and jaggery. This fertilizer helps in the growth of vegetables and fruits, and prevents flowers or fruits from falling off. The required materials for making the fertilizer are rotten fruits, jaggery and a 15litre bucket with lid. These materials are easily available and is affordable even for small and poor farmers. The method of preparation is also easy and hence it can be prepared by any farmer at home.
- ❖ **Vermicomposting (VC):** Vermicomposting is a technique which utilizes microorganisms and earthworms to accelerate the process of composting. This procedure requires low temperature and only the worms do the work.
- ❖ **NADEP(Composting):** This is a process of obtaining fertilizers by mixing rotten vegetable and leaves etc. with soil and cow dung. Other materials required for this method are bamboo, wooden posts, wooden bedding, bucket and water. The method of preparation and construction of the space is easy and uncomplicated. The duration period to prepare this fertilizer is 3 to 4 months.
- ❖ **Non-soil Composting:** It is a natural process by which biomass, wastes, animal wastes are biologically degraded and decomposed into organic compost. The materials required are all locally available like bamboo, blank or wooden box/tank, agricultural wastes, cow dung and water. The procedure is easy and relatable to the rural population, which makes this technique preferable even to the rural farmers.
- ❖ **Bio-Pesticides:** Also called Broad Spectrum Bio-Pesticide, it is an organic solution prepared from plants that have bio-pesticidal properties. Materials used for preparation of the pesticide are stinging nettle, water, cow urine, geranium spp, neem leaves, chilli, garlic, ginger, seeds and leaves of zanthoxylum (jaiur), allium, tobacco, lantana camara and eupatorium spp. The method of preparation and the instruction of usage are easy to follow and implement. This bio-pesticide controls wide variety of pests such as thrips,

leafhopper, leaf folder, mealy bugs, fruit, stem and bark borer, hairy caterpillars and aphids.

- ❖ **Bait Trap (BT)**: Bait Trap is an easy means of entrapping fruit flies. It is made out of reusable water bottles and water, jiggery and rotten fruit juice solution. In this method, an opening is created around the bottle for the flies to enter. The traps are then hung on the branches at a height of 3 feet from the ground within 400sq.m apart (12 traps per acre). This technique is easy with hardly any cost and, therefore, it can be practiced by all the farmers.

Valedictory Function:

The five days skills training on Low cost appropriate Technology was concluded at the playground of the Shillong college extension Campus. Shri. Pyniaid Sing Syiem Chairman KHADC graced the occasion as the chief guest of the day in the presence of Dr. E. Kharkongor Principal Shillong College, Shri. C.P Syiem PO SCSTE , Shri. T. Kharkongor Headman Mawkasiang and other guests and dignitaries.

The Valedictory function was organised on the **19th February, 2021**, the last day of the training. **Dr. E. Kharkongor** Principal Shillong College welcomed all the guests to the function and expressed happiness that the Training programme was successfully conducted in a short notice. She appreciated the participants for successfully completing the training. In a special way she thanked the organisers of the Training that includes SCSTE, MBDA and SIRD.

Message: The village headman **Shri. T. Kharkongor** spoke on the occasion expressing his gratitude to the organisers and the Resource persons who had spent their time in the village and imparting knowledge to the villagers. He urged the villager to utilise and replicate the knowledge learned during the training period.

Message: **Shri. C. P. Syiem** spoke at length about the programme of the State Council in the field of Science and as well as Technology propagated and promoted by the SCSTE. He appreciated the Resource team for their valuable time and knowledge shared to the villagers. He also encouraged all the villagers, especially the youth, to apply these low cost

technology as it not only cheap but also environment friendly which in turn would not have negative and long-lasting impact on the environment.

Message: Shri. Pyniaid Singh Syiem, Chairman KHADC in his message spoke on the importance of Training. There are many kind of trainings imparted by different Government Departments. All Trainings aim at skilling villager, farmer in order to promote their livelihood and also to identify Entrepreneurs. He appealed to all the participants to utilise the learning and skills received during the course of the Training. The knowledge has also to be shared with friend and neighbours so that knowledge multiplies.

Vote of thanks by Shri. K. D. Roy: Vice Principal Shillong college On the vote of thanks Shri. K.D Roy expressed his sincere appreciation to the organizers like SIRD, MBDA, SCSTE and CoRP for conducting this program in the village and particularly in the College extension Campus. He especially thanked the chief Guest of the day Shri. Pyniaid Singh Syiem, Dr. E. Kharkongor Principal, Shri. C.P Syiem, Shri T. Kharkongor and the council members for their time and effort to be part of the valedictory session. He acknowledge the contribution of the Resource Persons under the leadership of Shri. S. Wanniang who had given their valuable time and service to impart knowledge to the participants. He also thanked the village council members led by the Headman for their encouragement and also for providing all necessary resources for conducting this training. He acknowledged the effort and sincere participation of all the registered participants.

The programme concluded with the distribution of certificates and sharing of experiences by the participants

Summary of the Feedbacks from the Trainees

In order to access the outcome of trainings, feedbacks were collected in the form of questionnaire. The matrix below shows the preference of the participants with all the activities that had been conducted during those five days programme.

MALE

Sl.No	Name	1 st Priority	2 nd Priority	3 rd Priority	4 th Priority
01	Wankitboklang Nongkhlaw	Sustainable Green Technology (Vertical Farming)	Sustainable Green Technology (Organic Growth Promoter)	Stabilized Mud Block	Low cost Cold storage
02	Kolias Mawlong	Sustainable Green Technology (Vertical Farming)	Sustainable Green Technology (Organic Growth Promoter)	Stabilized Mud Block	Low cost Cold storage
03	Richard Kharumnuid	Not Mentioned	Not Mentioned	Not Mentioned	Not Mentioned
04	Fullmoon Suting	Rain Water Harvesting	Improved Chulha	Sustainable Green Technology (<i>Vermi Composting</i>)	Sustainable Green Technology (Non soil)
06	Banteikam kharkongor	Pedal pump	Stabilized Mud Block	Sustainable Green Technology (Organic Growth Promoter)	Sustainable Green Technology (<i>Bio Pesticides</i>)
07	Pyniaidkam Kharkongor	Rain Water Harvesting	Pedal pump	Stabilized Mud Block	Sustainable Green Technology (Farming)
08	Kyrmenlang Nongkhlaw	Sustainable Green Technology	Pedal pump	Sustainable Green Technology	Stabilized Mud Block

		(Organic Growth Promoter)		(Bio Pesticides)	
09	Korbarkam Kharkongor	Stabilized Mud Block	Sustainable Green Technology (Organic Growth Promoter)	Sustainable Green Technology (Vertical Farming)	Pedal pump
10	Listerwell Nongbri	Pedal pump	Stabilized Mud Block	Sustainable Green Technology (Organic Growth Promoter)	Sustainable Green Technology (Bio Pesticides)
11	Westernroy Nongrum	Rain Water Harvesting	Sustainable Green Technology (Farming)	Pedal pump	Stabilized Mud Block
12	Bannehskhem Mynsong	Rain Water Harvesting	Pedal pump	Sustainable Green Technology (Farming)	Stabilized Mud Block
13	Endarson Nongsiej	Rain Water Harvesting	Pedal pump	Sustainable Green Technology (Farming)	Stabilized Mud Block
14	Shanskhem Kharkongor	Rain Water Harvesting	Pedal pump	Stabilized Mud Block	Sustainable Green Technology (Organic Growth Promoter)
15	Dapynshaibor Nongbri	Rain Water Harvesting	Sustainable Green Technology (Farming)	Pedal pump	Stabilized Mud Block
Rain water Harvesting		7	0	0	0
Sustainable Green Tech		3	5	7	5
Low cost Cold Storage		0	0	0	2
Pedal Pump		2	5	2	1
Stabilized Mud Block		1	2	4	5
Improved Chulha		0	1	0	0

FEMALE

Sl.No	Name	1st Priority	2nd Priority	3rd Priority	4th Priority
01	Genevieve Nongbri	Rain Water Harvesting	Sustainable Green Technology (Vertical Farming)	Sustainable Green Technology (Bio Pesticides)	Pedal pump
02	Ibansara Mynsong	Sustainable Green Technology (OGP)	Sustainable Green Technology (Vertical Farming)	Sustainable Green Technology (Bio Pesticides)	Rain Water Harvesting
03	Dapmon Nongrum	Rain Water Harvesting	Sustainable Green Technology (Vertical Farming)	Sustainable Green Technology (Vermi Composting)	Sustainable Green Technology (Bio Pesticides)
04	Ritilda Nongbri	Rain Water Harvesting	Sustainable Green Technology (Vertical Farming)	Sustainable Green Technology (Vermi Composting)	Sustainable Green Technology (Bio Pesticides)
05	Steffie Nongbri	Rain Water Harvesting	Sustainable Green Technology (Vertical Farming)	Sustainable Green Technology (Bio Pesticides)	
06	Sofiana Suting	Sustainable Green Technology (Non soil)	Sustainable Green Technology (Vermi Compost)	Sustainable Green Technology (Berkely)	Sustainable Green Technology (Composting)
<i>Rain water Harvesting</i>		4	0	0	1
<i>Sustainable Green Tech</i>		2	6	6	3
<i>Low cost Cold Storage</i>		0	0	0	0
<i>Pedal Pump</i>		0	0	0	1
<i>Stabilized Mud Block</i>		0	0	0	0

From the above priority chart, it is established that most of the participants are more interested in Rain Water Harvesting. This confirms that people in the rural areas are now aware of the importance of water conservation and safe, clean and hygienic lifestyle. This proves that the training had made the villagers aware of conservation of water to be utilized during lean season and is aware of the importance of safe and clean drinking water. But overall, the participants are also happy to have learnt various kinds of technologies, which will be implemented as well as imparted to other fellow villagers. In general, the training programme was of great success. The other highly appreciated Technology is the Sustainable Green Technology. This can be mainly due to the majority farming population in the community. Other aspects can be the low cost or no cost requirement in carrying out the process of the techniques, easy and readily available of the materials required and easy method of construction and preparation.

SUMMARY OF THE FEEDBACKS OBTAINED FROM THE RESOURCE PERSONS

As per the feedback from the Resource Persons, it is understood that the participants had great enthusiasm to learn about every technology that was taught. According to them, since the community mostly engage in farming the interest of most of the participants was focussed towards Sustainable Green Technology, especially the techniques of bio-fertilizers, organic growth promoter, and composting.

The resource persons were also of the view that all the village labourers engaged during the training period have shown so much interest and they have expressed that their willingness to extend their knowledge to other villagers who were not able to attend the training.

EVALUATION SUMMARY

The outcome of the training programme has been assessed through the interaction with the Trainees. Evaluation sheets were also distributed to them to share their feedbacks. The participants commented on the training that it was the first of its kind to be introduced in their village. They also expressed the positive and long term impact that the training would have especially in the field of safe drinking water and agriculture. The participants are also happy that to have learnt various kinds of technologies, which will be practiced as well as imparted to other fellow villagers. Overall, the training programme proved to be successful.

REGISTRATION OF PARTICIPANTS

SKILL TRAINING ON LOW COST APPROPRIATE TECHNOLOGY				
VENUE: SHILLONG COLLEGE EXTENSION CAMPUS, MAWKASIANG				
DATE: 15th -19th February 2021				
Sl. No	Name	Gender	Address	Contact No.
01	Wankitboklang Nongkhlaw	Male	Mawdiangdiang, East Khasi Hills	7629890920
02	Kolias Mawlong	Male	Mawdiangdiang, East Khasi Hills	7628973066
03	Richard Kharumnuid	Male	Umroh , Mawkasiang, East Khasi	N/A
04	Fullmoon Suting	Male	Mawdiangdiang, East Khasi Hills	8787345385
05	R. K . Dohtdong	Male	Mawdiangdiang, East Khasi Hills	9862874712
06	Banteikam kharkongor	Male	Umroh , Mawkasiang, East Khasi	8794065582
07	Pyniaidkam Kharkongor	Male	Umroh , Mawkasiang, East Khasi	6009632980
08	Kyrmenlang Nongkhlaw	Male	Mawdiangdiang, East Khasi Hills	9862201954
09	Korbarkam Kharkongor	Male	Umroh , Mawkasiang, East Khasi	9366026532
10	Listerwell Nongbri	Male	Umroh , Mawkasiang, East Khasi	6009826311
11	Westernroy Nongrum	Male	Umroh , Mawkasiang, East Khasi	6033045484
12	Bannehskhem Mynsong	Male	Umroh , Mawkasiang, East Khasi	6009781475
13	Endarson Nongsiej	Male	Mawdiangdiang, East Khasi Hills	8731851302
14	Shanskhem Kharkongor	Male	Umroh , Mawkasiang, East Khasi	9402551067
15	Dapynshaibor Nongbri	Male	Umroh , Mawkasiang, East Khasi	6009786505
16	Genevieve Nongbri	Female	Umroh , Mawkasiang, East Khasi	9612929656
17	Ibansara Mynsong	Female	Umroh , Mawkasiang, East Khasi	8259844965
18	Dapmon Nongrum	Female	Umroh , Mawkasiang, East Khasi	9774959481

19	Ritilda Nongbri	Female	Umroh , Mawkasiang, East Khasi	9862859018
20	Steffie Nongbri	Female	Umroh , Mawkasiang, East Khasi	7085554007
21	Sofiana Suting	Female	Umroh , Mawkasiang, East Khasi	8837473720
TOTAL			21	

PHOTO GALLERY





5 Days Skills Training on Low Cost Appropriate Technology at Mawkasiang