Integrated Basin Development and Livelihoods Promotion Programme (IBDLP)

Meghalaya

Report to Citizens 2013

Dr. Mukul Sangma
Hon'ble Chief Minister

m e s s a g e

Every state requires a robust growth rate to be able to provide sufficiently for its citizens. When this growth rate is a concerted effort of the government, private sector, civil society and the citizens – a partnership between all the stakeholders of the system – it is a growth that is sustainable and long lasting, inclusive and enriching.

It is with this dream of achieving inclusive development that the Integrated Basin Development and Livelihood Promotion (IBDLP) programme was launched in April 2012, with a vision of realizing our shared dream of poverty free Meghalaya. Meghalaya is a state endowed with abundant natural resources. The IBDLP is a framework programme which seeks to harness this potential and deliver to every citizen a secure and sustainable livelihood that is in harmony with the sustainability of our natural resources. It is based on the foundational philosophy that every citizen of Meghalaya is an important stakeholder in the programme.

The government has made an active effort to constantly reach out to all the stakeholders, especially to engage with you - the citizen who is a 'partner' in the development model envisaged by the IBDLP. Hence the publication of the second Report to Citizens is in fulfillment of my promise at the launch of the IBDLP to bring out a report on the progress of the programme.

Since the period of its launch the IBDLP has been able to usher in a new way of thinking about development, - a partnership model – where every willing citizen is treated as a partner and as a potential entrepreneur in his/her own right. Specific steps have been taken in the initial phase to carefully design and build the institutional framework to deliver the objectives of the programme. The large numbers of persons who have actively come and registered with the EFCs is a testimonial that our very own home grown model is generating a huge demand. This enthusiasm of the people is being translated into action by furthering and building on the four pillars of the IBDLP including the missions, while at the same time enhancing the capacity of the government to deliver on the goals of the programme.

The Report to Citizens not only presents the obstacles that we have overcome together but also reflects the area where we need to put in more effort. The challenges are many, but the opportunities much greater. As we continue to strive towards the goal of making our state a model of sustainable development and partnership, I wish to thank you all for your support and belief you have shown in the programme and the government. Let me reiterate that with the active support and participation of all stakeholders the challenges we face can be converted to opportunities, whereby our dream of a truly poverty free and magnificent Meghalaya can be achieved.

Dr. Mukul Sangma

WMS Pariat
Chief Secretary

m e s s a g e

The Integrated Basin Development and Livelihoods Promotion Programme (IBDLP) is an outcome of deep commitment for and clear understanding of the possibility of placing Meghalaya on a higher growth trajectory and of providing better incomes and happier lives to all the citizens of the state who are now our partners in making the shared dream of a prosperous and poverty free Meghalaya, a reality.

What kick started as a venture to create sustainable livelihoods, has now turned into a full fledged effort to safeguard the ecosystem and at the same time put Meghalaya on a never-before growth trajectory.

This Report to Citizen is a testament of the advancements that the IBDLP programme has made since its inception. The current publication is aimed at sharing the story of progress till date including the various innovations and initiatives that have been undertaken by MBDA to make IBDLP a ground reality.

Other than laying forth the objectives, goals and aims of the programme and its various missions, this issue also brings to you the various activities that the task force of MBDA, under the aegis of the foundational pillars - Enterprise Facilitation, Knowledge Management, Good Governance and Natural Resource Management – has undertaken to take the programme forward and create a thundering impact. Be it IVDP or IVCS, partnerships such as with GIZ or NISG, or initiatives like MMFC or the seed festival or Chandigre rural cooperatives, this report has it all.

Efforts unheard of have been tapped and encouraged to set examples for others and bring the entire mass of the state under the fold of IBDLP. We do not believe in a beneficiary model of development, but seek to take the state ahead of its time with an inclusive approach where we are all equal partners in implementing our dream.

I am glad to inform you that work has been progressing as planned and would be graced to receive, not only your cooperation and hard work but also your inputs. I wish to be able to make the dream of a 'poverty free Meghalaya' see daylight and to share the joy of a greater and better Meghalaya with its citizens.

WMS Pariat


NTERPRISE FACILITATION CENT
SET UP UNDER
MEGHALAYA INTEGRATED BAS
DEVELOPMENT
&
LIVELIHOOD PROMOTION PROGRAMME
INAUGURATED BY
DR. MUKUL SANGMA
HON'BLE CHIEF MINISTER
GOVERNMENT OF MEGHALAYA
IN THE PRESENCE OF
SHRI. PRESTONE TYNSONG
HON'BLE MINISTER
FOREST & ENVIRONMENT, Etc.
ON THE 5TH OCTOBER, 2012
AT PYNURSLA, C & RD BLOCK

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WILLIAMNAGAR
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EFC
(ENTERPRISE FACILITATION CENTRE)
Under
Integrated Basin Development
and
Livelihood Promotion Programme
(IBDLP)
Come partner with us...
GOVERNMENT OF MEGHALAYA
OFFICE OF THE
ENTERPRISE FACILITATION CENTRE (EFC)
UNDER INTEGRATED BASIN DEVELOPMENT & LIVELIHOOD
PROMOTION PROGRAMME
GANGDUBI, MENDIPATHAR
NORTH GARO HILLS DISTRICT

Enterprise Facilitation

1

Enterprise
Facilitation

The Integrated Basin Development and Livelihood Promotion (IBDLP) is the flagship programme of the Government of Meghalaya. The goal of the programme is to develop a robust and viable framework for efficient and effective management of natural resources, striving towards creating livelihood opportunities for over two lakh families covering approximately one million people in the next five years.

The IBDLP is based on the foundational philosophy that citizens of the state are equal partners in the process of development. The aim is to build a framework whereby an equal and participative alliance can be created with 'entrepreneurs' who can become partners, and not merely beneficiaries, in the new model of development, which the IBDLP envisages.

Awareness generation and information dissemination are crucial aspects of IBDLP. IBDLP has made a concerted effort to reach out to the youth and budding entrepreneurs at the town, sub–divisional and block level. For creating awareness

about the scope, outreach, logic and rationale of the programme and to reach out to the citizen, Meghalaya Basin Development Authority (MBDA) has set up Entrepreneurship Facilitation Centres (EFC) at the block level. Till date 33 EFC's have been set up and are functioning as the front end of the IBDLP at the grass roots.

The EFCs are the public interface of IBDLP for providing communication and guidance to the citizens to become partners of the programme. EFCs also provide hand holding support to the entrepreneurs over a period of time, linking them with the various missions, departments, value chains and markets.

Enterprise Resource Person

The EFCs are envisaged as focal points for all activities. Each EFC has Enterprise Resource Persons (ERPs) who are responsible for mobilizing people to become partners of IBDLP. The role of ERP is vital for the success of the Programme as their support and guidance will enable the partners and aspiring entrepreneurs towards better livelihood avenues.

The EFC has two ERP's, one FBA (Field Business Associate) and one support staff designated as Enterprise Support Person (ESP) and together they manage the day to day functioning. Depending on the requirement and workload of a particular EFC the required staff is strengthened.

ERPs play a pivotal role in the success of the whole programme. The ERPs engage the citizens in dialogue to bring out their aspirations and inclination towards creating a viable enterprise. They further provide the hand holding support to guide and motivate the partners throughout their entrepreneurial journey till the time the enterprise can stand on its own feet. The ERPs also act as a facilitator body connecting the partners to the various line departments, BDO, block level officials, bankers at the block level and other stakeholders on the supply side. The ERPs are also tasked to propagate and create a favourable attitude towards IBDLP by organizing awareness programmes at the EFCs and to reach out to the citizens by visiting the nearby villages. Essentially the EPRs are the lifeline of the programme facilitating forward, backward and lateral communication between all stakeholders of the programme.

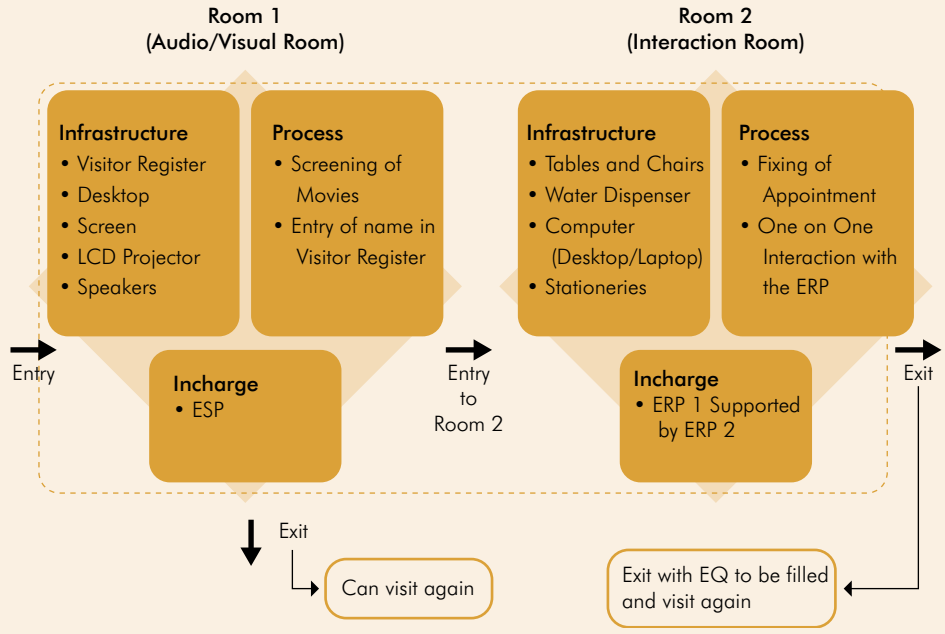
MBDA has recruited interns to work as ERPs, but before being posted to various EFCs these interns were given training to build their capacity at Meghalaya Institute of Entrepreneurship (MIE) in Shillong and Tura. Some of these interns were also sent for training and exposure visit with Infrastructure Development Finance Company (IDFC) Foundation at Delhi and Uttarakhand.

Facilitation

Entrepreneurship Centres

The EFCs are designated as the nodal centres for all interaction with the citizens. EFC being the hub of all activity are equipped with all facilities and aids to ensure effective communication with all citizens. The facilities at EFC include desktop computers, printers, internet connection, power backup, and refreshment facility. One room at the EFC is dedicated for showing motivating films and documentaries of success stories made by the Knowledge Management Division of the MBDA and equipped with LCD Projector and Screen for screening films on Entrepreneurship, IBDLP, value chains and other themes. The second room is designated for one to one interaction between the ERPs and citizens.

A schematic representation of the Process Flowchart at the EFC



information has to be effectively captured, stored and retrieved

Entrepreneur MIS

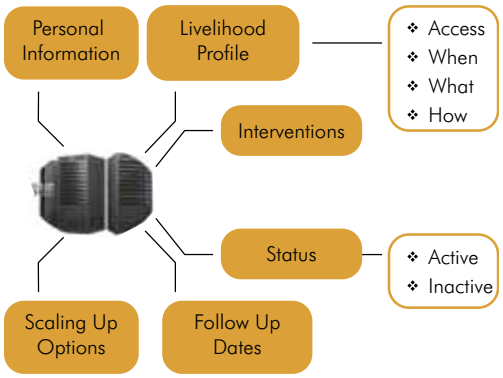
The information obtained through the interaction between ERPs and aspiring entrepreneurs at the EFC is important for all further interventions in the enterprise creation process. This information has to be effectively captured, stored and retrieved so that it can be used to provide the right kind of intervention and with this objective in mind an MIS has been developed. The key information about each entrepreneur who comes to the EFC is recorded in an MIS through the Basin Entrepreneur Portal. ERPs maintain the data on each entrepreneur on day to day basis using the SMS module.

The system is designed to capture the following data:

i. Some basic personal information.
ii. Information on current livelihood profile.
iii. Information on the sectors and sub-sectors the entrepreneurs are interested to pursue and the interventions needed.

Data thus entered and transmitted by ERPs using the SMS module are stored in a central server by MBDA and the data is processed on a continuous basis to determine the next level of intervention required and the timing of such intervention. The database is used to generate query based reports on the services desired by and required for the various entrepreneurs in each sector and sub-sector, district wise, block wise and village wise.

A schematic representation of MIS



The database is used to generate query based reports

The ERPs also maintain a response on the Emotional Quotient, leadership traits and other attributes of the entrepreneurs. The query based reports that are generated reflect the needs at the grass root level and the District Basin Development Units (BDUs), Mission implementing departments and the MBDA address these through interventions, projects and programmes. The MIS provides a list of services desired on the basis of data entered into the system for every entrepreneur along with the types of the agencies responsible for service delivery and the tentative time frame for service delivery. The MIS is currently being upgraded and a comprehensive version called Partner Management Information System (PMIS) will be rolled out in early 2014.

A schematic representation of the Service Delivery Flowchart at the EFC

Field Business Advisors

Another key person at the EFC is the Field Business Advisor (FBA). The FBA is essentially an advisor and facilitator for assessing credit for entrepreneurs. Financial inclusion and access to credit is essential for setting up of enterprises and for running them with reasonable degree of success. Since in majority of cases the entrepreneurs themselves are not equipped to formulate business plans and present them to the bank, the FBA cadre becomes essential, acting as a bridge between the banks and potential entrepreneurs. The FBAs are selected either directly from amongst the Interns or from amongst experienced ERPs.

FBAs are tasked to support the entrepreneur by providing basic understanding of business and enterprise building. This in turn leads to the formulation of a working business plan and helps the entrepreneur to better understand the market dynamics and value chain possibilities in their respective areas. They also facilitate bank linkages, investment opportunities available under the various schemes of the government and lending institutions.

The FBA are thoroughly trained in all aspects of Enterprise Building. The FBA handhold the entrepreneurs in choosing the right project size after conducting feasibility study and suggest the best available investment mode taking into consideration all the existing schemes of the government and the banks.

Enterprise Promotion & Facilitation is a people-centric activity and therefore it becomes necessary to be in sync with the needs and aspirations of the people to bring in the desired economic development in the state. The present model designed by MBDA, identifies the needs of individual entrepreneurs and seeks to match them with the resources they need to be successful. The model seeks to support the passion and ideas of local entrepreneurs and to facilitate the transformation of there ideas into viable businesses that contribute to economic vitality.

Dialogue with Partners

REPORT to CITIZENS

Dialogue with Partners is a key activity of the IBDLP to reach out and understand the requirements of the partners. This is a need assessment process which basically enables the senior functionaries of the line departments and MBDA to understand the interventions required by the partners. Designed also as a capacity building exercise for the partners, it provides them with a basic knowledge on the potential enterprise opportunities in the different sectors.

As part of this, interactions are carried out with prospective entrepreneurs who have already registered at the EFCs. A select group of 50 citizens who have shown their interest in that particular sector are invited to attend. These dialogues are spread out across the nine missions of the IBDLP enabling the officials to assess the particular interventions needed for each partner.

The team conducting the process comprises of one officer from MBDA, one officer from the specific line department and two Programme staff of MBDA. In addition, extension officers for the particular sector from the block are also present during the process.

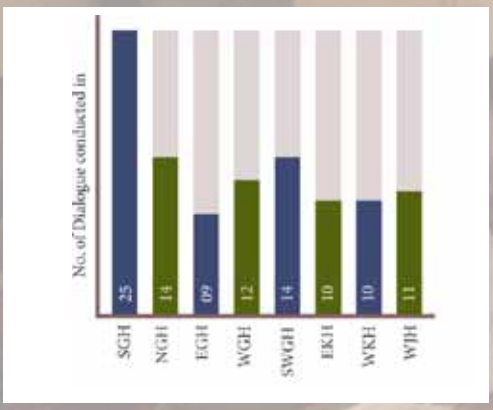
The teams conducting the dialogue explain to the citizens about the IBDLP and the whole idea of enterprise - costing, business cycles, market orientation, reducing input costs, aggregation of produce for marketing. The team also makes presentations to the citizens on specific sectors which include traditional and modern practices, common problems faced by farmers, forward and backward linkages, cluster formation for aggregation and linkages, market issues and a business model for the sector in terms of cost benefit analysis.

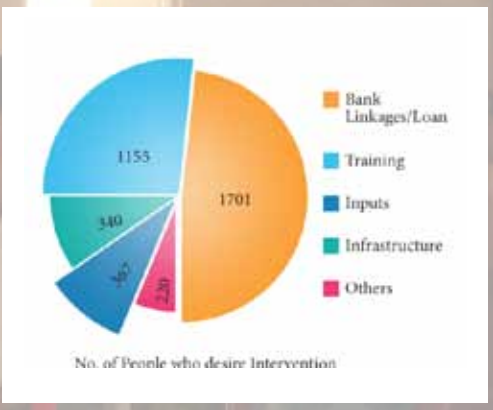
A feedback is also taken from each partner on current activity status and of the desired

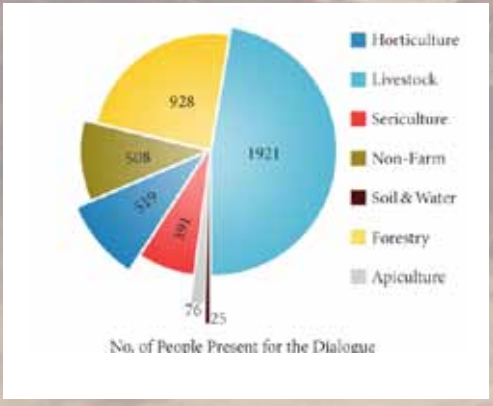
interventions. Partners ready for bank linkage, for skill up- gradation, for training on extension services, for exposure visits are identified, as are partners who with a little assistance from the government can become successful.

The process of Dialogue with Partner has received tremendous response from the citizens and more such activities are planned across the entire state. MBDA with the help of line departments is presently in process of formulating intervention strategies for each partner. This process of dialogue has to a large extent been able to effectively reach out to the partners and map the need so as to provide the best possible intervention for each partner of the IBDLP.

Formulating intervention strategies — Data till: July 2013







Integrated Village Cooperative Societies: The Farmer's Local Bank

A major factor impeding development and economic growth in the rural areas has been the lack of access to institutional credit. Even with the increase in the number of bank branches and micro-credit institutions, there is still a long way to go to achieve financial inclusion in the true sense. Reliance on local moneylenders is still prevalent in many villages. Given the impracticality of setting up bank branches in each and every village, the challenge is to design a scheme of financial inclusion that is not only sustainable but also easily accessible. Thus it was felt that to deliver sustainable financial inclusion it is imperative to design home-grown institutions rooted in the local culture itself.

An Integrated Village Cooperative Society (IVCS) is such an entity. An IVCS is basically an institution at at village/small group of village level which builds

on social capital and draws upon the best features of a SHG and a PACS. To provide IVCS with a legal framework for functioning, they are being registered as a Cooperative Society under the Meghalaya Cooperative Societies Act with joint liability of all its members. The IVCSs are being set up with the objective of providing its members with financial services such as loans, deposits, as well as mobilization, intermediation and facilitating bank linkages. Each IVCS unit is being provided share capital assistance by the government which is used as a seed corpus or revolving fund which will be managed by an elected committee.

The incentive structure is designed in a way to promote repayment of loan rather than default. Thus when a loan repayment has been made, the corpus fund is topped up there by giving every IVCS unit an incentive to put pressure on every member to pay off their loans. With the success of the repayment of the bank loan, whole or part of the margin money contributed by MBDA will also be recovered by the IVCS from the members and thus added to the share capital. This will slowly but surely lead to a steady increase in the size of the capital share. When the share capital reaches a certain limit, the IVCS can be allowed to utilize the share capital to provide bigger loans for both productive and consumption purposes.

Perhaps in the not too distant future IVCSs can grow into local banks.

IVCS unit are being formed in those villages where the inhabitants have shown a keen interest to partner with the government under the IBDLP. After consultation with the prospective entrepreneurs and village headman, IVCSs are being registered by the MBDA team in coordination with the office of the Registrar of Cooperative Societies.

The IVCS pursues its members' interests with single-minded devotion. The members need to develop a cooperative structure, reflecting the members' interests in decisions at the village level while pursuing the core interests of their members. The structure enables them to specialize, achieve economic size and integrate production and distribution of inputs, processing and marketing of their products. The role of cooperative societies lies in aggregating and articulating the interests of widely scattered small producers. Through consultative dialogues, members of cooperative societies are made to understand that cooperative groups must not be propelled by the imagination of profit alone but must work on the ethos of self help as well as mutual help for community development.

The imperatives for the IVCS are clear:

Reflect members' interests in a state wide cooperative structure, with decision making in the interests of all members, especially small producers. | Specialize, achieve economic size. |Pursue integrated activities. | Monitor the members' loan repayments.

Integrated Village Cooperative Societies Formed in 2013

Laitlulong Laitnongkseh Laitpynter Umkaber Krangnongrum Lyndem Mawlyngngot War War Laitmawphlang Laitmawroh Nongkrem Riangmang	Khasi Hills Jaintia Hills Garo Hills	 Moorap Umbluh Jelbongpara Latirigre

EFC

Statistics

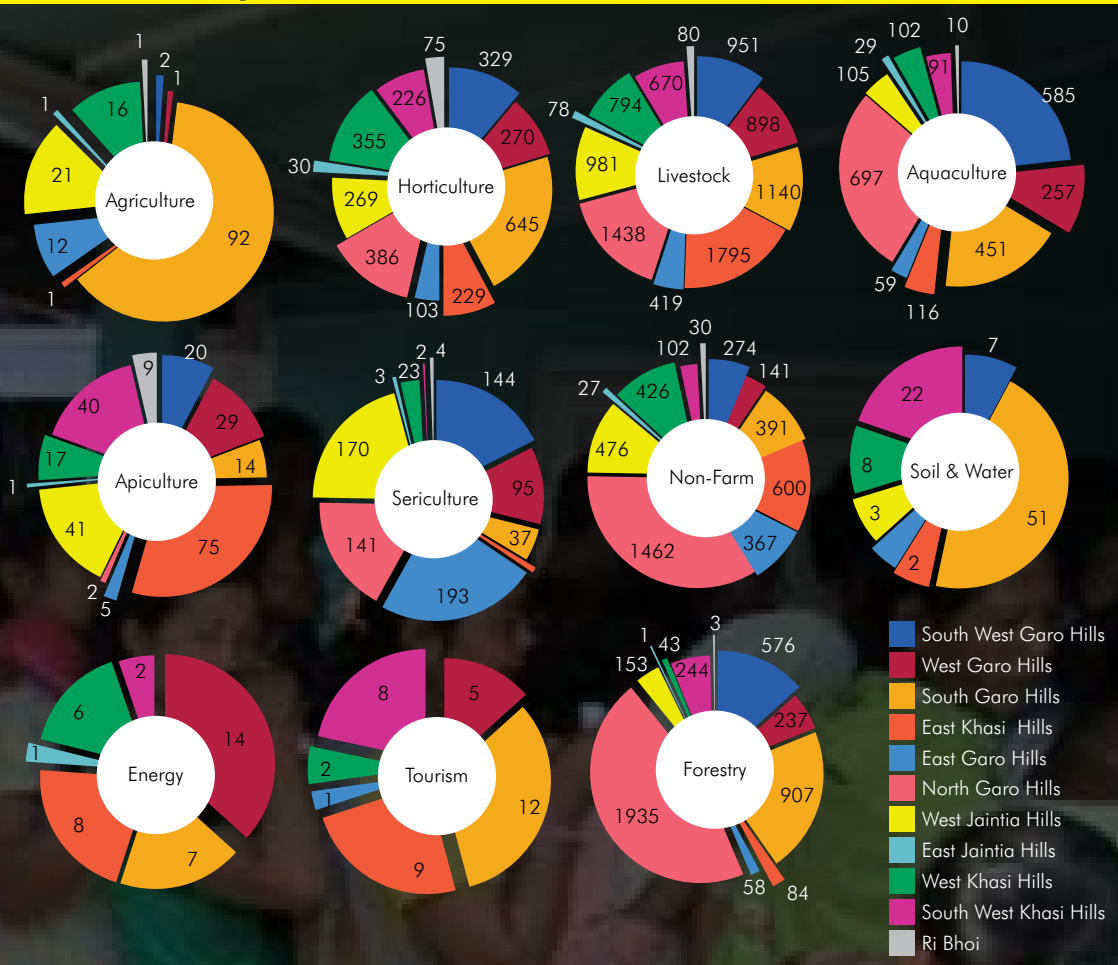
Data till Nov, 2013

Sl. No	District	EFC Centre	No. of People who visited the centre	No. of People (1-on-1 interaction)
1	South West Garo Hills	Zikzak	7876	2236
2		Betasing	2018	1700
3	West Garo Hills	Rongram	1765	1402
4		Selsella	6876	790
5		Gambegre	1409	163
6		Dalu	500	190
7		Dadenggre	936	201
8		Tikrikilla	3100	380
9	South Garo Hills	Baghmara	2206	1054
10		Gasuapara	2700	810
11		Chokpot	2014	771
12		Rongara	1802	
13	East Khasi Hills	Pynursla	847	410
14		Laitkroh	564	543
15		Mawphlang	2970	1989
16		Mawryngkneng	600	139
17		Mylliem	197	184
18	East Garo Hills	Samanda	3246	1765
19	North Garo Hills	Resubelpara	13072	4963
20		Kharkutta	2300	
21	West Jaintia Hills	Amlarem	387	337
22		Laskein	554	300
23		Thadlaskein	2602	1700
24	East Jaintia Hills	Khliehriat	200	160
25		Saipung	102	80
26	West Khasi Hills	Mairang	1443	987
27		Nongstoin	113	60
28		Mawthadraishan	600	340
29		Mawshynrut	2315	1650
30	South West Khasi Hills	Mawkyrwat	1600	1325
31	Ri Bhoi	Umling	282	236
32		Umsning	72	65
33		Jirang	200	70
Total			**67468**	**27000**

The role of cooperative societies lies in aggregating and articulating the interests of widely scattered small producers

Sector Wise Interest Shown by Partners

Data Nov, 2013



S. No.	District	EFC/Block	Date of Inauguration	Date of Functioning
1	East Khasi Hills	Pynursla	5-Oct-12	8-Oct-12
2		Khatarshnong Laitkroh	25-Oct-12	26-Oct-12
3		Mawphlang	11-Apr-13	12-Apr-13
4		Mawryngkneng	21-May-13	22-May-13
5		Mylliem	27-Aug-13	28-Aug-13
6	West Khasi Hills	Mairang	21-Dec-12	7-Jan-13
7		Nongstoin	21-May-13	22-May-13
8		Mawthadraishan	5-Jun-13	6-Jun-13
9		Mawshynrut	21-Jun-13	24-Jun-13
10	South West Khasi Hills	Mawkyrwat	26-Apr-13	29-Apr-13
11	East Jaintia Hills	Khliehriat	9-May-13	11-May-13
12		Saipung	10-May-13	11-May-13
13	West Jaintia Hills	Amlarem	22-Nov-12	23-Nov-12
14		Laskein	22-Nov-12	23-Nov-12
15		Thadlaskein	8-Nov-12	12-Nov-12
16	West Garo Hills	Selsella	23-Nov-12	14-Jan-12
17		Rongram	9-Nov-12	19-Nov-12
18		Dadenggre	27-Sep-13	1-Oct-13
19		Gambegre	30-Aug-13	2-Sep-13
20		Tikrikilla	8-Oct-13	14-Oct-13
21		Dalu	21-Aug-13	26-Aug-13
22	South West Garo Hills	Betasing	9-Aug-12	10-Aug-12
23		Zikzak	10-Sep-12	14-Sep-12
24	South Garo Hills	Baghmara	14-Aug-12	29-Aug-12
25		Gasuapara	3-Sep-12	11-Sep-12
26		Rongara	26-Nov-12	5-Dec-12
27		Chokpot	12-Sep-12	27-Nov-12
28	North Garo Hills	Resubelpara	21-Jan-13	23-Jan-13
29		Kharkutta	28-Jun-13	9-Jul-13
30	East Garo Hills	Samanda	12-Dec-12	8-Oct-12
31	Ri Bhoi	Umling	14-Jun-13	17-Jun-13
32		Umsning	13-Sep-13	16-Sep-13
33		Jirang	1-Oct-13	22-Oct-13

Knowledge Management

2

IDFC Foundation

Partnership for Development

IDFC Foundation is a Strategic Partner of Meghalaya Basin Development Authority (MBDA). They are helping in building the Strategic Plan, Delivery Mechanisms, Institutions and State's capacity for developing, implementing and monitoring the programme on sustainable basis.

The Strategic Plan has a focus on improving the quality of life of the people by supporting building of required social infrastructure (connectivity, water & sanitation, rural roads, energy and fuel) for empowerment, skill development, entrepreneurship and enterprise creation. The development approach is to reduce disparities between urban and rural communities, different geographical regions and gender.

IDFC Foundation is also supporting special projects to address the needs of village clusters on holistic basis for social infrastructure and income generation opportunities. This will enhance community ownership and participation, supporting the MBDA's initiatives for good governance.

Some of the major initiatives of IDFC Foundation are:

- **Field Business Advisors at Enterprise Facilitation Centers:** The IDFC Foundation has developed a framework for the training of the cadre of Field Business Advisors (FBAs) at the EFCs for reaching out to people at block and village clusters. These trained FBAs reach out to prospective entrepreneurs and guide them through opportunity selection and preparation of the bankable business plan. They also establish linkages with the missions and the line departments for extension service support.
- **Rural Markets:** Market Access is critical for the growth of the rural economy, expansion of the production base and higher revenue realization for the produce. A baseline study was conducted to help prepare the strategy for rural market access, infrastructure and transaction mechanism for better realization for the farmers. There are 169 major markets including district council markets in various parts of the state. Of these 169 markets covered through preliminary data collection, detailed data has been collected till date for 55 markets and for other major markets survey is underway and expected

to be complete shortly. The information collection effort includes the trade data (produce and value), market infrastructure, major produce coming to the markets, transportation facilities, number of villages and households impacted, etc.

- **Market infrastructure:** Markets needs to be improved by providing basic infrastructure facilities like pathways, toilets, portable water, drainage, lighting, covered auction platform, vehicle loading-unloading facility, vehicle parking area, livestock loading-unloading facility, market area, ramps, warehouse, etc.

The generic startup interventions identified at market level are:

Layouts: Ergonomic layout
Pathways: 1.2 metre wide minimum
Drainage: both sides of shops and at all sides of market
Shop structures including farmer day rest rooms: Bamboo structure with water proof envelopes (roofing and sides) for a group of shops and as partition between them
Water: Potable water points
Sanitation: Block of toilet with ecological disposal and low water consumption
Light: stand alone lanterns with renewable energy based solution along with charging stations to cover shops, pathways, platform, warehouse, etc.

As start up interventions, the MBDA in collaboration with the IDFC Foundation is taking up the following 7 markets in different regions of the state:

List of start up Intervention markets

S. No.	Region/ District	Name of the Market
1.	**West Khasi Hills**	Mairang
2.	**East Khasi Hills**	Smit
3.	**Ri-Bhoi**	Umsning
4.	**East Jaintia Hills**	Wahiajer
5.	**West Garo Hills**	Garobadha
6.	**South West Garo Hills**	Ampati
7.	**North Garo Hills**	Gokulgre

Capacity Building: The Capacity Building effort includes support for Market Management, MIS, Training and Trade Data Acquisition and Management etc.

Linkages: Linkages to be established with the financial system for credit access, and with the buyers and input providers to derive benefit of scale for the farmers.

- **Regional Market Hubs:** Two regional market hubs for development have been identified at Smit and Garobadha to cover the 2 major regions of the state. Proposals have already been made for allocation of funds from the Government of India.

These hubs will be game changers for the region and facilitate trade for outputs and inputs in the region covering the needs of the villages and the farmers. These hubs will also be the contact points for long term supply chain linkages with the large institutional and private sector buyers and suppliers.

The Smit market hub will impact more than 400 villages with an estimated population of 200,000 people in its vicinity besides regional impact. Similarly the Garobadha market hub will impact more than 300 villages with an estimated population of 120,000 people in its vicinity besides regional impact over the next 5 years.

- **Renewable Energy:** Special effort is being made to utilize renewable clean energy as a stand alone system reaching out to remote villages and clusters for meeting the needs of energy, primarily light and cooking fuel. Cooking fuel alternatives are being addressed to remove the health hazard to women and deforestation as 79% of household use firewood as cooking fuel. To begin with, IDFC Foundation had conducted survey in 13 sites across the State and found seven sites feasible for which DPRs are being prepared:

For these projects, Meghalaya New and Renewable Energy Development Agency (MNREDA) and IDFC Foundation along with support from MBDA is going ahead with implementation plan by preparing to appoint a turnkey contractor for construction and commissioning of these projects. Contractor

S No	Site Name	Location	Resource/Project Identified	Status
1.	Public Health Centre (PHC) Bhaitbari	Bhaitbari, West Garo Hills	Solar PV(Rooftop)	DPR prepared and approved.
2.	Chikgitchakre	Ampati, South West Garo Hills	Biomass Gasification for lighting and Biogas for cooking	DPR prepared and approved.
3.	Banderkona	Ampati, South West Garo Hills	Biomass Gasification for lighting and Biogas for cooking	DPR prepared and approved.
4.	Garobadha Market street lightning	Garobadha, West Garo Hills	Street Lighting using Solar PV	DPR under preparation
5.	Nengkra Hydel Project	Nengkra, East Garo Hills	Hydel Project	PFR under preparation
6.	Mawlynnong Street Lightning	East Khasi Hills	Solar PV	DPR under preparation
7.	Mawlyngmna Hydel Project	East Khasi Hills	Hydel Project	PFR under preparation

will also be responsible for training the local community on operation and maintenance of this project.

The strategy is to build the capacity within the State by training the MNREDA officials, technical graduates and MBDA interns with requisite background, as this can become a sustainable solution for future.

Local Capacity Building

IDFC is training the core team of FBAs for survey and need assessment, across many interventions, as part of the of State's delivery mechanisms for capacity building. Till date IDFC Foundation has trained 45 senior officers of Government of Meghalaya on Public Private Partnership (PPP) and procurement. Apart from officials, IDFC Foundation has also trained 25 MBDA interns on basic PRA, project identification, market assessment, livelihood development, village profiling, project profiling at Delhi and exposure visit to Uttarakhand. IDFC Foundation also conducted two days training session for 75 MBDA interns. IDFC Foundation was assigned 6 interns who are being trained continuously through on the job training by guiding them in various surveys relating to market assessment and renewable energy.

Financial Intermediation and Resource Mobilization

IDFC foundation is currently working towards supporting the seting up of the Meghalaya Infrastructure Development Finance Corporation (MIDFC). This will have a long term impact on inclusive growth and development of the state.

IDFC is also supporting MBDA in building the states capacity for making project proposals for seeking funds from various agencies both domestic and international.

Building a
Knowledge Base

The MBDA has recently commissioned a few studies to capture emerging nuances in different areas of relevance to its mandate

1 Study on the State of Environment and Biodiversity in Meghalaya, would investigate and report on the following:

- **Forest-** Studies on different types of forests, indicators of extent of forest area, quality of tree cover, diversity of species, environmental values. Studies on control of deforestation, ecosystem protection, and forest degradation.
- **Agriculture and farm land-** Studies on changes in agricultural land use, area of shifting and types of crop grown. Studies on reasons of these changes and their impact on the biodiversity, water supply etc.
- **Mineral Extraction-** Studies on growth of different sector, contribution to the economy and employment, impact on the environment, human health, natural flora, compliance and enforcement of environment regulations.

The study is expected to give an overall state of the environment score card and environment risk analysis for the state which will help in policy planning and implementation.

2 Study on Poverty and Gender Analysis is expected to provide an assessment of current occurrence and depth of poverty that can be used to provide additional insights alongside secondary sources, gain an understanding of the causes and consequences of poverty and vulnerability and analyse the position of rural women and the factors that result in them being disadvantaged and vulnerable.

3 Study on the use and availability of traditional plants in Meghalaya to identify locally useful plants, such as medicinal plants, edible plants, plants used for construction materials and plants used for other purposes by tradition or otherwise. The study would cover villages covering different agro climatic conditions in the region as also list out the plants and their uses for each village. The study would report on the villagers' perception of the current availability, changes in availability, and reasons for changes. This would be done for each selected village and conclusions would be drawn regarding the relationship the loss of bio diversity under different agro climatic zones, and reasons for such loss of traditional plants.

4 Study on Land Tenure & Livilihoods is expected to provide insights into recent changes in use, ownership & access to land in the context of livilihoods and the impact of these changes on the envoirnment. The study would focus on selected villages across the State.

Integrated **V**illage **D**evelopment **P**lan: **C**ommunity **P**articipation in **P**lanning

REPORT TO CITIZENS

About 80% of Meghalaya's population lives in approximately seven thousand villages. Such rural areas need provision of adequate infrastructure to ensure a decent quality of life. The widespread adoption of participation in development is welcome for the legitimacy and space it accords to those who genuinely want to practice it. In parallel, the phenomenal spread of practices described as PRA has shown practical ways, in which participation can be made real, and has inspired and provided opportunities for many. These successes have brought many benefits. Among the best has been the empowerment of poor people through their own analysis and action, and new insight gained by professionals into the realities and priorities.

Though Meghalaya is a State that is rich in natural resources, however, it has acute problem of poverty, lack of skilled manpower and low productivity. The developmental agencies have been doing their bit to improve the lives of the rural community in whatever manner possible. However, there is a need for co-ordinated effort to improve the Human Development parameters of the rural poor and this can be done if "Convergence" occurs at

the village level.

Village Planning is an endeavour focusing on people, especially the most vulnerable, the children, the women and the disadvantaged. Fundamentally, this is a people driven approach to bring about a significant change in the quality of life through people's participation in their own development efforts.

One of the biggest lacunae in rural development is that there is no "Single Window" information Centre wherein developmental actors can view and analyse village level data for interventions. Secondly, there is a lack of visioning exercises of the village as a whole. Thirdly, there is a need to create a demand driven approach for development to be sustainable.

Community dialogue process is the central methodology along with judicious application of tools (such as a simple Household Survey, Venn diagram, Social Map, Resource Map) for engaging all the people, to discuss and assess their situation – especially their quality of life in terms of health, nutrition, hygiene, education,

water, sanitation and economic prosperity. Once the people collectively become aware of their situation the search for solutions begins with the facilitators assisting them with the required information. Once the options are discussed the people then embark upon developing a Village Action Plan that includes 'what', 'how', 'who', and 'when'. Prompted by the facilitators the people also suggest the names of four Village Youth Volunteers (ideally, two girls and two boys) to help them in their development endeavour. The youth volunteers are subsequently provided with training inputs to enhance their skills to walk with the people along the path of village development through access to the services and self-reliance.

The Integrated Village Development Plan (IVDP) was conceived by MBDA keeping the above constraints in mind. Based on learning's of the International Fund for Agriculture Development (IFAD) funded projects of North Eastern Region Community Resource Management Project (NERCORMP) and Meghalaya Livelihood Improvement Project for the Himalayas (MLIPH) and other Mission implemented in the state, an exhaustive template was developed to integrate those learning's along with climate change perception and observations for village land use planning.

The village action plan, however, is not an exercise in isolation, neither an end by itself. Prior to planning, the people discuss what they can do by themselves and in what they would require external assistance. Building a relationship, therefore, based on the notion of partnership with the Line Functionaries including as teachers and the Dorbar (a body for Local Self Governance in Meghalaya) members also becomes a major consideration during discussion and while planning. The volunteers form a vital link between the people and the line functionaries.

The people take the responsibility of monitoring progress and make corrections as and when required through regular meetings. The volunteers assist the people by providing them, with basic information and holding regular discussions related to children and women thus keeping the spirit of self-help alive and thriving.

Two training were organised, one for East Zone and the other for West Zone. The East Zone Training was conducted at Shillong from May 8, 2013 to May 9, 2013 with practical hands on training in the field held in Domkseh Village of West Khasi Hills from May 10, 2013 to May 12, 2013. The West Zone Training was conducted at Tura from May 15, 2013 to May 16, 2013 with practical hands on training in the field held at Panda Village of South Garo Hills from May 17, 2013 to May 19, 2013. The participants were drawn from various CBOs that already have experiences with Participatory Rural Appraisal (PRA's) Tools and Micro Plan.

The IVDP Templates consists of the following:

Timeline | Social Map | Resource Map | Seasonality Calendar | Data Processing Sheet | Inflow & Outflow | Well Being Ranking | Livelihood Portfolio Mapping | Venn Diagram Analysis | Vision Building

Till date villages exercises have been completed in 110 villages. Digitization and analyzing of village data's are in progress. Analysis will be shared with the Line Department at District Level with Deputy Commissioner as the Chairman. Representatives from these villages will be invited to understand how the line department can assist them in order that their vision is achieved. The Team is also working on developing software to assist in analyzing and monitoring interventions done in the villages. Participatory GIS mapping adds a scientific component to the PRA exercises to the IVDP. Further an IVDP - MIS is being developed to place the data of village development plans online so that it can be used and accessed by all concerned.

List of Facilitators for Integrated Village Developement Plan (IVDP)

S. No.	District	Total No. of Facilitators for IVDP
1	East Khasi Hills	8
2	West Khasi Hills	4
3	South West Khasi Hills	5
4	East Jaintia Hills	3
5	West Jaintia Hills	5
6	Ri-Bhoi	5
7	East Garo Hills	9
8	North Garo Hills	7
9	South Garo Hills	4
10	West Garo Hills	6
11	South West Garo Hills	7
	Total No. of Facilitators for IVDP from All Districts	**63**

Village **M**apping: **H**arnessing **G**eographic **I**nformation **S**ystems

REPORT to CITIZENS

IBDLP has the potential to impact countless lives. The interventions and guidance needed to achieve maximal impact will be driven by the availability of village level information. Geographic Information Systems (GIS) are widely used to collect, compile and display various kinds of information in a geospatial framework. Diverse information, when displayed together, provides deeper insight and brings to light ideas which may have otherwise been missed. These systems are invaluable management tools which can make a huge difference in the IBDLP.

The unique aspect of GIS in the IBDLP context is that not only is it aimed at helping Government personnel make important management decisions but is also aimed at facilitating rural stakeholder level decision making. The information from the GIS systems is made available to people at the grassroots level and presented in a manner in which it can be easily assimilated. It is hoped that such information will help develop holistic perceptions of "land use" and will guide future village level decision making.

The exercises being taken up are likely to yield more information on various existing land use practices, unique geographic conditions, expected storm run-offs, soil erosion, water availability, agro-climatic zones and other information. Satellite imagery and remote sensing methods will be used to prepare the base maps required for these exercises. From these base maps, relevant "knowledge layers" can be extracted and other sophisticated analysis can be performed. The analysis of these knowledge layers will help in the formulation of future land use practices, ensuring that sustainable development goals are met and resources are efficiently utilized. Once a complete picture is obtained, village people maybe issued advisories or recommendations on different matters. Villages can also be categorized and activities maybe prioritized based on the outcomes.

The MBDA has partnered with the North Eastern Space Applications (NESAC) in helping with Village Level Mapping. NESAC is one of the key resource partners, with their state of the art infrastructure and access to the most recent satellite imagery. NESAC has done extensive

work in Meghalaya and has partnered with various state line departments, namely the Department of Forest & Environment, the Department of Soil & Water Conservation, Department of Agriculture, Department of Water Resources and others.

A Task Force, comprising of key personnel from various departments, has been formed. This task force will be supervising and facilitating GIS related activities. The activities being taken up have been divided into different phases. The initial phases are focused on the preparation of base maps while subsequent phases will be focused on the analysis and interpretation of base layers. The results of the analysis will be documented in the form of advisories and recommendations issued to people at the village level. The village level geospatial mapping activities mark the beginning of a new paradigm and are likely to become a critical developmental tool for the state.

Swer Village

While GIS is likely to become a key component of Integrated Village Development related planning activities, the challenges and benefits of having GIS is needed to be better understood. Some initial preparation activities included identification of data sources, evaluation of data availability and determining access. Once these activities were completed, a village named Swer, in the Khatarshnong area of the Laitkroh C&RD block was chosen as the basis for all work.

The mapping exercise was broken up into a number of components:

- Data Collection
- Surveys and Interviews
- GIS Integration
- Analysis and Findings
- Presentations and Way Forward

Data Collection: Data collection exercises were undertaken and all available information was collected. The most important data was satellite imagery which allowed for the creation of numerous GIS data layers. These base layers form the basis of the analysis. The single most important layer is the digital elevation model. Other missing information which can be incorporated in the village estimates are micro climatic information and water information, but since these were not available they have to be incorporated subsequently.

Surveys and Interviews Creating a Village Profile: The first component of the mapping exercise which took place on the "ground" was the village surveys. These surveys were in the form of traditional interview based surveys, Geographic Position System (GPS) point collections and detailed soil surveys. Some critical information was missing, namely local climate information and information on water or availability of water.

The detailed village survey provided great insight into the village. The Village is located on a plateau at a high elevation ranging from 1750 to 1950m and is home to about 320 households. Due to the high elevation and steep slopes, majority of the water bodies are streams which are seasonal. The village can be easily accessed and is very close to the district headquarters. The main livelihood activity which is prevalent in the village is quarrying of limestone deposits. Other activities involve the cultivation of potatoes and maize. The villagers are proactive about safe guarding their community forests and have a great example of a sacred grove.

Due to the lack of any available soil information, detailed soil surveys were conducted for the village. These were analysed separately in the laboratory and conclusions were presented in the report. After all the surveys were completed it was very easy to put together a "profile" for the village, identify its problems and prioritise actions/interventions.

It was found that the village has severe water problems. The Public Health Engineering Department supplies water to the community. In the lean season, when the water sources are impacted the ability to provide water is impacted. This calls for action relating to better water management in the village. Another key area which needs attention is mining. The unscientific quarrying practices taking place in the village is damaging to the environment as it chokes streams and possibly adds lactates to the groundwater. There is urgent need to implement best management practices in the village.

GIS Integration: All information so obtained is placed into the GIS system and is further analysed. The GPS points so collected facilitate this integration process and at the same time allows for validation. Roads, settlements, infrastructure etc. are also captured and placed in the system. Information from digitized Topo sheets was also taken and placed into the GIS.

Analysis and Findings: Numerous analysis was conducted- the morphometric analysis, the vegetation index (to evaluate the health of forests), Slope Aspect classification of the area, land cover classification of the village and soil surveys for future land use planning. The steep slopes were not particularly suited for activities though the plateau areas were already in cultivation. There were gaps in the vegetation where there had been shifting cultivation practiced. Alternative uses could be identified for these areas once the micro climate information became available. The detailed soil series classification identified constraints of each soil a type. The series were classified as Swer A,B,C. Each area having its own constraints was identified. Constraints being erosion, lack of irrigation, low soil moisture, high slopes, shallow soils, poor soil fertility etc. Suggested interventions based on constraints were specific water harvesting activities, terracing/contour cultivation development etc.

The information obtained from the analysis will become fully usable when there is a cluster of villages in the same geographic area for which the mapping and GIS integration exercise has been carried out. On an ad-hoc basis it can only serve as a catalogue of what the village has and how it maybe characterized. The analysis work done here helped in the "categorization" of the village at a much deeper level.

Way Forward

After this exercise the information obtained was presented to the Dorbar at meetings held between the GIS teams and the rural citizens. 3D fly through movies were developed to this effect and shown to the citizens. These activities facilitate empowerment and bottom up planning. These forums allow capacity building and sensitization on the importance of sustainable development and the principles guiding it.

Eventually, these exercises can harness the capabilities of GIS and serve as a convergence platform, where not only line departments can connect with every other department and the villages, but people themselves can take stock of what they have, protect their collective resources and spearhead responsible development. Swer allowed the Knowledge Management team to evaluate the missing gaps, identify what needed to be done to fill these and finally develop methodologies for future village surveys and mapping. Once the GIS surveys are scaled up, it will allow for the development of an intelligent Decision Support Systems and thus expedite planning and development activities in an unique application of Knowledge and Technology.

Creating Market Access for Producers

REPORT to CITIZENS

Through the IBDLP the Meghalaya Government intends to create viable and sustainable livelihoods. For this it is necessary to provide opportunities access to markets so that partners can realize the true value of their produce. In this regard the development of supply chain and logistics for the produce grown in Meghalaya becomes of crucial significance.

To understand the transport and logistical challenges of farmers in the state growing vegetables, fruits, flowers, cash crops such as cashew nut and areca nut, a study was conducted by National Centre for Cold Chain Development (NCCD), Department of Agriculture and Cooperation, Ministry of Agriculture, Government of India in April 2013.

The team of officers & interns travelled through the districts of East Khasi Hills, West Khasi Hills, East Jantia Hills, West Jantia Hills, Ri Bhoi, West Garo Hills, South Garo Hills, South West Garo Hills, North Garo Hills and East Garo Hills. During this trip, covering a distance of 2,000 km, the team interacted with more than 250 farmers at several villages.

The tour was ably supported by District Horticulture Officers and their respective teams bringing with them their familiarity with terrain and local growers. Included as part of this trip's itinerary, the team also visited a few Horticulture-Hubs to understand their activities in helping farmers.

After conducting the detailed study, NCCD submitted a detailed report on the present deficiencies in the system and recommended an action plan and suggested the way forward for the development of supply and logistic chain in the state.

Key Suggestions

1. A sustained campaign to educate farmers on the importance of cooperatives in the form of Farmers' Groups at local level.
2. Induct experienced guidance staff on how to form and run such bodies on both commercial and administrative levels.
3. Interns and programme executives will become 'facilitators' under the Entrepreneurship Facilitation Centre (EFC) banner for development of cooperatives and farmer groups.

1. Interns and programme executives be educated and exposed to all value addition formalities product wise before they are sent out to spread the message.
2. EFCs, coming up at every block level, will foray out into the target area instead of sitting behind desk to collect information from walk-ins.
3. Success stories, culled out by EFCs, will be propagated through various media, including print and television.
4. Bring successful Strawberry Growers Association members of Ri Bhoi and Mawpran for a face to face session with other growers of fruits and vegetable and promote operational and market linked synergy.
5. Growers of cashew nut and areca nut will be taken on guided visits to processing units to familiarize them with what really happens when their raw products reach their doorsteps. This will definitely make them realize what small steps they can do at their farm-gate and collection centre level which will help them earn a bit extra and also perhaps reduce the workload at the processing unit itself.
2. While there will be a clamour for government to set up processing units, ideally, traders and growers need to come together and do it, ably supported by government subsidy. This seems a good time to explore Public Private Participation route.
3. Transport Subsidy can be explored to help growers to move their produce to nearest markets.
4. Road linkage from growing regions to nearest state and national highway ought to be a priority.
5. More than building roads, maintenance of existing state and national highways is of paramount importance.
6. Jurisdictional issues seem to be the cause for non-functionality of ropeways to help deep valley farmers. This needs to be addressed quickly.

Natural Resource Management

3

Initiatives of

Bio Resources Development Centre

The National Botanical Research Institute (NBRI), Lucknow has set up a Centre of Excellence as a joint venture with Meghalaya Basin Development Authority (MBDA) at Bio- Resources Development Centre (BRDC) Campus, Upper Shillong to promote livelihood initiatives linked to bio-resources based on botanical research. The BRDC centre functions towards improving the current status of sustainable agriculture, conservation and sustainable utilization of biodiversity through technology development, refinement and transfer and human resource development.

The Centre has currently taken-up a project sponsored by Department of Bio-technology

(DBT), Ministry of Science & Technology, Govt. of India titled 'Conservation & Sustainable Utilization of Bio-Resources of Meghalaya' at BRDC.

As the state is very rich in bio-resources by way of medicinal plants, aromatic plants, orchids, wild flowers, wild edible plants and many other potential indigenous species an appropriate and eco- friendly intervention of R & D is needed to ensure effective conservation and sustainable utilization of these resources in the state.

In view of the immense potential for crops like ginger, potato and vegetables and also for commercial plants like geranium, used for making perfumes, CSIR-NBRI has selected few technologies befitting the soil and climate in Meghalaya.

Focus areas: The major thrust areas defined for the collaboration are

Sustainable agriculture

Specific mission mode interventions in Agriculture (use of bio-inoculants), Horticulture (floriculture, medicinal & aromatic plants), Plantation crops (betelvine) are envisaged with main objective of promotion of sustainable livelihoods for the people of the state leveraging on the opportunities and strengths of the State's natural resources.

Biodiversity prospection and product development

An assessment of the natural resources available within the different basins and catchment areas of the state has been done for proper and sustainable utilisation of such resources. These resources may be used in food production, pest control, and the development of new drugs, aroma compounds, natural dyes and for other related biotechnological applications and products. CSIR-NBRI would provide its knowledge base and research infra-structure for bio-prospecting the plant diversity and development of herbal/ nutraceutical/ cosmoceutical products.

CSIR-800

CSIR-800 programme focusses on inclusive growth and improved quality of life for India's 800 million citizens through science and technology interventions that are socially and economically relevant. Value addition is proposed through introduction of dehydrated floral crafts for augmentation of income which is in great demand in national and international market and offers great scope for women empowerment.

Need based R&D support

During the partnership, the problem areas in gearing up the ongoing developmental programmes of MBDA would be identified and CSIR-NBRI will provide support to resolve the scientific and technological issues.

Human resource development

CSIR-NBRI will provide opportunities and resources for development of human resources at various levels including training on using high end research equipments through programmes on awareness generation, capacity building and training in different areas.

Progress so far

Bio Resources Development Centre (BRDC) has an experimental farm near Mattilang Park at Upper Shillong. Medicinal and aromatic plants (MAPs) were selected as the first group of focus crop for promotion of sustainable livelihoods

for the people of the state. Central Institute for Medicinal and Aromatic Plants (CIMAP), another CSIR lab in Lucknow, joined the alliance for introducing MAPs in the state of Meghalaya. Based on the soil and climatic conditions of the state and potential of MAPs, CIMAP and NBRI finalized evaluation of the following crops at the experimental farm of BRDC:

Artemisia annua: Artemisinin and its derivatives are a group of drugs that possess the most rapid action of all current drugs against malaria. Treatments containing an artemisinin derivative (artemisinin-combination therapies) are now standard treatment worldwide for malaria. The starting compound artemisinin is isolated from the plant Artemisia annua. The herb, which has its origin in China, was introduced some 10 years ago in India by CIMAP. CIMAP has the agro- technology and improved variety of the herb and has been providing technical assistance as well as seeds for commercial cultivation of the plant to about 200 farmers from Uttarakhand and Uttar Pradesh.

Geranium It is an aromatic herb, which is commercially cultivated for its oil called geranium oil. The oil is used for making perfumes, soaps and cosmetics. Presently, the annual production in India is about 5 tonnes and about 150 tonnes of geranium oil is being imported annually. CIMAP has developed new high yielding variety suitable for growing in Uttar Pradesh and Uttaranchal states of India. The successful introduction of Geranium in Meghalaya would provide expansion in its geographical limits, generally limited to the hilly regions of Southern India.

Other aromatic crops

CIMAP has perfected the production and processing technologies for several medicinal and aromatic plants. These technologies increase yield as well as quality of essential oils using different types of improved and highly efficient processes developed through continuous R&D efforts. Out of several such crops, Damask Rose, Lemongrass, Citronella, Peppermint and Vetiver were prioritized for evaluation of growth, yield and oil quality in the state of Meghalaya.

The team of scientists from CSIR-CIMAP and CSIR-NBRI visited Shillong during 11-14 Feb 2013 to undertake and complete the proposed activity on MAPs. On the first day, the two plantation and experimentation sites, viz., Bio Resource Development Centre and Horti Hub were visited. The nursery beds and field beds were prepared in their supervision and plantation of Geranium cuttings and plants, Artemisia seedlings, Damask rose cuttings, slips of Vetiver, Citronella, Lemongrass, Mentha piperita suckers were done. The nursery of Artemisia was also sown. Plants of Artemisia (25), Geranium (10) and cuttings of Damask rose (100) were provided to Horti-Hub for planting purpose.

CSIR-NBRI bio-inoculants: CSIR has developed stress (abiotic and biotic) tolerant bio inoculants for diverse soil and climatic conditions. These formulations are useful as plant growth enhancer for seed, soil and foliar applications and improve the soil health, crop yield and quality. Applications of the products have increased the yield of several economically important crops. CSIR Award for S&T Innovation for Rural Development (CAIRD) 2011 has been conferred on CSIR-NBRI, Lucknow & Directorate of Agriculture, Government of Uttar Pradesh for the 'Plant Growth Promoting Microbial Bioinoculants for Enhanced Crop Productivity'.

During the visit of scientists in Feb 13, a group of women farmers were trained on importance and application of biofertilizers. They also met senior officers of agriculture

and horticulture departments of Meghalaya for planning the trials and demos on CSIR-NBRI biofertilizer.

Trichoderma harzianum packets were provided for use in tissue culture of Orchids to improve the survival and growth. The packets of Phosphate Solubilising Bacteria (PSB, 10 kg), along with information on application techniques were provided to BRDC with instructions for conducting field demonstrations to the two master trainers.

During March 2013, 22 farmers from Laitmynsaw, Myrkhan and Nongpyiur were selected for demonstration of biofertilizers. Two districts, Ri- Bhoi and West Jaintia hills were visited for demos on PSB in other crops like ginger. Another 15 kg of PSB culture were taken up March-May 2013. There was 29% increase in growth levels of the PSB treated plants with respect to the untreated ones. Four crops Potato, Tomato, Chilli and Beans have been taken up with respect to the PSB usage in the different fields.

Oranges

To promote and showcase to the world the famous local oranges known as the Khasi Mandarin grown abundantly in Khasi and Jaintia Hills, the samples of oranges from Narwan and Nongjrong were provided for analysis and benchmarking. The preliminary analysis results have suggested leads to move further in promoting these as special fruits.

Turmeric

Lakadong turmeric grown in Jaintia Hills is said to be one of best. However, the production is low and sold at a very low price. Lakadong turmeric is a much sought after variety by the extraction industry because of its high curcumin content. Samples of Lakadong turmeric were taken up for analysis and benchmarking.

Status of Medicinal & Aromatic Plants Nursery

The medicinal and aromatic plants (approximately 2500) which were provided to BRDC-NBRI, SC and Horti-hub during 12-14 of February 2013 are surviving well. The survival of Geranium cuttings was poor due to extremely dry weather and time lag in cutting and transplanting. Artemisia seedlings have developed well which is sufficient for 1 acre and the land is also ready for the multiplication.

For the extraction of the oil and quality evaluation, few more months are required as the planting materials are not ready for extraction. More Geranium plants will be brought from CSIR-CIMAP for further evaluation. Artemisia annua is also being multiplied and its oil will be extracted and checked for quality. Scented Rose cutting (1123) and plants (10) are also growing well. Grasses such as Vetiver, Citronella and Mentha (Peppermint) have been planted in the farm along with Lemon grass.

Training of MBDA Interns

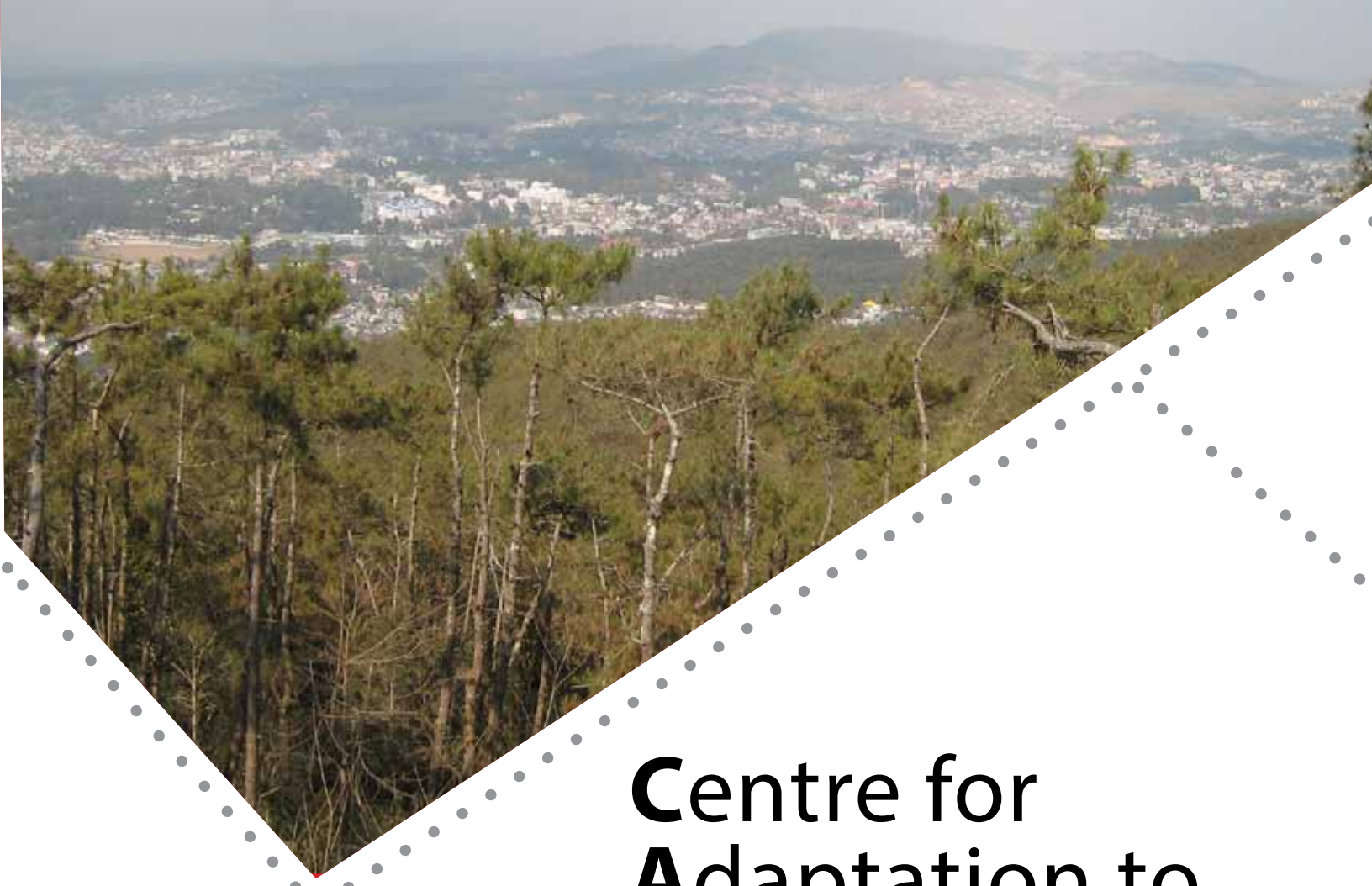
Two master trainers, Ms. Lizbeth Sangma and Mr. Indrajit Bhowal, working at CSIR-NBRI BRDC Shillong Centre were deputed to CSIR-NBRI for two weeks training programme during 6- 17 May 2013. The trainees spent one week each at CSIR-NBRI and CSIR-CIMAP, getting hands on training on various technologies like biofertilizers, tissue culture, floriculture, vermi- composting, dehydrated floral crafts and production, processing and quality evaluation of medicinal and aromatic plants.

Floriculture

Gladiolus is a very promising and economic floriculture crop for introduction in Meghalaya. CSIR-NBRI has released several Gladiolus varieties and popularized its cultivation in plains of Uttar Pradesh. Corms of four Gladiolus varieties viz., Rashmi, Amethyst, Rashmi and Neelima, released by CSIR-NBRI were provided to MBDA interns on the National Technology Day, 11 May 2013 at Lucknow. These varieties are being multiplied and evaluated at BRDC farm in Shillong.

Future Action Plan

- Expansion of biofertilizer application in other crops and estimation of yield, quality along with soil health.
- Analysis of oranges and turmeric for promoting the brand value
- Organizing training programme for government departments and NGOs to promote Dehydrated Floral Crafts as economic empowerment tool
- Yield and quality estimates of medicinal and aromatic plants, grown at BRDC, Shillong and their further multiplication



Centre for **A**daptation to **C**limate **C**hange, **M**eghalaya

REPORT to CITIZENS

The State Action Plan on Climate Change (SAPCC) highlights the problem of the limited / fragmented knowledge related to climate change available at the state level as an important cross-cutting issue. To improve the situation, work towards establishing the Centre for Adaptation to Climate Change, Meghalaya is underway. This is an initiative taken through the GIZ (Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH), Germany's agency for international co-operation. The foundation of the Centre was laid by the Chief Minister of Meghalaya in the presence of a high level delegation from the Federal Republic of Germany.

The Centre aims to facilitate database creation. Generation of knowledge in the field of climate change adaptation across all levels is a prerequisite. Information shared among various stakeholders can ensure effective planning and implementation of climate change measures across sectors. Moreover, the database can be used to share relevant information with target groups such as villagers, district councils, planning authorities, government institutions and others. The program works closely with planning authorities, government institutions, research organizations, civil societies and communities.

State Action Plans on Climate Change (SAPCC) Meghalaya

GIZ provides technical assistance to the partner states in the endorsement, publication and implementation of the SAPCCs. The SAPCC outlines strategic framework to tackle the adverse Impacts of climate change. The Centre for Adaptation to Climate Change has to be seen in the context of the need for climate proofing of value chains which are of importance to livelihoods. Knowledge management at the state and regional level is one of the core activities under the technical assistance and the Centre for Adaptation to Climate Change is a key instrumentality in the task.

Mission Green Meghalaya

REPORT to CITIZENS

The conservation & protection of forests and other natural resources in the state reflects the ethos of the people of the people of Meghalaya.The extent of forest cover is well above the national average.However with increasing population, an emerging trend of significant reduction of 'green cover' is being noticed. This reduction of the 'green cover' in the state is due to the indiscriminate felling of trees and other plant species both in the community forests, private forests, reserve forests and also severe destruction of 'green cover' along the roads and the water catchments. Due to the heavy rainfall that the state receives and considering the nature of the roads in the hilly terrains, protection and enhancement of road-side 'green cover' is of utmost importance to protect the roads from landslides, slips, sinking and also to maintain the aesthetic beauty. It will also reduce land, water, air and noise pollution. Tourism development too requires good roads along with the aesthetic cover to attract more tourists. Hence, the State has taken up an initiative to implement a "Mission Green" through the Integrated Basin Development and Livelihoods Promotion Programme focusing on the following:

i. Enhancing sustainable green cover

ii. Adoption of green technologies

iii. Building up a green movement

To collectively implement the objectives of 'Mission Green Meghalaya' (MGM), aGreen Campaign, has been launched at theStakeholders Conclave on the Green Mission, organized at Shillong on December 5, 2013. The Green Campaign would be a meeting of minds to see how the Government, traditional institutions, local institutions and stakeholders can come together to deliberate further the MGM.

Objectives of

Mission Green Meghalaya

The objectives of Mission Green Meghalaya are:-

Enhancing sustainable green cover

1. To create a store house of genetic diversity by planting indigenous trees, shrubs, herbs, climbers, creepers, conifers and green foliage including fruits, NTFPs and medicinal plants

2. Mass afforestation along the roads and vacant land, streams and water catchments etc

3. To increase local precipitation through aerographic and micro-climatic effects &create conditions favorable for condensation

4. Development of 'village nurseries' in a partnership with the grass-roots entrepreneurs to meet planting material requirement

5. To promote tissue culture and other R&D activities for promotion of suitable species

6. To reduce the surface run-off discharge and checking slope erosion

7. To support an environment conducive to attracting avifauna, butterflies, squirrels etc

8. To check air pollution in urban areas.

9. To create green belt and avenues for meeting aesthetic &recreational needs of people

Adoption of green technologies

1. Encourage dissemination, use and development of 'green' construction technology

2. Support adoption of green agriculture

3. Promotion of 'green' Energy

4. Pioneer and support eco friendly tourism

Building a green movement

1. Encourage villages to become clean and green

2. Promote Youth for Green

3. Facilitate formation of village level authority for CPR

4. Inculcate a culture for greenery at school and college level

Coverage & Extent of Green Cover

'Mission Green Meghalaya' (MGM) is being implemented in all the 39 blocks across 11 districts of Meghalaya.

The 'Mission' covers:

- Catchments of rivers & streams
- Vacant lands of education institutions, religious institutions & other Government institutions
- Along the National Highway, State Highway, District Roads and Other Roads.
- Community forests, private forests and buffers of reserve forests
- Waste lands & wet lands
- Government vacant lands in the heart of city andtowns to create 'city lungs'
- In and around tourism places

Implementation

of Mission Green Meghalaya

The 'Mission Green Meghalaya (MGM) has been conceived on a convergence platform in which all the concerned government departments, agencies, community based organizations and traditional institutions work in close cooperation. The Meghalaya Basin Development Authority (MBDA) which is implementing the Integrated Basin Development & Livelihoods Promotion Programme, Meghalaya (IBDLP), a state flagship programme, is the nodal implementation agency for the 'Mission Green Meghalaya (MGM)'.

The Mission Green Meghalaya is managed by a high level committee headed by the Chief Minister. This State Level Management Committee (SLMC)is tasked to create policy framework for the mission and would be responsible for overall implementation throughout the state. Additionally, the committee also oversees that timely provision of financial, material and manpower resources are being provided under the mission and

Good Governance

4

Training of Gram Sevaks on Ethics

The Gram Sevaks and Sevikas of the State are the key functionaries of the Government in its efforts to bring about a meaningful change in the Rural Areas. These functionaries are selected from the village itself and are responsible for delivery of services and disseminating information at the village level. These functionaries are in constant contact with the grassroots, therefore their knowledge and skills need to be enhanced on a regular basis through training and other capacity building techniques.

Accordingly the State Institute of Rural Development Meghalaya (SIRD) in collaboration with the Meghalaya Institute of Governance (MIG) and the Initiatives of Change, Panchgani (IofC) organized a eight week Integrated Programme on Ethical Governance and Public Service for the 600 plus Gram Sevaks and Gram Sevikas of the State who are at the cutting edge of the Government machinery.

The components of the training were two and a half days of domain training and two and a half days of ethical and values training. The domain training was handled by the SIRD with Resource Persons drawn from SIRD and other related institutions. The 'Initiatives of Change Panchgani', with its renowned expertise, took care of the entire two and a half days of ethics training. In the 8 weeks of training 16 batches of Gram Sevaks and Gram Sevikas were trained and a total of 606 participants attended the Programme. The training Programme can be considered as an achievement for SIRD and the State as a whole as it was the first time that such a large number has been trained in such a short span of time.

Process **R**e-**E**ngineering for **S**ystematic **S**ervice **D**elivery

REPORT to CITIZENS

In line with the perspective of promoting inclusive growth with a focus on poverty alleviation, employment generation and livelihood promotion MBDA has worked with the National Institute of Smart Government (NISG), Hyderabad.

NISG, Hyderabad is a not-for-profit company incorporated in 2002 (under Section 25 of the Companies Act) with ownership of Government of India, Government of Andhra Pradesh and NASSCOM. NISG is an institution of excellence in the area of e-Governance providing consulting services in Strategic Planning, Project Development, and Capacity Building. NISG also provides strategic guidance during the project development and support phase.

NISG has identified 4 missions; sericulture, livestock, horticulture and forestry for which it has analysed intervention services.

These intervention services have been requested by the MBDA and are based on the analysis of the service requests received from the EFCs.

NISG was tasked with identifying a list of twenty (20) services to be delivered through the EFCs and prepare process maps for each service. They have also prepared the process guidelines, checklist and reference processes for the services. To build MBDA's capacity for developing process re-engineering and continuation of ongoing services delivery, NISG has trained four MBDA resource persons.

Services identified

for sericulture mission

a. Outreach on IBDLP - Provide communication how to approach EFC

b. Creation of nurseries by Sericulture and Weaving Department
c. Provide training on various activities related to sericulture
d. Facilitate raising of nurseries by sericulture farmers
e. Assistance in formation of food plant nurseries
f. Provide training for setting up an enterprise
g. Provide inputs (seeds, plants, eggs, cocoons etc.) at subsidized rates
h. Provide assistance in understanding the economy of the enterprise
i. Provide common tools
j. Provide disinfectants, acid treatment, manures and fertilizers
k. Facilitate area expansion for sericulture farms
l. Provide assistance in improving the quality of end product
m. Provide assistance in improving the yield of the end product
n. Facilitate an ecosystem for providing multiple options to villagers for selling their produce (Diversify marketing options)
o. Creation of Sericulture Hubs
p. Assist farmers in constructing infrastructure required for storage
q. Provide training on generating income through forward integration methods like weaving of sarees, traditional dresses, shawls etc.

Services identified for livestock mission

a. Outreach on IBDLP - Provide communication how to approach EFC
b. Provide training on various activities related to animal and bird farms
c. Provide Government subsidy to entrepreneurs
d. Provide assistance in availing bank loans for setting up animal and bird farms
e. Provide training for setting up animal and bird farms
f. Facilitate area expansion for cultivation
g. Provide assistance in understanding the economy of the enterprise
h. Assistance in formation of hatcheries
i. Provide medicines and vaccination for animals and birds
j. Provide assistance in improving the quality of end product
k. Facilitate an ecosystem for providing multiple options to villagers for selling of their produce (Diversify marketing options)
l. Facilitate transportation of products
m. Provide training on generating income through forward integration methods like milk processing and milk products, frozen meats, packaged meats etc.

Services identified for
Horticulture Mission:

a. Outreach on IBDLP - Provide communication how to approach EFC
b. Creation of nurseries by Horticulture Department
c. Provide training on various activities related to horticulture hub
d. Facilitate raising nurseries by farmers
e. Provide training for setting up horticulture hubs
f. Provide seeds, saplings and plants to raise horticulture hubs
g. Provide fertilizers, pesticides and medicines for plants
h. Provide government subsidy for horticulture hubs
i. Provide assistance in understanding the economy of the enterprise
j. Facilitate area expansion for horticulture hubs
k. Provide assistance in improving the quality of end product
l. Provide assistance in improving the yield of the end product
m. Facilitate an ecosystem for providing multiple options to villagers for selling of their produce (Diversify marketing options)
n. Formation of common distribution centers
o. Construct infrastructure for storage
p. Provide training on generating income through forward integration methods like food processing, jams, juices, beverages etc.

Services are identified for the
Forestry Mission

a. Outreach on IBDLP - Provide communication how to approach EFC
b. Provide training on various activities related to forestry
c. Provide government grant to entrepreneurs
d. Provide assistance to villagers in raising nurseries (Exposure Visit)
e. Provide seeds and saplings to raise nurseries
f. Provide fertilizers, pesticides and medicines for plants
g. Provide assistance in nursery stage to improve the planting stock
h. Provide training in setting up forest
i. Provide assistance in understanding the economy of the enterprise
j. Facilitate area expansion for forest plantation
k. Provide assistance in improving the quality of the forest product
l. Provide assistance in improving the yield of the end product
m. Facilitate an ecosystem to provide multiple options to villagers for selling of their produce (Diversify marketing options)
n. Construct infrastructure for storage of forest product
o. Provide training on generating income through forward integration methods like making furniture, decoration items, bamboo articles etc

NISG has developed the process maps for all the identified services. The AS-IS and TO-BE process map creation is complete for the services identified.

Training the **E**nterprise **R**esource **P**ersons and **F**ield **B**usiness **A**dvisors

REPORT to CITIZENS

Enterprise Resource Persons (ERPs) and Field Business Advisors (FBA) are the cornerstone of IBDLP providing the public interface for the programme at the grass root level. The ERPs and FBAs are responsible for mobilizing people to become partners of IBDLP by providing guidance and linkages. Therefore the role of ERPs and FBAs becomes very vital for the success of the Programme as their support and guidance will enable the partners and aspiring entrepreneurs towards better livelihood avenues. Training the ERPs and FBAs is essential so as the required information and knowledge is communicated to the citizens. MBDA has tied up with the 'The Livelihood School' which is an academic institution promoted by BASIX Group which deals in livelihood promotion. The mandate of the school is to build up a scientific Knowledge Base on livelihoods and disseminate the same to livelihood practitioners for enhancing their understanding and implementation capabilities, who in turn will promote large number of livelihoods.

Besides, capacity building support services to the ERPs and FBAs, TLS has established a system in the EFCs so as to work in an inclusive manner to further serve the poorest of the poor, small and marginal farmers, women who may not be

proactive to use the services of the EFCs. One of the activities that TLS facilitates is 'Livelihood Mapping' in the given blocks by enhancing the capacities of the ERPs and FBAs. The agenda behind this exercise is to sensitize the ERPs and FBAs about the livelihood needs of the poorest of the poorer sections.

TLS is providing Knowledge Management Services and Enterprise Development Services to 8 Enterprise Facilitation Centres to promote entrepreneurship in the state.

The broad scope of its activities is encapsulated as :

- Customized training programs on entrepreneurship and livelihood promotion for the existing and to-be recruited staff of EFCs. This consists of class room sessions, practicals and exposure visits to successful livelihood promotion projects in the country;
- Use of psychometric analysis tools to identify potential entrepreneurs from the database available with eight EFCs in the intensive blocks;
- Create a pool of Master Trainers to carry forward the task of training in Enterprise promotion in alliance with TLS;
- Identify and maintain a roster of successful entrepreneurs who can serve as mentors for a new entrepreneur;
- Developing a compendium of livelihood activities for the population in each of the 8 blocks through Livelihood Mapping studies;
- Undertake six sub sector studies to understand the livelihood and value chain gaps of different subsectors.

With this background, TLS facilitated a three day orientation to a group of 14 participants comprising ERPs, FBAs and Interns which was conducted from 16 to 18 May, 2013 at the MBDA office in Shillong. Armed with this knowledge provided by The Livelihood School, the ERPs and FBAs are now able to reach-out to the partners in a more systematic and dynamic way. TLS envisages that at the end of their intervention, the select EFCs would emerge as a one stop solution for local enterprises as well as a repository of local knowledge and sector specific enterprise solution providers. The ERPs & FBAs in these EFCs would be the key resource personnel having local knowledge but with global outlook on the best practices in the sector specific areas. They must be catalysts in igniting the local economy for ensuring livelihood security and inclusive growth within a sustainable framework.

Meghalaya State Skill Development Society **(MSSDS)**

The Meghalaya State Skill Development Society (M.S.S.D.S) was created to enhance the skill sets of the youth of the State, thereby improving their employability. The M.S.S.D.S gives focused attention to this task, by promoting cohesive skill formation, entrepreneurship and a placement framework for Meghalaya, based on the current and emerging needs of the economy of the state and the country.

The Meghalaya State Skill Development Society was registered under the Meghalaya Societies Registration Act, 1983 on 5th December, 2011. It has an office at Montfort Building, Dhanketi, Shillong. The Society also works "Supporting Human Capital Development" for Meghalaya, an ADB Project.

The Ministry of Home Affairs (MHA) has earmarked 5% of the Fund allocated to the Border Areas Development Department for skill development for the people living along the international boundary with Bangladesh. The State Level Screening Committee of the concerned Department has entrusted the implementation of the said component to the MSSDS. The Funds have been made available to train 7550 youth, including the 2550 from the Border areas.

Training partners like DB Tech and IL&FS have showed great interest in providing skill development of the rural BPL youths. These training partners are known throughout the country and partnerships have been built up based on this credentials & track record.

Training Partners
Don Bosco Tech Society (DB Tech)

Don Bosco Tech Society (DB Tech) is a society registered under the Indian Societies Registration Act, incorporated in the year 2006. The primary mandate of DB tech is to train youth with the motto of 'learn a trade and earn a living'. The Don Bosco Organisation is spread across 132 countries across the world and has thousands of training institutes worldwide. The BASE (Bosco Academy for Skills & Employment) has been set up by DB Tech, which provides a short term module for market-driven employment-oriented skill development training, aiming at the engineering and service sectors. Don Bosco Tech Society has set up Skill Development Centres in Meghalaya. DB Tech has successfully completed 2 Projects in Meghalaya namely East & North East Projects and the Meghalaya & Nagaland Project, where the Organization had trained 3574 youths, out of which 1744 youths were placed.

An Orientation Programme on Skill Development was organized by the MSSDS and the SSSS (Synjuk ki Seng Samla Shnong) at Don Bosco Technical School on 17th August, 2013 at Laitumkhrah. The primary objective of this programme was to impart knowledge to the youth of Meghalaya about the Skill Development initiatives being undertaken by the Government of Meghalaya to help them secure a better future for themselves. The programme was attended by 250 youths. Skill Providers viz. Ranger Security and Services Organization, IL&FS, DB Tech and ILEAD gave their presentations on the various types of Skill Development programmes being undertaken by them.

Name of the Organization	Financial Year	Mandate	Completed	Placed	Under Placement	Ongoing Training
DB Tech	2011-2012	MoRD	460	308	0	0
	2012-2013		1583	982	601	0
	2013-2014		1531	454	481	596
Overall			3574	1744	1082	596

Infrastructure Leasing & Financial Services **(IL & FS) ETS**

IL&FS Education and Technology Services Limited (IETS) is the Education Technology and Training Arm of Infrastructure Leasing and Financial Services (IL&FS). The division has been involved in training since its incorporation in 1997. IL&FS Education focuses on building Human Capital of the country through targeted intervention in the areas of Capacity Building, School Education, Vocational Education and Professional training.

Since its inception, IL&FS-ETS has been extensively involved in Project Design, Development, Implementation, Policy Advisory, Technical Assistance, Monitoring & Evaluation in the Education, Skills, Clusters, e-Governance and Health related social sector projects in India and developing countries. IL&FS has a long, rich and diversified experience in undertaking several advisory and implementation mandates of various Ministries and Departments in Government of India (GOI), State Governments & multi-lateral organisations.

IL & FS Education and its subsidiaries (IL&FS Clusters & IL&FS Skills) are working with Ministry of Rural Development (MoRD) in the capacity of Project Implementing Agency under Swarna Jayanti Grameen Swarozgar Yojana (SJSY, Special Project). IL &FS Education has setup a Joint Venture IL & FS Skill Development Corporation Ltd. (IL&FS Skills) with the National Skills Development Corporation (NSDC) for conducting skill training of youth in the country to meet the objectives and mission of Government

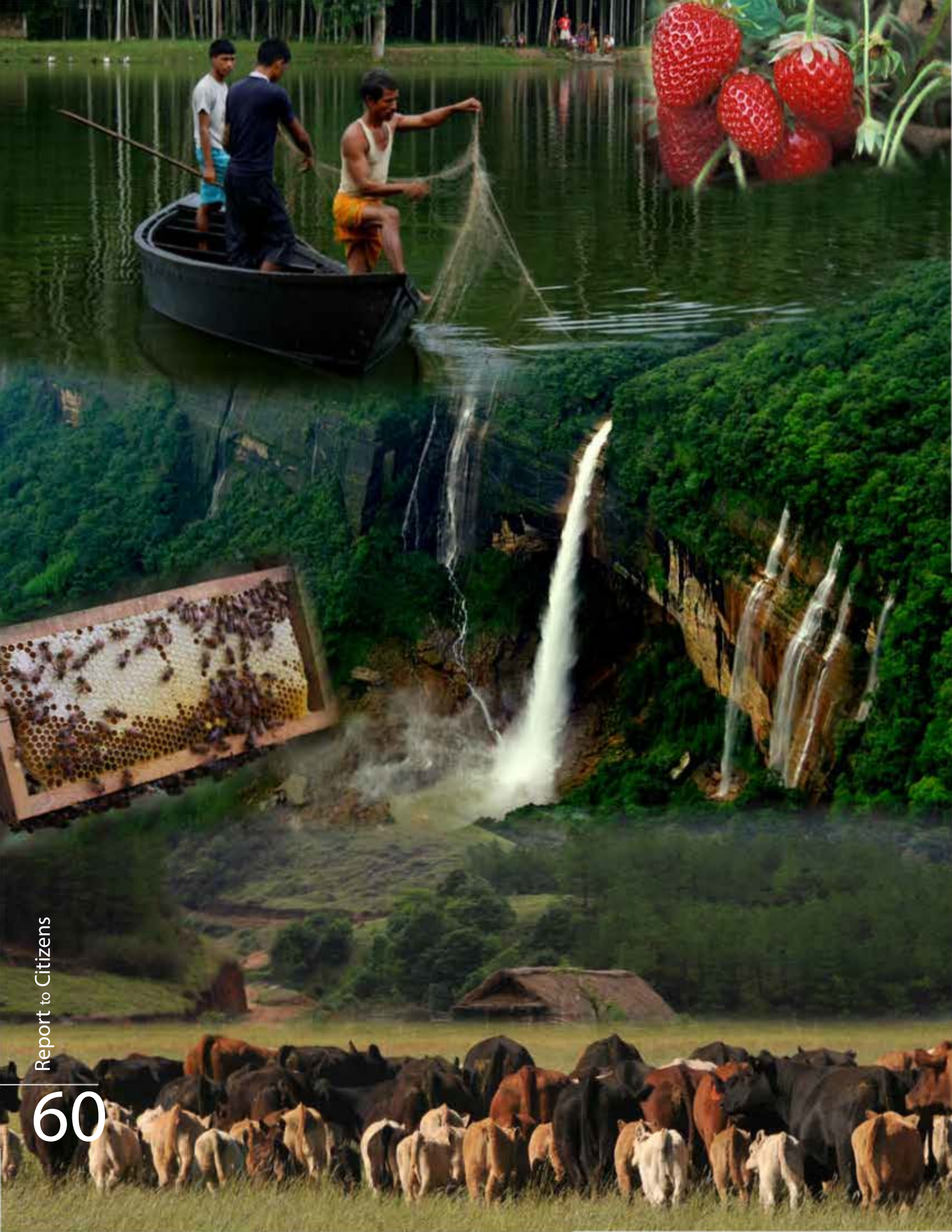
of India of ambitious target of 500 million skilled man-power in the country. As a part of the joint venture, they are setting up 100 skill centres across India in the next 5 years.

IL&FS has set up six Skill Development Centres in Meghalaya and has successfully trained 1247 youths and placed 791 youths under the MoRD and Tourism projects.

Project Design, Development, Implementation, Policy Advisory, Technical Assistance

Name of the Organization	Financial Year	Mandate	Completed	Placed	Under Placement	Ongoing Training
IL&FS	2011-2012	MoRD	195	195	195	100%
	2012-2013		816	816	488	59.8%
	2013-2014			236 (136 Ongoing Training)	108	45.76%
Overall			3574	1247	791	68.52%

Name of Center	Address	Class Room	Domain Lab	IT Lab	In Take Capacity	Residential Capacity
IL&FS Skills School Barapani	Pyllun Village,$th KM,Lad Rong Men,Ribhol, Meghalaya, PIN-793103	2 Nos.	Hospitality 1 Lab Mason-1 Lab	Yes	40 seats	30 (Boys hostel)
IL&FS Skill School Umsning	Umsning Parish Educational &Welfare Society, Mary Mother of God Church, Umaning Parish, P.O Umsning, RiBhoi,Meghalaya, PIN-793105	2 Nos.	Hosptality-1Lab Electrical-1 Lab	Yes	80 seats	40 (Boys hostel)
IL&FS Skill School-Rongjeng	Dambo- Rongjeng BDO office, East Gargo Hills, Meghalaya, PIN-794110	2 Nos.	Hospitality-1 Lab Mason-1 Lab	Yes	85 seats	20 (Boys hostel)
IL&FS Skill School-Williamnagar	DRDA Hall-II. Williamnagar, East Garo Hills, Meghalaya, PIN-794111	2 Nos.	Hospitality- 1 Lab	Yes	100 seats	20 (Boys hostel)
IL&FS Skill School-Khliehriat	Khliehriat Higher Secondary School, Khliehriat, East jaintia Hills, Meghalaya, PIN 793200	2 Nos.	Electrical- 1 Lab Mason-1 Lab	Yes	50 seat	20 (Boys hostel)
IL&FS Skill School-Shillong	2nd Floor, NL Complex, Dhankheti, Shillong, East Khasi Hills, Meghalaya, PIN-793001(Above SBI-Malki)	3 Nos.	BPO-1 Lab Hospitality -1 Lab	Yes	90 seat	Non-Residential
Total		**13 Nos.**			**445 Seats**	



Mission Interventions

5

Aquaculture

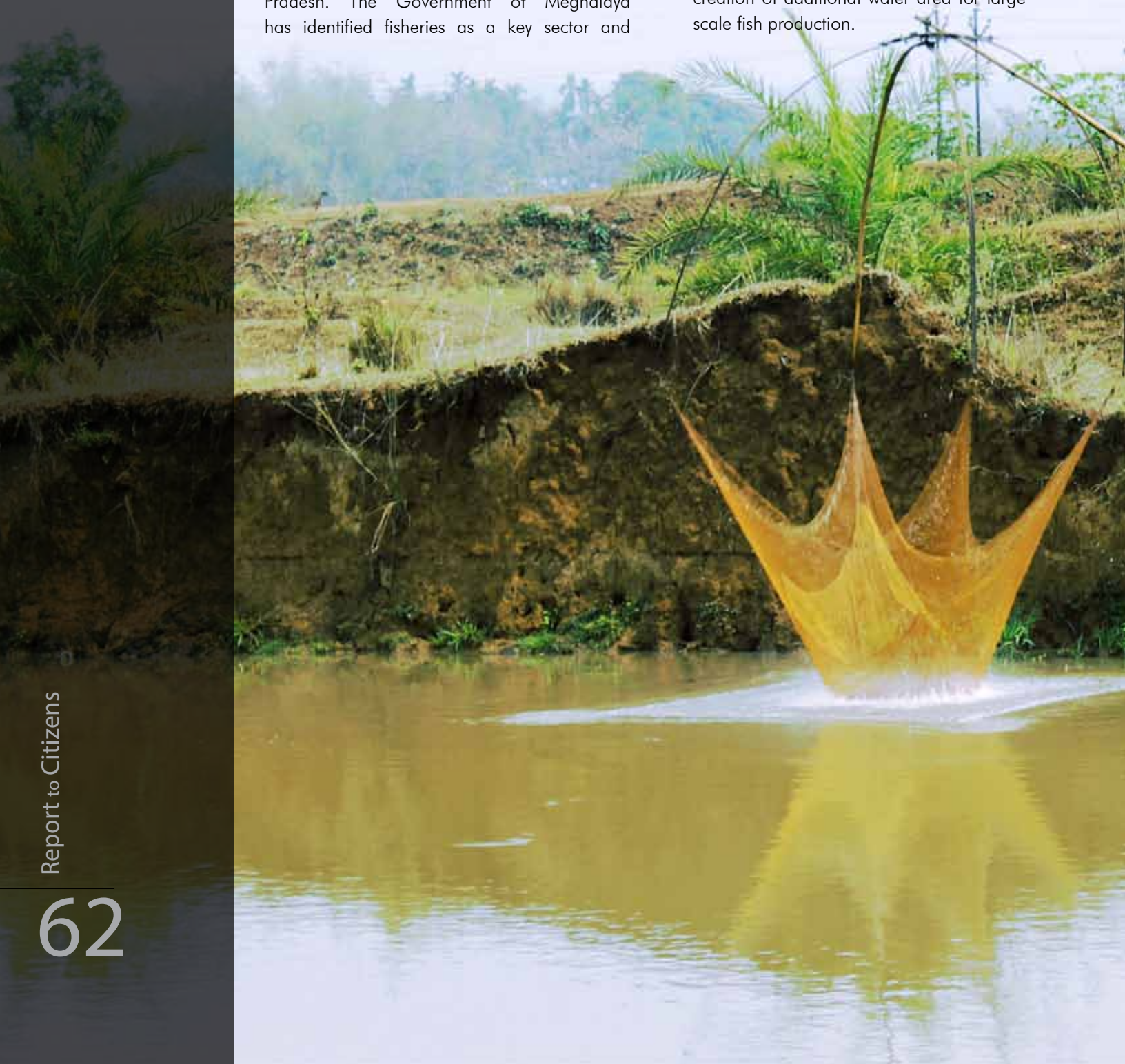
Meghalaya with its vast inland fishery resources offers tremendous scope for developing the fisheries sector, but lags behind in harnessing the potential of these natural resources. Though the state is predominantly a fish consuming State, the supply of fish is inadequate to meet its growing demand, necessitating imports from Andhra Pradesh. The Government of Meghalaya has identified fisheries as a key sector and has decided to launch the Meghalaya State Aquaculture Mission (MSAM) co-terminus with the Twelth Five Year Plan period (2012-13 to 2016-17).

Objectives of

Aquaculture Mission

The MSAM has the following objectives:

a. Development of existing water bodies and creation of additional water area for large scale fish production.



b. Reclamation/rehabilitation of marshy and swampy lands Bheels and other water area and developing them into modern fish production system.
c. Creation of mass awareness, capacity building, exposure training and skill development of all the stakeholders, for long term sustainability of fishery sector.
d. Conservation of native, endangered and traditional species (Mahseer and Chocolate Mahseer) of Meghalaya and developing breeding farms of commercially potential species on a large scale.
e. Introduce and promote ornamental fisheries as also diversify the current range, so as to capture several emerging opportunities in the aquaculture sector viz., fresh water scampi culture, etc.
f. Enhancement of water storage capacity through development of small water areas and microclimate to sustain agricultural production and
g. Extend all technical support at the door step of the stakeholders.

Aquaculture Mission is divided into six Mini Missions, for better focus and ease of implementation. The Mission is being implemented under six mini-missions, each of which is detailed below:

Mini Mission I: Area and Productivity Expansion

- The Department of Fisheries launched the "1000 Pond Scheme" during 2005-06 to bring in more area under fisheries, which had resulted in the creation of an additional 500 hectares of water area in the state. 2336 individuals became fish farmers through that scheme and are now engaged in the production process. The growth that happened through the scheme not being sufficient, it has been decided to make a much larger investment through Aquaculture Mission. The Mission envisages the creation of a water area of 10,000 ha within a period of five years at the individual level in addition to the reclamation of marshy areas and development of community water bodies. Adopting a cluster approach for area expansion and development of fishery clusters will be one of the approaches to be adopted.
- Marshy and swampy areas, Bheels and other community water bodies are being reclaimed and stocked with good quality fish seed. It is visualized that upto 500 hectares of such community water bodies could be developed under the Mission. As reservoirs are an important source for increasing fish production, the Mission will also improve the productivity of the three known reservoirs of the state (Umiam, Kyrdemkulai and Nongmahir) by stocking with high quality fish seed to enhance the fish production in the state. Similarly, the Mission will make the lakes and other small water bodies productive by stocking with quality fish seeds. In nutshell, wherever there is potential for fisheries, the Mission will strive to make the assets productive.

Mini Mission II: Critical Infrastructure Development

- Seed and feed are two critical components for inland fish farming. The Mission is addressing the problem of shortage of quality fish seed by establishing modern hatcheries and upgrading the existing Departmental fish farms. The government hatcheries in the seven districts are being upgraded to meet the demand for fish seed. Wherever possible, the hatcheries will be privatized for higher and better fish seed production as well as for generating revenues for the state exchequer. Setting up of FRP portable hatcheries is one of the key small scale interventions of the Mission, to get quality seed in a decentralized approach. The Mission also addresses the problem of high cost and non-availability of fish feed by setting up small scale fish feed mills in the private sector, technology for which will be appropriately sourced.
- The aquaculture technology developed in Israel for large scale production of seed

of the cultured organisms (fish fry) is being adopted. The Mawpun Fish Farm is being upgraded further. The Mission provides technical support and advisory services for management of fish diseases. Disease is one of the major problems associated with aquaculture, which has become a limiting factor in enhancement of fish production. Fish become susceptible to various infectious organisms such as Protozoa, Helminths, Bacteria, Fungi and Virus. Therefore, it is essential to adopt suitable health management measures to reduce the loss due to disease outbreaks in culture systems. Through the Mission, the research wing of the Department of Fisheries at Mawpun is being upgraded and equipped with essential instruments and technologies like PCR for diagnosis of infectious diseases and recommending prophylactic measures. Procurement and supply of necessary equipments like kits for water-soil analysis, Drag-nets, Happas, Hand-nets, etc will form the other key activities under the Mission.

- The Mission proposes to upgrade the existing fish markets and also construct modern fish markets in scientific lines, with necessary facilities. Through the Aquaculture Mission, the existing Fishery Co-operative societies in the state is being strengthened by extending financial and technical support to help the fish farmers, and to further enhance fish production. Institution building within the fishery sector is of high priority but as the process of creating new institutions will take time, it is felt necessary to take stock of the existing institutional base and strengthen it immediately in the short term.

New institutional structures, by way of district level and state level fish farmers' collectives are being supported.

Mini Mission III: Conservation of indigenous fish

- Establishing sanctuaries for conserving indigenous and endemic species of fish is a key component of the Mission. Conservation is considered important due to various reasons. Firstly, the indigenous species are the wealth of the state and hence they have to be conserved, secondly they have future commercial value and emerge as unique food material, thirdly they are potential genetic material from the point of view of bio-diversity and lastly they may form a source of livelihood for many fishers. Several measures for conservation are being adopted by the Mission, key ones being the launching of Media campaigns, orientation workshops for the fish farmers, awareness campaigns for school and college students, educational camps, etc. Steps will be taken under the Mission to draft and implement a legislation to conserve and protect indigenous species of fish. The Meghalaya Fisheries Act will be put in place.
- The importance of Mahseer as a sport fish is well known and it will be declared as the State fish. For evolving a sound rehabilitation policy for Mahseer water bodies, detailed surveys are being conducted utilizing the services of Programme Managers in collaboration with the district officials of the Department of Fisheries. There will be check on unregulated fishing and selected Mahseer water bodies will be developed where rods and lines only will be allowed to operate. The existing Mahseer sanctuaries in various locations will be protected, and will be developed as tourist destinations. The Mission is collaborating with the Department of Tourism for boosting the objectives and target of the Mission related to Mahseer conservation.

Mini Mission IV: Capacity building and HRD

- The successful implementation of the Mission is critically dependent upon the capacities of all stakeholders. Besides the service personnel, fish farmers, multi service providers and cooperators are being provided technical training. Creation of the capacity building infrastructure will be given due importance under the Mission. It is also proposed to organize skill trainings for unemployed youth in hatchery management, ornamental fish production and setting up of aquarium fabrication units. Mass mobilization campaigns for enrolling potential fish farmers in the Mission have been organized in all districts of the state.
- The Mission proposes to establish seven Training Centres (one in each district) with adequate facilities for training, as part of its effort to create the Capacity building infrastructure. Each of these training centres would be fully equipped, with sufficient capacities to train the farmers and the officers.
- The Aquaculture Mission will be implemented in Meghalaya during 12th plan period by the Fish Farmer Development Agency (FFDA). For effective functioning of the Mission and to ensure its success, the organisational set up of FFDA would be strengthened. FFDA will function as a body with a Mission Director and requisite supporting staff. Technically qualified Programme Managers will be appointed on contractual basis for reaching out to the farmers. They will be supported by the Multi Service Providers (MSPs) who are also appointed on contractual basis for the Mission in order to provide various services to the farmers. They should have passed Class 12 and will be given hands on training on the required skill sets.
- The Mission will work in a phased manner. During the first year of implementation, the target fixed were low, these are gradually increasing in the subsequent years, as the

institutional capacities to achieve the targets improve, along with the streamlining of the processes. The targets would be achieved by the end of the fifth year. Under the Mission, it is proposed to institutionalize awards/incentives for the best performing fish farmers and fishery officers to motivate them for higher performance.

Mini Mission V: Mass Media Campaign, Documentation and Outreach

- The Mission can succeed only if there is greater participation of the fish farmers in various activities envisaged. To create awareness about the Mission and its activities and give wide publicity among the public at large and the fish farmers in particular, campaigns utilizing the mass media (print and electronic) are being organized. The process documentation of the implementation of the project and preparation of success stories and its wide dissemination through the media form an important component of the Mission. Mini Mission V intends to provide boost to the mass media campaigns and documentation in a big way. Workshops, seminars, fish melas, fish festivals, exhibitions, etc have been organized to popularize and publicize the essence of the Aquaculture Mission to the public. Press releases, press conferences, broadcast/telecast through local cable networks, etc have been used to reach out to the public. FM radio has been used extensively for reaching out. Promotional and publicity materials like pamphlets, leaflets, booklets, technical bulletins, etc will be published in local language and distributed to the public, and educational films have been made.

Mini Mission VI: Emerging opportunities in the fisheries sector

- There is an exclusive visionary component envisaged under the Mission for tapping the emerging opportunities in the fisheries sector, and addressing them with utmost seriousness and scientific backstopping. There is immense potential for breeding and rearing of ornamental/aquarium fish. It is reported that the state has about 256 species of indigenous ornamental fish species which are easy to culture and breed in a commercial way. The agroclimatic conditions of the state are very congenial for cold water aquaculture. There is potential for trout farming in the state, which has to be fully exploited. The potential for freshwater prawn culture has also to be further exploited. Freshwater prawn (Macrobrachium malcolmsonii) is a compatible species for polyculture along with Indian major carps.
- The people of Meghalaya are known to be sport lovers and angling is one of their favourite sports. Under the Mission, appropriate sites and structures of water bodies will be identified and developed as angling pockets for promoting sports fish and aqua/eco-tourism. The Mission has promoted organization of Fishery festivals to attract tourists and disseminate the theme of Aquaculture mission.
- The Mission will initiate freshwater prawn/ scampi culture in the state. Establishment of aqua parks that display various types of fish in natural bodies developed in a meandering way with passages will be another activity, which will have entertainment and educational value for the students. The Mission will also strive for introduction and popularization of new table species of fish. Table trout and two German phenotypes of common carp (mirror carp and scale carp) will be introduced.
- The Rombagre Fish Sanctuary in West Garo Hills and the Nongbareh Fish Sanctuary in Jaintia Hills have become popular tourist destination in the state. In line with these, the Mission proposes to transform a few other fish sanctuaries also as tourist destinations.

Other activities
under the Mission:
Convergence

It is expected that convergence of inter sectoral programmes with State Aquaculture Mission will enable better planning and effective investment in the fisheries sector. Convergence also brings synergy between different government programmes and/ or schemes in terms of their planning, process and implementation. It also helps in avoiding the duplication of efforts by different agencies and thus helps in optimally deploying resources. Convergence will also help to integrate relevant technologies with the Mission. The Aquaculture Mission has functional convergence with programmes like MGNREGS, RKVY, NRLM, etc. and thematic convergence with line departments like Water Resources Department, Soil and Water Conservation, Tourism.

An example of successful convergence is in Nongbareh village in Jaintia Hills, where a small check dam constructed by the Soil and water conservation department/ Water Resources department has been declared as a Fish Sanctuary by the people of the village. The endangered chocolate Mahseer species is also being conserved and has now populated the entire stretch of the river. The Mission will attempt to replicate such interventions in other rivers, streams of the state.

Management
Information System (MIS)

There is need for developing data generation and interpretation system to provide instant information and credible and accurate data relating to all the components of the Mission. The Mission proposes to develop a Management Information System (MIS) vested with the responsibility to collect all the relevant data including details of water bodies, details of beneficiaries, financial details, etc.

Technically qualified personnel would be engaged for developing the MIS. The data entry would be on on-line mode. A website has been designed and hosted for uploading the data and information relating to the various components of the Mission and providing the same to the stakeholders promptly.

Greening of value chains
Trout farming, Meghalaya – a GIZ initiative

It is estimated that in the state of Meghalaya, about 30% of the total land area of 22,429 sq.km can potentially be utilized for fisheries. Against this backdrop, climate change has emerged as one of the serious threats to the development of fisheries in the state. The program aims at showcasing a technically sound management plan with clearly defined interventions to ensure rehabilitation of the perennial clean water supply system, introduction of a sustainable hatchery system and a marketing strategy to transform trout farming into a viable enterprise. A feasibility study on fishery and rural development which highlights the need for an efficient water management and aquaculture development has been undertaken. A detailed management plan for rehabilitation of trout farming with focus on rehabilitation of water supply system at the fish farms, introduction of a sustainable hatchery system and marketing strategy to transform trout farming into a viable enterprise has been implemented. The process of development of draft training material that includes comprehensive modules on hatchery

related aspects and aims at building capacity of key department personnel in operationalization and management of trout farms is presently underway.

Monitoring, Evaluation and Social Audit

The progress of implementation of the various components under the Mission will be monitored regularly. Monthly progress reports, quarterly progress reports and half yearly reports in the prescribed formats sent by the implementing officials are reviewed and mid-course corrections in implementation made, wherever necessary.

There will be a mid-term evaluation of the Mission conducted by an external agency at the end of the second year, which will be selected, based on competitive bidding. The findings of the mid-term evaluation will be used for modifications/ refinements in the implementation of the Mission during the subsequent periods. There will also be an end-term evaluation of the Mission, which will capture the tangible and intangible benefits to the fish farmers developed through the Mission. The impact of the various components of the Mission in relation to income gains, employment gains and contribution towards the State Domestic Product will also be analysed.

Social audit will be employed to monitor the progress of the Mission in the field. Social audit is a process in which the details of the resources, both physical and financial, used by the public agencies for the development initiatives are shared with the people, often through a public platform. It allows people to enforce transparency and accountability, thereby providing the ultimate users an opportunity to scrutinize the

development initiatives. It is proposed under the Mission to create a social audit team involving beneficiaries of the programme, civil society members, media personnel and reputed persons in the society to ensure transparency and accountability of the programme.

Social Cost Benefit Analysis

The social cost benefit analysis of the various components will be worked out to understand the income gains to farmers, employment gains and other gains to the society. Various measures of project performance will be employed to study the direct and indirect benefits of the Mission. The impact of the Mission on the State Domestic Product (SDP) will be studied based on the data generated from MIS and monitoring reports.

Sourcing of funds and management

The total requirement of funds for the Mission for implementing the various components of the Mission is being mobilized from different sources such as Ministry of Agriculture (RKVY), NFDB, NEC, NCDC, SPA, State Plan, etc. Institutional credit support through the Meghalaya Co-operative Apex Bank and the possible funding through other multi-lateral institutions is also being tapped.

Progress so far

Mini Mission I: Area and Productivity Expansion

Assistance to individual Fish Farmers.

A total of 16,400 fish farmers have been supported for area expansion covering a water area of 1630 Ha involving Rs. 9185 lakh.

Mini Mission II: Critical Infrastructure Development

(i) Establishment of Fish Seed hatcheries in Private sectors 20 (Twenty) entrepreneurs have been supported for the "Establishment of Fish Seed hatcheries".

(ii) **Establishment of Fabricated Reinforced Plastic (FRP) hatcheries in Private Sector:** 14(Fourteen) entrepreneurs of the state are being supported for Establishment of Fabricated Reinforced Plastic (FRP) hatcheries for fish seed production.

(iii) Fish feed mills 3 (three) entrepreneurs are being supported for establishment of fish feed mills.

Mini Mission III : Establishing sanctuaries for conserving the indigenous and endemic species

In order to conserve the indigenous and endemic species of the state 54 (fifty four) fish sanctuaries at an estimated cost of Rs. 5.00 Lakh each are being created.

Mini Mission IV: Capacity Building and Human Resource Development

(i) **Training of Departmental Officers**

29 (twenty nine) Departmental Officers/ FFDA officials have been sent for training within the state, outside the state and outside the country.

(ii) **Training of Potential Fish Farmers:**

(a) Around 1200 potential fish farmers have been trained under the NIRD Guwahati.

(b) The Meghalaya State Fisheries Research & Training Institute, a state owned Training and Research Institute at Mawpun, Ri Bhoi District has been inaugurated on the 2nd May, 2013. The Institution aims at imparting training to all the fish farmers, potential fish farmers, of the state as a whole. Till date, 320 farmers from across the state have been trained in this Institute.

(c) 2000 numbers of fish farmers will be trained under NFDB sponsored programme during 2013-14.

Mini Mission V: Mass Media Campaign, Documentation and Outreach

Outreach Programme/ Fish Festival.

State level Aqua Fests have been held at Shillong on the 6th and 7th November 2013 and on 15th November 2013 at Tura where approximately 8 metric tonnes and 5 metric tonnes of fresh fish were sold respectively.

Mini Mission VI: Emerging opportunities in the Fisheries Sector

Aqua Tourism/ Aqua Parks:

Preliminary works are under process for developing the following Aqua Parks/ Aqua Tourism Projects:.

Particulars/ items	Amount (in Rs. Cr.)
Development of Aqua Parks/ Tourism at Jaud East Khasi Hills	12.00
Development of aqua Parks/ Tourism at Phot-ja-ud, Mawkyrwat	25.00
Development of Aqua Parks/ Tourism at Kiew Irat, Ri-Bhoi District	25.00
Development of Aqua Parks/ Tourism at Chengga Benga , Betasing Block, South West Garo Hills	25.00

Apiculture

REPORT to CITIZENS

Apiculture is one of the specific missions under the IBDLP which can play a crucial role in poverty reduction, employment generation and livelihood promotion.

The Apiculture Mission has been initiated across the State in a convergent mode with the Department of Commerce and Industries. The Mission has been designed to spur initiatives integrative with Meghalaya's biophysical attributes to confer livelihood improvement through gainful employment of the local populace. It was conceived as a mission-mode apiculture development strategy underpinned by intensified honey production, domain expansion of honey product development, creation of market linkages for profitable marketing of honey and honey products and community engagement for creating an effective and sustainable income source through infrastructural and human capacity development. Technical assistance [illegible] with innovative financing and market linkages under institutionalized management [illegible] the key vehicles for implementing the strategy for up scaling and promoting apiculture as an organized enterprise.

The broad objectives

of the mission are

a. To intensify honey production [illegible] in terms of enhanced production and productivity;
b. To expand the demand for honey;
c. To motivate traditional beekeepers for adoption of modern and scientific beekeeping practices to increase the productivity of honey;
d. To motivate unemployed youth to take up beekeeping enterprise as a means of self employment;
e. To engage the community into the modern beekeeping enterprise by way of mobilizing

a. the support of local community leaders in the promotion of beekeeping enterprise for improvement of livelihood standard and preservation of environment;
b. To upgrade the skill and knowledge of the beekeepers by conducting awareness, educational and motivational programme so as to enhance the quality of honey and beeswax
c. Production through the use of appropriate technologies;
d. Domain expansion of honey product development and other bee products;
e. To promote the availability of various support services for bee keepers;
f. To motivate entrepreneurs towards the establishment of enterprises for value -added honey and other product development, create financial and market linkages; and
g. To develop institutional system involving bee farmers and government functionaries to effect better coordination relating to production system, management and marketing of products.

First steps under the Mission

1. The first steps toward realising these objectives have been taken with the engagement of AFC India Limited, as a strategic partner. A state wide scoping study on the status and potential of apiculture in Meghalaya has been conducted. The study has revealed that though the state possesses a long and hoary tradition of beekeeping, the practice is still unscientific, more of a household than commercial activity characterised by low productivity, quality and with little or no value addition. There is tremendous scope for improvement in both productivity and quality, especially for speciality honey like orange honey, and ample opportunity for honey based enterprises along the value chain.
2. In order for the state to realize the full potential of a beekeeping economy, farmers have to be trained in modern scientific methods of beekeeping and the processes associated with turning traditional beekeeping into a commercial enterprise. The process has been started with the identification and training of 43 Master Beekeepers from the Khasi and Garo Hills, at the prestigious University of Agriculture Sciences (UAS), Bangalore, by the Meghalaya Institute of Entrepreneurship (MIE) and further refining their practical skills with hands on training at the RRTC, Umran.
3. A process of dialogue and convergence with the Department of Commerce and Industries to strengthen the capacity of the department and help put in place delivery systems to service the upcoming needs of beekeepers has been started. The Department has conducted a state-wide awareness campaign and has shortlisted 2000 beekeepers for training beginning August 2013 in convergence with the IBDLP.
4. A state floral calendar for apiculture is under preparation and being vetted by the Botanical Survey of India and National Botanical Research Institute (NBRI).
5. An apiculture cluster has been identified in Chandigre village in West Garo Hills and work is underway to upscale existing beehives and motivate the people in the process of cluster formation.
6. The feasibility of using mud hives, which are almost zero cost and can be made at the village level itself, is under study and trial both in the Khasi and Garo Hills. If successful it will revolutionize apiculture in the state.
7. A Dialogue with Partners Programme (DPP) on apiculture has been completed for Pynursla and Laitkroh EFCs to better understand the needs of the partners.
8. Potential Master Beekeepers of Jaintia Hills have been identified for further upgradation of their skills.

Forestry

REPORT to CITIZENS

With forests occupying more than 70% of the total geographical area of the State of Meghalaya, the Forest mission becomes an inevitable one to focus on, not just to nurture one of the prime natural resources but to also help maintain an ecological balance and ensure sustainable development.

Forestry includes afforestation, forest nursery, and quality planting material through tissue culture inter alia. Of the total forest cover, a major chunk is open and moderately dense forest. The quality of forests needs enhancement through afforestation intervention. Improvement of quality of forest will eventually lead to reliance on the ecosystem to absorb pressure. Immediate spinoff will enhance water yield and its conservation.

The State Forest Department has taken up afforestation activities through the Central Sector Scheme called the National Afforestation Programme, State Plan Scheme called the Afforestation of Critical Catchment Area and Integrated Basin Development and Livelihood Promotion Programme in a convergence mode The Joint Forest Management Committees have raised 2920 hectares of forest plantation during the first quarter of the year 2013-14 through the National Afforestation Programme. Under the State Plan Scheme for afforestation of critical catchment areas, 1125 nurseries have been raised and 420 hectares of forest land have been afforested during first quarter of 2013-14. Under the Forestry Mission of the IBDP 725 forest nurseries and 420 hectares plantations have been raised.

It is vital that quality planting material be generated to improve productivity of plantation. This will go a long way in increasing production and meeting the need for forest produce. Accordingly, the establishment of Plant Tissue Culture Laboratory at Sohra and Tura has been sanctioned with an amount of Rs 3.28 crore for infrastructure build up and Rs 1.25 crore for recurring expenditure. Another amount of Rs 1.25 crore for recurring expenditure will be released in due course of time.

Thus, a beginning has been made to increase availability and resilience of natural resources in the context of providing livelihood and inclusive growth within the framework of sustainable development under the umbrella of Basin Development.

Tourism

REPORT to CITIZENS

Meghalaya has vast potential to bring up the tourism sector in a big way in the state. The vision is to promote this potential as an organised industry which will help promote livelihood and will provide gainful employment opportunities and help improve rural economy.

It is expected that more tourists would visit the State and the flow of tourist traffic both domestic and foreign would increase rapidly in the near future as Meghalaya is considered to be one of the most picturesque states in the country and the State has enough tourism content and potential to attract tourists of different interests. While increasing the tourist inflow, care is also being taken to develop the facilities in a sustainable manner. Comprehensive review of tourism has brought into focus several shortcomings like insufficient infrastructure in terms of accommodation for tourists.

Further there is a need for capacity building of various stakeholders, marketing, publicity, greater investments in the sector and linkages with financial institutions. Meghalaya has a lot to offer in terms of natural scenic beauty, adventure, eco tourism and a large number of educated human resources which could support the delivery systems. It was with this background that the Government has decided to develop tourism in a mission mode so that this sector can evolve as a major engine of economic growth for the State.

Vision

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The Tourism Mission aims at projecting Meghalaya as the most preferred Tourist destination within the country and abroad.

With a view to achieve the aims of the mission the major activities undertaken are:-

Training, capacity building and skill development

Tourism sector has a great potential for employment generation provided the right skill building is done. The training partners for the department under the mission are IL&FS Education, B ABLE, Avenues, ETPL India, and IHM & FCI etc. These partner agencies having worked at various national and international levels have a huge reservoir of knowledge and experience, providing the tourism mission the right kind of support.

Training have been conducted in the areas of grooming and building of life skills in hospitality and service, front office work including communication skills, housekeeping, food and beverage service, food and beverage production, outdoor and adventure activities & skill development of masons and electricians. About 1410 youth have been trained in these skills over the last few months out of which 574 have so far been placed within and outside the state at different capacities by the training partners. The target for the current year is to train 2000 youths.

Basin Development Unit at Tura, West Garo Hills has organised a trip to Mumbai and Goa for ERPs. The exposure trip was undertaken basically to acquaint the ERPs with the knowledge of various opportunities in the tourism and other allied sectors. The ERPs visited various places of interests in Mumbai and Goa, which will be very helpful in future role to facilitate the partners in EFC.

Infrastructure

Inadequate facilities for stay and accommodation is impeding the growth of the sector, hence the scheme 'Meghalaya Tourism Development and Investment Promotion Scheme 2012' was launched. This scheme provides assistance to entrepreneurs for creation of Home-stays and Resorts to the tune of 30% of project cost of Rs 16 lakh and Rs 100 lakh respectively

Under this scheme, during the last financial year four numbers of home-stays had been sanctioned out of which disbursement of the assistance has been made to two entrepreneurs who have fulfilled all the criteria. Another two numbers of home-stays and one resorts is under process for sanction.

The mission also focuses on brand building and convergence with other departments. After the successful convergence with Horticulture Department for Ghasura Park in South West Garo Hills similar convergence projects are being undertaken at Kongthong Village with the Cooperation Department.

Energy

REPORT to CITIZENS

With the fast depletion of conventional energy sources along with growing demand of power the future of conventional electric power systems is getting uncertain. This has led to worldwide thrust on development and use of non-conventional energy sources for electric power generation & use. Extending the electric power grids to the village located in the isolated placed deep inside the forest zone remains unfeasible. Lack of access to clean cooking fuel in such areas adds to the misery by causing respiratory & other ailments, especially to women and children.

Meghalaya Government over the past year has initiated a few projects for tapping the renewable energy on the state. The Government is setting up three projects for catering to the energy needs of small local communities in the state.

Chikgitchakre & Banderkona energy sufficiency project

IDFC Foundation has worked on an Integrated Energy Sufficiency project for this village which aims to address both the power problem and cooking fuel problem in the village. Electricity is to be generated by a Biomass Gasifier based Power Plant that utilizes abundantly available wood at Chikgitchakre. The project is eligible to avail Central Financial Assistance (CFA) from Ministry of New and Renewable Energy under its off-grid Biomass-Gas scheme. Central Financial Assistance under the National Biomass & Manure Management Programme (NBMMP) is up to Rs 16,700 per unit per household.

The Chikgitchakre and Banderkona project is entitled to a CFA of Rs. 10,98,000 and Rs. 6,55,200, respectively. Chikgitchakre Power house of a combined capacity of 35 kWe (23 +12) and the Banderkona has an installed capacity of 15 kWe abd. Both of them shall generate electricity for the entire village, divided in two clusters for operational ease.

Features of the Projects

All households shall be provided electricity to operate:

- Four (4) CFL lightbulbs of 15 Watt each.
- One (1) Fan of 70 Watts.
- One Power Socket to charge Mobile Phones etc of 10 Watt.
- Additionally, provision to power three (3) pump sets, the local church & lower primary school is included.
- The supply shall be for 8 hours in a day, 2 in the morning & 6 at evening.

Cooking fuel used in the both the villages is 100% fire wood (7-10 kg/day/family). It is proposed to replace it by Biogas (Gobar gas), produced using the manure/refuse from the cattle owned by the villagers. Each household of Banderkona owns, on an average, 2-3 cattle heads (Cows & Pigs). Family type biogas plants of 1-4 cu.m capacity is proposed to be installed at each house.

Operation & Maintenance of the projects

After the plant and system is commissioned and the trial period is over, the operation and maintenance for 5 years period will be the responsibility of the contractor who has supplied, erected tested and commissioned the plant and the system. The contractor may not use 100% of his own staff and may require certain number of additional persons for managing O&M under the guidance of his limited staff. The Village Energy Committee (VEC) may arrange for the same from amongst the people of the village, depending on the age, physical and mental health, willingness and educational qualifications.

The maintenance staff shall undergo O&M technician course at a designated training center to be identified by the State Nodal Agency. MNRE will provide a grant of Rs. 2 lakh per course.

Revenue for this project shall come as tariff from each household. Currently they are paying for kerosene every month and that amount can be paid to the VEC as tariff. Moreover, this biomass plant will generate around 7-10% of wood used as fuel for gassifier as high quality charcoal. Charcoal produced can be sold in the neighboring market and can act as a revenue source for VEC. Revenue collected shall be used for buying wood for gassifier and also payment of salary for the staff.

Roles & Responsibilities of Village Energy Committee

Village Energy Committee to be setup will carry out the following functions:

i. Motivation and creating interest amongst the villagers for success of the project.
ii. Collection of contribution from the villagers towards installation of the Plant and the System.
iii. Collection of monthly payment from the users as may be settled after deliberations. It is assessed based on the survey, that each household can pay Rs 200 to to Rs 250.
iv. Arrangement for continuous availability of Biomass by;
    a. Appointing full time employees for wood collection.
    b. Acquiring wood at a fixed price from villagers.
    c. Ensuring that green cover is maintained and depletion does not occur.
    d. Undertake re-plantation of energy crop in the surroundings at fixed intervals.

i. Arrangement and appointment of manager, operators etc. for running of the plant and system as required.
ii. Operation of Bank Account.

Benefit of this Programme

Environmental Benefits

i. Saving in Firewood (@7kg/HH/Day for 191 HH on 50% replacement): 244000 Kg
ii. Annual Requirement of wood for Power Plant: 63000 Kg
iii. Annual Reduction in Fire Wood use: 181000 Kg
iv. Estimated Reduction in CO2 Emissions (1Kg Wood Combustion ~ 1.07 Kg Co2): 193670 Kg

Social Benefits:

i. Community based effort to enhance the quality of life by providing electricity & cooking fuel.
ii. Direct employment & skill development for technicians hired locally.
iii. Additional Income generation for individuals collecting & selling wood to the Gasifier plant.
iv. Time & means for social/educational activities (television, computer, internet etc)
v. Improving health of the women by shifting from wood to cleaner fuel i.e biogas for cooking
vi. Can use water pump for pumping drinking water which will lead to improvement of health and sanitation.

Bhaitbari Primary Health Center

Energy Project

Primary Health Center (PHC), Bhaitbari is a key healthcare facility in the Phulbari block. At present, there is no other facility in a radius of 10 km of it. Its importance can be gauged by the fact that the second highest number of childbirths occur here amongst all other such facilities in Meghalaya. Due to highly unreliable supply and very poor voltage levels, the PHC faces a steep challenge in securing elecricity for most essential & critical services. It was found that many times the childbirth takes place in a candle lit labour room. A rooftop solar PV power plant, situated on the roof of the main building of PHC will a reliable solution for this problem.

The Rooftop Solar PV power plant shall benefit hundreds of residents in and around Bhaitbari, enabling access to better medical care by virtue of the reliable energy supply to the PHC. The project cost shall be Rs 18,01,800 based on the benchmark price set by MNRE with a central subsidy of upto 90% and promoter equity of 10%.

Water

REPORT to CITIZENS

The Water Resources Department is implementing a new initiative which is the Integrated Water Resources Management Programme (IWRMP). It will cover the activities under the Water Mission under the aegis of the IBDLP through the Meghalaya Water Resources Development Agency (MeWDA). This programme promotes the coordinated development and management of water, land and related resources in order to maximize the resultant economic and social welfare in an equitable manner, without compromising the sustainability of the eco-system.

Under this programme, activities for management and maximum utilization of the available water resources through the implementation of water harvesting structures, Jalkunds and Multipurpose Reservoirs have been taken up. Furthermore other programmes relating to water quality, capacity building and awareness, monitoring and evaluation of projects, policy and regulation have also been initiated.

Briefly the present status of the different activities and the programme taken up under the Integrated Water Resources Management Programme is as follows:-

Multipurpose
Reservoirs (MRs)

During March 2013, an amount of Rs. 29.15 crore was sanctioned for development of Multipurpose Reservoirs (MRs).

Multipurpose Reservoirs (MRs) are water bodies created in a cascade that will cater to the different water needs of the community. Multipurpose Reservoirs (MRs) will have the following elements:-

a. Structural components having a combination of components for different uses such as Drinking & Domestic Water, Irrigation, Fisheries, Livestock, Micro hydel (< 100kw; where ever feasible) etc.
b. Non-structural components such as capacity building, institution building, Management Information System (MIS), monitoring & evaluation, entrepreneurial promotion, etc.

c. Ancillary components such as water filtration, soil fertility testing, water testing kits, improvement of traditional sources, improvement of catchment areas, conveyance systems through canals and pipes, etc.

District Water Resources Councils (DWRCs) have been instructed to identify feasible sites for which this Programme can be taken up shortly. The consultant engaged to support the Meghalaya Water Mission is also helping out to carry this work forward.

Harvesting structures

A total amount of Rs. 28.00 crore has been sanctioned for the construction of Jalkunds and Water Harvesting structures.

Out of this available fund, Rs. 7.99 crore have been allotted to the 164 schemes as proposed by the Water Resources Department, while Rs. 10 crore have been sanctioned for 385 schemes proposed by Soil & Water Conservation Department. The schemes are being implemented through the District Water Resources Councils (DWRCs).

In order to sensitize the public on the implementation of Jalkunds and Water Harvesting structures, capacity building programmes have been taken up in the 7 district Headquarters. A separate Programme on this subject was also held at Mawkyrwat in collaboration with the Mawkyrwat Farmers' Association. Officers from the MeWDA, the Water Resources Department and the Soil & Water Conservation Department were deputed as resource persons for the programme.

Furthermore, implementation of Roof Top Rain Water Harvesting projects in Government and School buildings, PHCs and CHCs and accordingly the District Water Resources Councils have been instructed to identify and submit proposals.

Capacity Building

MeWDA and Water Resources Department, in collaboration with Central Soil & Material Research Station (CSMRS), New Delhi, has organized Awareness Programme on the topic "Save Water , Save Earth" in Khliehriat & Tura. The Programme at Khliehriat was held on May 17, 2013 and 200 students from different schools in the district had participated. In Tura, the Programme was held on May 21, 2013 were in 250 students had participated in the programme. Competitions were held and prizes were distributed to the winners. Apart from competitions, presentations relating to water were made by the resource persons from Central Soil & Material Research Station (CSMRS), New Delhi.

Projects

MeWDA has procured two lightweight reflectorless Total Stations for the Soil & Water Conservation Department, one each for the Garo Hills and Khasi-Jaintia Hills Circle for an amount of Rs. 9.2 lakh. These instruments will help the Department in taking up more surveys & investigation works and also help in preparing Detailed Project Reports (DPRs).

Monitoring & Evaluation of projects

MeWDA through the Integrated Water Resources Management Programme has funded an amount of Rs. 13.77 lakh for engaging an agency for third party monitoring of projects under the Accelerated Irrigation Benefit Programme (AIBP), implemented by the Water Resources Department and Soil & Water Conservation Department. The work is under progress.

Others

MeWDA with the assistance of the engaged consultants are in the process of preparing two proposals for funding by Asian Development Bank (ADB) and Japan International Cooperation Agency (JICA) for the creation of Multipurpose Reservoirs (MRs) in the State.

Integrated water resource management

Upper Umiam River basin Meghalaya

The Integrated Water Resource Management in the Upper Umiam river basin aims to make an assessment of climate and land use change impacts on land and water resources. The objective of the assignment is to work towards an improvement of water management in the

Upper Umiam basin to cope with the recent and upcoming challenges by setting up and implementing an Integrated Land and Water Resources Management System (ILWRMS) and a design Support System (DSS) for the Upper Umiam river basin. The project supported by GIZ works closely with the Department for Planning, Government of Meghalaya, Department for Geoinformatics, Hydrology and Modelling, Friedrich Schiller University Jena, Germany and with various government departments in Meghalaya, national institutes such as NESAC and NEHU, research organisations.

A series of stakeholder consultation workshop undertaken has established common understanding of all stakeholders concerning the need for a common knowledge management system for integrated water management as well as detailed input data. The consultations have led to an improved understanding of requirements for a KMS system and the subsequent DSS system and their benefits in future.

Drinking water & Sanitation

Mawlyngbna, Meghalaya

The program presently implemented at MawlyngbnaVillage, located in the southern slopes of the State bordering Bangladesh aims at installation of a proper drinking water storage and distribution system and facilitation of a community based committee which can be entrusted with the task of overseeing the maintenance of asset and devising rules and regulations on the use of water as well as cost recovery of its use. The intervention supported by GIZ is expected to devise a more efficient use of available water resources through improvement of existing water infrastructure that meets the community's drinking, washing and bathing needs. An Integrated village development feasibility study was undertaken in May 2012 which highlights the need for comprehensive water resource use management plan recommended, introduction of cost recovery for maintenance of assets and specific interventions for improvement of existing drinking, bathing and washing facilities detailed in consultation with the community, A Community based Water User Committee constituted at the village level has been constituted.

Sericulture

REPORT to CITIZENS

Sericulture is an agro-based industry with considerable employment potential. A very significant characteristic of this industry is its ability to provide gainful occupation for a sizeable section of the rural mass without dislodging them from their homesteads. The industry qualifies very well as a cottage – based rural industry, which can be practiced keeping in view economics, technology as well as specialization based on small working units, community ownership and common working place, utilizing local labour and resources.

Sericulture is ideal for weaker sections of the society as it can provide enough income to a family with a small extent of 0.75 per hectare of land for growing food plants for Silkworms. It is an effective tool for empowerment of women as it can be carried out as a supplementary activity by women without moving out of their houses and carrying out their domestic activities. The waste from silkworms rearing can be re-cycled as inputs for the garden. Dried mulberry twigs and branches are used as fuel in the place of firewood, reducing the pressure on forests.

No smoke emitting machinery is used in the industry. The special feature of the activity is its self-targeting nature. Only poor people will take up this activity because some of its activities are carried out in a hard environment. All the support given to this sector will go to the poor. It is an effective anti-poverty Programme.

The salient features of the Sericulture industry and Silk industry in Meghalaya are:-

- Three or four crops can be harvested in a year without interfering with other agricultural crops.
- Mulberry produces large quantities of leaves. It can stand heavy pruning; sprouting is quicker and multiplication is easier.
- Mulberry trees, once planted, yield leaves for 20 to 30 years. In-case of plain area the leaves are available six months after plantation, whereres in the case of hilly areas they take about 3-4 years.
- Space required for rearing is not much. Effective rate of rearing and percentage of harvested cocoons are very high. Under proper management, it is a sure crop.
- Grainage expenditure is less and rearing of silkworms is convenient.
- With a biological clock, the insect responds to different manoeuvres according to schedule.
- Mulberry cocoon and silk prices are very high. Demand for silk is increasing so is the price of silk.
- Even a semi-skilled labourer can handle sericulture activities.
- The technology of reeling and spinning is well-developed with sophisticated machines making it easier.
- Earning per unit of land is highest in sericulture amongst any agro-based industries and is likely to be so in future.
- Quality control and marketing of end-products are easy.
- Middleman can be eliminated, if filature or reeling units are well-established and effective cocoon procurement is organized. In advanced countries, silk law is enforced for development of the industry..
- Sericulture is a definite and certain source of income for the villager.
- The activity has a short gestation period and provides high returns.
- Sericulture is an eco-friendly activity.

Meghalaya produces three types of silk out of the four varieties available in the world. Eri is produced extensively in almost all the areas of the state. It is reared not merely for silk production but also for its food value. The temperate climate of the state is suitable for the production of Bi-voltine Mulberry silk which is in great demand. The Government of India is taking all steps to boost Bi-voltine. Meghalaya and Assam are the only places of Muga Silk production in the world. Meghalaya is highly suitable for Muga seed production. This can be extended to value addition by encouraging commercial cocoon production and value addition through silk production.

The main objectives of the mission are as follows:

- Additional coverage of plantation in the private land, for all sector i.e new plantations of Mulberry, Eri and Muga food plants.
- To increase the quantity of rearing for more production of cocoons.
- To improve the quality and quantity production of seed cocoon and reeling cocoons with financial support for construction of rearing house cocooning shed, and rearing equipments.
- To increase supply of disease free laying to the farmers.
- To encourage scientific practices in rearing, reeling, spinning and twisting of yarn.
- To strengthen Muga production in the State by encouraging value addition.
- To strengthen Eri silk by popularizing natural dyeing.
- To strengthen silk weaving sector by providing training and diversification.
- To bring technology upgradation among the sericulture farmers through capacity building and input support.
- To develop silk tourism in the State in convergence with the Tourism Mission.

Sericulture Mission

The activities to be taken up

Implementation of the mission will consist of two distinct components namely sericulture and silk weaving. The component consists of Eri culture, Muga culture, Mulberry culture.

This mission will address the problem of technology induction and human resource development in the Sericulture sector and will also focus on establishment of silk villages by providing infrastructure from development of nurseries for food crops to reeling and weaving. These villages will become tourist places and also market centres. It will also focus on development of handloom sector, installation of modern looms and training in weaving fabrics designing product diversification and garment making.

Interventions

The following interventions will be made to realize the goals of the Mission.

- To develop nurseries in the private sector for Eri, Muga and Mulberry.
- To encourage farmers to develop plantations in a systematic manner and adopt technologies to improve the productivity of food corps.
- To introduce seed production in the private sector with technical and financial support from the government.
- To support the farmers in constructing rearing/cocooning sheds so that productivity can be improved.
- To develop cocoon market so that transactions become transparent and producers realize better prices.
- To encourage value addition in sericulture within the State by expanding reeling, spinning and twisting activities.
- To improve the traditional knowledge in vegetable dyeing, and realize the benefits of international demands for eco-friendly products.
- To assist the weavers in procuring modern looms and to provide the necessary training for the adoption of modern technologies.
- To assist the farmers in having proper space for carrying out weaving and related activities.
- To encourage the weavers in diversification by providing training in designing and garment making.
- To support the farmers in storage and marketing of the products produced by them.
- To encourage the producers by conducting competitions in Sericulture and Weaving and providing exposure to outside areas.
- To develop 'Model Silk Village' by strengthening all the activities from farm to fabric in selected places in the State.
- To strengthen the existing Departmental Sericulture Farms, reeling, twisting and weaving centres to cater to the needs of the farmers and weavers.

Capacity buildings & exposure visit to farmer (Sericulture)

The Sericulturist will be trained regarding the knowhow of Sericulture activities for Mulberry, Eri and Muga rearing, reeling and spinning for a period of 25 days.

The total cost for implementation of silk mission to be proposed is almost Rs. 3000.00 lakh for the 12th five year plan.

Implementation

during 2012 –13

- Creation of Nurseries for Eri, Muga and mulberry.
- Creation of silkworm host plan for Eri, Muga and Mulberry i.e increase in acreage in private sector.
- Establishments of Eri and Muga grainages in private sector
- Capacity building.
- Strengthening of Sericulture Training unit and Research section
- Renovation and Upgradation of Reeling unit.
- Assistance to the reeler and spinner
- Rain water harvesting
- Contractual appointment to PGDS & Certificate Course Passed.
- Assistance to weavers groups

Proposed

Implementation Plan for the year 2013 -14 are the following

- Creation of more number of nurseries for Eri, Muga and Mulberry
- Engagement in contractual appointment of post graduate Diploma in Sericulture and Certificate Course passed out students
- Study for revival of potentially viable of Muga and Eri including identification of new era, discrimination of products development etc.
- Weavers Mass Registration Programme.

Eri Silk and Slow Fashion, Meghalaya – a GIZ initiative

The program on Eri silk, also known as Peace or Non-violent silk aims at improving livelihoods of rural people, especially women, by preserving traditional spinning, dying and weaving techniques of Eri silk and adding value through the introduction of improved silk processing techniques which increase benefits and are environment friendly. The program works closely with Department of Sericulture, Government of Meghalaya as a key partner institution and communities comprising of entrepreneurs using mechanized production and Eri silk weavers & spinners, farmers raising silk worms and producing feed for the worms.

So far 50 Eri silk spinning women from 5 villages have been trained in improved degumming process which has resulted in transforming the initial rough texture of the Eri silk fabric into silk which has become softer, whiter and with more shine. This process has led to improved efficiency of spinning and higher quality of yarn. Basic standardization has taught spinners to produce three different kinds of threads: fine, medium and thick. Innovations in the dyeing process has resulted in experimentation with natural colours and fixing of colors has improved. An exposure visit of Sericulture Department from Nagaland to Meghalaya to facilitate exchange of learning was organized.

Horticulture

REPORT to CITIZENS

Meghalaya State

Horticulture Mission

Meghalaya has three factors conducive for the development of horticulture – a large extent of land suitable only for horticultural crops, diversity in agro-climatic factors making a variety of fruits, spices and plantation crops feasible and established tradition of growing horticultural crops making further expansion easy.

Net area sown is only 2.83 lakh hectares forming 12.7 per cent of the geographical area and 7.69 lakh hectares is available in the form of fallows, cultivable waste and miscellaneous tree crops. Most of this land is in the hill slopes and is more suitable for plantation and fruit crops rather than traditional agricultural crops. The State has a great diversity of agro-climatic factors. The average annual rainfall is high at 12000 mm and elevation varies from 150 m to 2000 m mean sea level. As a result, temperature varies from 2 ^{0} to 36 ^{0} Celsius. With this diversity, a variety of horticultural crops can be grown.

Given the tremendous potential for the development of horticulture to generate income and employment for the farming community, a much more intensive, focused and holistic strategy, coupled with major investments, is needed. The Mission will take up the task of conceptualizing, designing and executing projects in a systematic and focused manner.

Table: Land Available for Horticulture Development (Hectares)

District	Miscellaneous Tree Crops	Cultivable Waste	Fallow Land	Available for Development	Horticulture Area	Net Area Sown
East Khasi Hills	17161	48110	10681	75952	36986	37795
West Khasi Hills	42562	101170	65858	209590	24205	30097
Jaintia Hills	17003	116040	26721	159764	20274	36091
Ri-Bhoi	29194	56983	15052	101229	13671	22232
West Garo Hills	24506	15274	45737	85517	46259	94492
East Garo Hills	25195	36952	25195	87342	18568	36921
South Garo Hills	6171	19516	24048	49735	20222	25311
State	161792	394045	213292	769129	179227	282939

Objectives of

Horticulture Mission

The Horticulture Mission has the following objectives:

a. Expand the area under horticulture by about 36,000 hectares in five years covering nearly 90,000 farmers. This will add 20 % to the existing area under horticulture.
b. Adopt holistic approach for the development of horticulture by providing support for irrigation, technology transfer and post harvest management.
c. Improve the productivity of existing orchards by rejuvenation of senile plantations, introducing proper management practices and replacing the low grade varieties with high grade.
d. Develop farmers' organisations to derive the benefits of higher prices through exporting to outside areas in the country and outside and converting some of the crops into organic.
e. Develop cold chain for high value and perishable crops and provide access to the cold chain through development of collection centres at appropriate locations.
f. Develop entrepreneurship in processing and marketing of horticulture products.
g. Strengthen the existing horticulture farms to produce adequate planting material and

convert them as hubs so that they can create spokes and link to the cold chain.

h. Encourage the farmers in organic production and assist them in certification.

i. Improve the productivity of existing orchards by rejuvenation of senile plantations, introducing proper management practices and replacing the low grade varieties with high grade.

Mission Strategy

The Mission will follow cluster approach to strengthen the existing concentration of crops. For each crop post harvest management and value chain management will be given emphasis so that additional income and employment will be generated in the State itself.

New technologies in post harvest infrastructure like grading, packaging, ripening chambers will be introduced for the major crops in areas of their concentrations. As it is difficult to attract huge investment to start large scale processing units, small scale and cottage units will be encouraged and support will be provided for them. Farmers associations will be formed to take care of the management of the post harvest infrastructure developed.

The Mission will be implemented in a convergence mode for optimising the resource use. MGNREGS, Water Resources Department and Department of Commerce and Industry will be the major players in convergence.

Demonstration of new technologies and crop management practices will be taken up on the fields of progressive farmers who have got the assistance for inputs. The success stories of the farmers will be documented by audio-visual methods and shown to other farmers.

Capacity building will be an important component for all the beneficiaries as well as officials. Farmers' attitudes for the adoption of the practices and their difficulties will be taken into account at the time of introducing new technologies.

Approach

The Mission will be co-terminus with the Twelfth Five Year Plan and it will be implemented through mini-missions. The mini-missions are intended to focus on a few activities and discharge them thoroughly. Entrusting all the activities to one agency will not lead to efficient implementation.

Mini Mission I: Area Augmentation

The Mission aims at expansion of 35,731 hectares or 88,293 acres during the period of five years. The major emphasis of the Mission is on the expansion of area under fruits. Area targeted for fruits is 16,270 hectares, accounting for 45.5 per cent of the total area. Next in importance is vegetable group with an area of 11,070 hectares, which forms 31.0 per cent of the targeted area. The targets for plantation crops and spices (including medicinal plants) are 4605 hectares and 3,761 hectares respectively. They account for 12.9 per cent and 10.6 per cent in the additional targeted area respectively.

Cost of Area

Augmentation & Expansion (Mini Mission I)

The fruits sub mission has a target of expanding 40,204 acres, covering about 40,000 beneficiaries. The total cost of this sub mission is estimated at Rs. 19,388.64 lakh, out of which Rs. 11,631.90 will be provided in the form of assistance and Rs. 4850.37 lakh in the form of bank loan. The balance amount of Rs. 2,096.37 lakh has to come as beneficiary contribution, either in the form of labour or in the form of own materials.

The target fixed for vegetables sub mission is 29,107 acres, covering about 30,000 beneficiaries. The total cost of this sub mission

is estimated at Rs. 8,957.69 lakh, out of which Rs. 5,520.86 will be provided in the form of assistance and Rs. 3,436.83 lakh in the form of own funds. There will be no bank loan in this case as there is no long or medium term investment involved in it. However, beneficiaries are eligible to take crop loan for the season, but it will not be a part of the Mission.

Plantations, spices, aromatic and medicinal plants will be developed in an area of 26,700 acres and nearly 27,000 farmers will be benefitted under this sub mission. The total cost of this sub mission is estimated at Rs. 9,759.88 lakh, out of which Rs. 5,855.93 lakh will be provided in the form of assistance and Rs. 1,353.47 lakh in the form of bank loan. The balance amount of Rs. 2,550.51 lakh has to come as beneficiary contribution, either in the form of labour or in the form of own materials.

The area augmentation and expansion Mini Mission will cover an extent of 96,011 acres and will benefit about a lakh farmers. The total cost of the Mini Mission is Rs. 38,106.21 lakh, of which assistance is Rs. 23,008.69 lakh and bank loan Rs. 6,203.84 lakh. This amount will be spent in five years with proper sequencing of schemes and coverage of areas.

Table: Cost of Area Augmentation and Expansion: Mini Mission I

Crop	Cost of Cultivation (Rs.)				Area (acres)	Total Cost (Rs. Lakh)			
	Total	Assist.	Bank Loan	Own		Assist.	Bank Loan	Own	Total Cost
Fruits									
Pine Apple	65,000	39,000	16,250	9,750	10,873	4,240.47	1,766.86	1,060.12	7,067.45
Khasi Mandarin	45,000	27,000	11,250	6,750	10,131	2,735.37	1,139.74	683.84	4,558.95
Banana	45,000	27,000	11,250	6,750	8,525	2,301.75	959.06	575.44	3,836.25
Assam Lemon	37,000	22,200	9,250	5,550	1,878	416.92	173.72	104.23	694.86
Litchi	31,000	18,600	7,750	4,650	2,261	420.55	175.23	105.14	700.91
Guava	36,000	21,600	9,000	5,400	247	53.35	22.23	13.34	88.92
Temperate	32,000	19,200	8,000	4,800	2,595	498.24	207.60	124.56	830.4
Strawberry	82,000	49,000	21,000	12,000	642	314.58	134.82	77.04	526.44
Amla	41,000	24,600	10,250	6,150	494	121.52	50.64	30.38	202.54
Papaya	63,000	37,800	15,750	9,450	198	74.84	31.19	18.71	124.74
Sapota	34,000	20,400	8,500	5,100	99	20.20	8.42	5.05	33.66
Indigenous	32,000	19,200	8,000	4,800	2,261	434.11	180.88	108.53	723.52
Total	-	-	-	-	**40,204**	**11,631.90**	**4,850.37**	**2,906.37**	**19,388.64**
Vegetables									
Potato	37,000	22,200	-	14,800	3,076	682.87	-	455.25	1,138.12
Carrot	24,000	14,400	-	9,600	2,916	419.90	-	279.94	699.84
Tomato	32,000	19,200	-	12,800	4,053	778.18	-	518.78	1,296.96
Cabbage	27,000	16,200	-	10,800	6,042	978.80	-	652.54	1,631.34
Cauliflower	27,000	16,200	-	10,800	1,656	268.27	-	178.85	447.12
Broccoli	31,000	18,600	-	12,400	927	172.42	-	114.95	287.37
Lettuce	26,000	15,600	-	10,400	939	146.48	-	97.66	244.14
Cow-Chow	35,000	21,000	-	14,000	198	41.58	-	27.72	69.3
Cucumber	34,000	20,400	-	13,600	1,334	272.14	-	181.42	453.56
French Beans	25,000	15,000	-	10,000	2,222	333.30	-	222.20	555.5
Peas	33,000	19,800	-	13,200	1,384	274.03	-	182.69	456.72
Capsicum	26,000	15,600	-	10,400	507	79.09	-	52.73	131.82
Chilly	30,000	18,000	-	12,000	1,903	342.54	-	228.36	570.9
Off Season*	50,000	37,500	-	12,500	1,950*	731.25	-	243.75**	975
Total	-	-	-	-	**29,107**	**5,520.86**	-	**3,436.83**	**8,957.69**

Crop	Cost of Cultivation (Rs.)				Area (acres)	Total Cost (Rs. Lakh)			
	Total	Assist.	Bank Loan	Own		Assist.	Bank Loan	Own	Total Cost
Plantation crops, Spices, Aromatic and Medicinal Plants									
Areca Nut	46,000	27,600	11,500	6,900	3583	988.91	412.05	247.23	1648.18
Betel vine	12,000	7,200	3,000	1,800	2236	160.99	67.08	40.25	268.32
Cashew	55,000	33,000	13,750	8,250	3830	1263.90	526.63	315.98	2106.50
Ginger	46,000	27,600	-	18,400	198	54.65	-	36.43	91.08
Turmeric	41,000	24,600	-	16,400	10378	2552.99	-	1701.99	4254.98
B Pepper	21,000	12,600	5,250	3,150	5004	630.50	262.71	157.63	1050.84
Patchouli	18,000	10,800	4,500	2,700	1236	133.49	55.62	33.37	222.48
Aloe Vera	50,000	30,000	12,500	7,500	235	70.50	29.38	17.63	117.50
Total	-	-	-	-	**26,700**	**5,855.93**	**1,353.47**	**2,550.51**	**9,759.88**
Grand Total	-	-	-	-	**96,011**	**23,008.69**	**6,203.84**	**8,893.71**	**38106.21**

*No of low cost green houses

Mini Mission II: Planting Material

Nursery Development

A nursery for Khasi Mandarin to produce 80,000 budded plants of high quality with indexing will be developed at a cost of Rs. 236.25 lakh. This has to be established in the departmental farm. Two nurseries are proposed – one for Upper Shillong and another for Rongram. At the later part of the Mission, five more nurseries are proposed without indexing facility to be established in the private sector with financial and technical support from the Government.

Planting material for strawberry will be produced in the State by importing the mother plants. The project will be first tested in the government farms and then introduced in the farmers fields. The cost of implementation in the farmers' field will be Rs. 450 lakh, of which Rs. 270 lakh will be assistance and Rs. 112.50 lakh bank loan.

It is proposed to establish seven cashew nurseries, five in the private sector and two in the government sector - at a unit cost of Rs. 18.44 lakh. The private nurseries will be assisted with 60 per cent assistance and 25 per cent bank loan.

Support will also be provided to establish five areca nut nurseries and six black pepper nurseries at a unit cost of Rs. 4.45 lakh and Rs. 5 lakh respectively.

Planting material for temperate fruits will be available from the existing nurseries and no fresh investment is proposed for this.

Production of vegetable is very important for the development of this component. Low cost nurseries will be assisted to produce seed and planting material for vegetables. The unit cost of a nursery is estimated at Rs. 3 lakh and 78 nurseries will be supported under this scheme.

The total cost of Planting Material Mini Mission is Rs. 2560.12 lakh, of which 1,914.84 lakh will be provided in the form of Government assistance and Rs. 403.30 lakh in the form of bank loan. A small amount of Rs. 241.98 lakh has to come as own investment by the entrepreneurs. In the case of support to the existing departmental farms, entire amount has to come as assistance and there will be no bank loan or own contribution.

Table 2: Cost of Production of Planting Material: Mini Mission II (Rs. Lakh)

S. No	Item	Unit Cost	No. of Units	Total Cost	Assistance	Bank Loan	Own Funds
1.	Orange nursery with indexing	236.25	2	472.50	472.50	-	-
2.	Orange nursery without indexing	188.75	5	943.75	566.25	235.94	141.56
3.	Strawberry mother plants (govt.)	2.25	2	4.50	4.50	-	-
4.	Strawberry farmers	2.25	200	450.00	270.00	112.50	67.50
5.	Cashew nursery in govt. farms	18.44	3	52.32	52.32	-	-
6.	Cashew nursery in pvt. Farms	18.44	5	92.20	55.32	23.05	13.83
7.	Areca nut nursery in pvt. Farms	4.45	5	22.25	13.35	5.56	3.34
8.	Black pepper nursery in pvt farms	5.00	6	30.00	18.00	7.50	4.50
9.	Nursery for temperate, passion & sohiang	5.00	15	75.00	45.00	18.75	11.25
10.	Federation of Potato growers	50.00	-	50.00	50.00	-	-
11.	Small vegetable seed nurseries	3.00	78	234.00	234.00	-	-
12.	Ginger seed replacement	0.57	80	45.60	45.60	-	-
13.	Turmeric variety replacement	0.50	80	40.00	40.00	-	-
14.	Turmeric grade change in JH	0.48	100	48.00	48.00	-	-
	Total Cost	**-**	**-**	**2,560.12**	**1,914.84**	**403.30**	**241.98**

Mini Mission III: Post Harvest Management

Post harvest management is very important for horticultural crops because it will increase the shelf life of the produce. It is estimated that 35 to 40 per cent of the fruits and vegetables valued at Rs. 40,000 crore in India are lost every year due to poor post harvest. Once separated from its sources of water and nourishment, the produce will decay soon in the absence of care. Postharvest handling is intended to delay this process as long as possible. Post harvest management, covers pre-cooling, storage, cleaning, grading, packaging and marketing.

The Mission intends to provide integrated cold chain and preservation infrastructure facilities by linking the groups of producers to the processors and market through well-equipped cold chain infrastructure. The infrastructure in the cold chain will consist of sorting, washing, grading and packing infrastructure, multi-chamber cold storages, normal storage, reefer vans, pre-cooling vans and distribution hubs. The Mission identified 13 routes for the cold chain and all these will reach either the border haats or national high way in Assam or Guwahati air port. The cost of the cold chain is estimated at Rs. 781.00 lakh.

Ginger is one important horticulture produce in the State. The produce is sold on the raw form and is subjected to severe price fluctuations. It is suggested that farmers will have storage facility at the point of production for a short period. If the price is very low and storage is also difficult, processing can be taken on a small scale. Hence, the Mission will assist the producer groups to construct 84 ginger go downs at a unit cost of Rs. 4.00 lakh. The scheme can be linked to the central scheme of rural go down construction. Similar is the case with cashew. Since storage is less complex for cashew as compared to ginger, only nine go downs are proposed. Farmers face problems in drying and slicing ginger. Hence, SHGs will be assisted to procure slicer and hydro-extractor for ginger and 550 machines are proposed at a unit cost of Rs. 0.65 lakh.

The State produces a variety of fruits and further expansion will take place in the next five years. Some of these fruits are indigenous and not

available in other areas. There are some units in the private sector like Mansan in Ri- Bhoi district. It is suggested that primary processing of the fruits can be taken up at the point of production and transported to the processing units. In order to introduce this new concept, it is proposed to establish six pre-processing units – three in the Khasi Jaintia region and three in the Garo region. However, only one unit in each will be started initially and the other two will be established after examining the performance of these units. It is suggested that the Ranikor area can be selected for initial development and Khadarshnong and Mairang in the later stage. Rongram and Chibinang are identified as suitable locations in Garo Hills. The units may be sanctioned to the successful SHGs or co-operatives and technical guidance and training may be provided by the Department.

The private processing units and the units in the government sector will also be supported to reduce their cost. It is found that transport of empty bottles at a high cost is one of the reasons for high cost of production of fruit juices. To solve this problem, assistance may be provided to the processing units for purchasing pet blowing machine.

Tea **Processing**

Organic certification is obtained for 100 ha in Ri-Bhoi district, but there is no factory to produce organic tea. A factory with a capacity of 2,500 kg green leaves per day has to be established in the co-operative sector. The cost of this factory is estimated at Rs. 200 lakh, out of which Rs. 150 lakh will be provided as assistance and Rs. 50 lakh as loan.

A large extent of area under tea plantations is neglected in West Khasi Hills as there is no factory in the nearby area. A factory has to be established in co-operated sector at Riangdo at a cost of at Rs.150 lakh, out of which Rs. 112.50 lakh will be provided as assistance and the balance amount of Rs. 37.50 lakh will be the bank loan.

In West Garo Hills, tea is cultivated in an area of 600 ha and there is a factory under the co-operative sector at Rongram. In the peak season, the capacity of the factory is not sufficient to process the green leaves procured. This is affecting the quality of tea produced. The problem can be solved if two more withering trays are added so that the green leaves can be withered immediately and kept for processing without affecting the quality. The cost of two withering trays of size 40'x 5'is estimated at Rs.5 lakh. This amount can be provided by way of Rs. 3.75 lakh assistance and Rs. 1.25 lakh loan.

Following the pattern of Ri-Bhoi tea farmers, the farmers in West Garo Hills also want to cultivate tea organically. In fact, they are not using any chemical fertilizers at present. It is proposed to obtain organic certification for 200 ha. The total cost of the certification is estimated at Rs. 32.50 lakh.

The cost of cold chain infrastructure is estimated at Rs. 1860.00 lakh and 65% of this amount can be obtained as grant from the MoFPI and the balance amount of Rs. 690.00 lakh has to be invested by the Government of Meghalaya. The total cost of all the components of post harvest management is estimated at Rs. 3715.78 lakh and the expenditure to be incurred by the State Government is estimated at Rs. 1739.23 lakh. The remaining amount will come as the grant from the Government of India and loan from commercial banks.

Table: Cost of Post Harvest Management: Mini Mission III

S. No.	Item	Capacity (MT)	No. of units	Unit Cost (Rs. lakh)	Total Cost (Rs. lakh)
Cold storage					
1	Sorting, washing, grading and packing	30	41	0.30	12.30
2	Normal Storage (other than giner & cashew)	150	41	4.50	184.50
3	Multi Chamber Cold Storage	15	41	1.20	49.20
4	Refer vans	-	41	7.00	287.00
5	Pre Cooling vans	-	41	15.00	615.00
6	Distribution Hubs	400	4	128.00	512.00
	capacity building & initial operation				200.00
A	Total Cost of Cold Chain				1860.00
	MoFPI Grant 65%				1170.00
	Govt. of Meghalaya Contribution 35%				690.00
Ginger and cashew go downs					
	Ginger go downs		84	4.00	336.00
	Cashew go downs		9	4.00	36.00
B	Total cost of go downs		93	4.00	372.00
	Central subsidy (33 %)				122.76
	State subsidy (33 %)				122.76
	Loan (25 %)				93.00
	Cooperative funds (9 %)				33.48
Ginger processing, areca nut soakage and strengthening of private fruits processing units					
	Slicer and hydro extractor		550	0.65	357.50
	Soakage tanks		660	0.46	303.60
	Primary fruit processing units		6	24.53	147.18
	Strengthening of private fruit processing units		2	15.00	30.00
C	Total				838.28
	Assistance				502.97
	Bank loan				209.57
	Own funds				125.74
Strengthening of tea processing					
	Organic Tea factory at Ri – Bhoi				200.00
	Tea factory at West Khasi Hills				150.00
	Organic Tea factory at West Garo Hills				200.00
	Strengthening of existing factory at WGH				5.00
D	Total cost of tea processing				555.00
	Assistance				333.00
	Bank loan				138.75
	Own funds				83.25
Organic certification and strengthening of departmental fruit processing units					
	Organic certification of tea in WGH				32.50
	Machinery for fruit processing units				58.00
E	Total				90.50
Total cost of Post Harvest Management Mission					
	Grand total (A+B+C+D+E)				3715.78
	Assistance from Government of India				1292.76
	State assistance				1739.23
	Loan				441.32
	Own funds				242.47

Implementation

Process

Implementation of the Horticulture Mission requires a separate administrative set up because of the massiveness of the Programme. A separate administrative structure will be created at the State, district and block levels. There is also a need to identify the land to be taken up for development and care will be taken to avoid lands that will result in adverse impact on environment.

The following steps will be taken before commencing the plantation activity:

- The implementation will begin with Mass Mobilisation Campaigns to make the people aware of the new areas that can be developed under the Mission. The assistance of NGOs can be availed for the purpose with some lump sum payment for the activity.
- Plantation crops will be developed in clusters so that SHG can be formed for each cluster.
- Beneficiaries in a cluster will form groups for effective implementation of the Programme.
- It is preferable to have one acre for each beneficiary, but because cluster approach is followed, area more than one acre may sometimes have to be allowed.
- The area identified for a cluster will have water sources. If it is not presently available, it may be developed under convergence with MGNREGS. However, expenditure for bringing water to the individual field can be met from the Mission. The cost of such expenditure will not exceed Rs. 10,000 per acre.
- Based on the estimated cost of cultivation per acre, each beneficiary will be provided 60% of the cost in the form of assistance, 25% in the form of bank loan and the balance is the contribution of the beneficiary. The contribution of the beneficiary will be in the form of labour required for the development of the plantation or own material used.
- After selecting the beneficiaries, they will be provided with the material for fencing and vermin-compost. They have to make the field ready for plantation. The vermin-compost will be ready and fencing work will be completed. Then planting material will be provided. Plantation activity can be taken up under convergence with MGNREGS so that the beneficiaries need not invest their own funds much.

The Meghalaya State Horticulture Mission will be implemented by the Meghalaya Horticulture Development Agency (MHDA), an autonomous body created for the implementation of the Mission. The Minister of Agriculture will be the Chairman of the Agency and the Commissioner and Principal Secretary, Agriculture and Horticulture will be the Deputy Chairman. Principal Secretary, Rural Development will also be a member to facilitate convergence with MGNREGS.

It will have a two-tier system of organisational structure, one at the State level and the other at the District level. The Director of Horticulture will be the Chief Executive Officer (CEO) at the State level. In view of the heavy work pressure in the Department for implementation of other State and Central Schemes, an additional Director will be appointed as the Deputy Chief Executive Officer (DCEO) to take care of all the technical and administrative matters. However, the DCEO will be of the rank slightly below the Director and will have all the powers to take decisions regarding implementation with proper information to the Director, Horticulture.

At the district level the DHO will be the Nodal Officer with separate office and staff for the implementation of the Mission. The District Mission Office will be run by an Assistant Director who will be taken on deputation from the Department with horticulture background. In addition to this, there will be two Programme Managers and two Deputy Programme Managers with B.Sc. horticulture. The HDO in the block will be the nodal officer at the block level who will be assisted by 2-4 multiple service providers appointed on contract basis for the period of the Mission. The minimum qualification required for the post is Higher Secondary.

Monitoring
and Evaluation

The MSHM will organise monitoring in two steps and evaluation again in two steps. The first step in monitoring is conducting the base line census survey of all the beneficiaries to obtain their socio – economic characteristics and the lands identified for the development of horticulture. The second step will be the collection of information for the MIS.

Evaluation will be entrusted to a third party and it will be conducted in three stages. The first stage of evaluation will be after completing one year of implementation. This will help to identify the deficiencies in implementation. The second evaluation will be the mid-term appraisal conducted after the completion of second year. It will focus more on the aspects not touched in the first evaluation and also the benefits derived by the farmers covered in the first year. The third and final monitoring and evaluation report will be at the end of the fifth year. The sample size of the evaluation study will be 1000 farmers in the first year, 1500 farmers in the second year and 1500 farmers for the final evaluation.

Management

Information System (MIS)

Management Information System (MIS) needs to be introduced in the Horticulture Mission so that all relevant data are collected, stored and retrieved instantaneously to facilitate planning, executing, monitoring, and evaluation.

Human Resource Development

Successful execution of various components of the Horticulture Mission will call for systematic building of the competencies of various stakeholders to the required degree. The Mission intends to enhance the capacities of the stakeholders in efficient management of crops, reducing post-harvest wastage and undertaking primary processing of fruits.

The Horticulture Officers will be trained in the following aspects:

a. Project management and book keeping
b. Participatory rural appraisal methods (PRA)
c. Cold chain management

Training of Trainers

Training for the beneficiaries has to be organised at the district level. Active SHGs and Co-operative members may be engaged for training. This will build local capacities and strengthen the organisations. Selected members may be trained along with the Programme managers. They will be trained intensively and material will also be provided. These trainers can be from any district in the region. Thus, two batches of trainers will be enlisted and provided training so that they can, in turn, train the beneficiaries.

Creating/Strengthening Training Infrastructure

Since training will be provided at the district level, physical infrastructure will be developed in each district. The gaps in infrastructure will be filled with the help of funds from the Mission. However, expenditure on these items will be kept at a minimum.

Awards to Horticulture Farmers and Incentives to Departmental Officers

To encourage innovations in management, the Mission will identify progressive farmers and give awards at the end of each year separately to individual farmers, communities and co-operative societies. The criteria for selection will be enhancement of productivity, introduction of new initiatives and management practices.

Scope for Convergence

Two schemes in the MSHM can be implemented efficiently under convergence with MGNREGS. One is planting and fencing of fruit and plantation crops and the other is rejuvenation of cashew orchards. Both these schemes are highly labour intensive and require participation of orchard owners. The machinery needed for rejuvenation will be provided by the MSHM and implementation can be done by the Rural Development Department under MGNREGS.

Majority of the work related to water catchment, water conservation and water management are handled by the Department of Water Resources. As more than 50 per cent of MGNREGS works are related to water conservation, the possibility of convergence between MGNREGS, Department of Water Resources and Horticulture Mission will achieve sustainable development of the horticulture sector.

The Department of Commerce and Industries, Government of Meghalaya is implementing National Mission on Food Processing (NMFP). The main objective of the scheme is to increase the level of processing, reduction of wastage, value addition, enhance the income of farmers as well as increase exports. The scheme envisages provision of financial assistance for setting up of new food processing units. It will provide grant in aid of 33% subjective to a maximum of Rs. 75 lakh. It has another scheme of developing cold chain infrastructure. The objective of the scheme is to provide integrated and complete cold chain and preservation infrastructure facilities. Pre-cooling facilities at production sites, reefer vans, and mobile cooling units can also be provided under the Integrated Cold Chain Projects.

The total cost of implementation, human resource development, M & E and other components is estimated at Rs. 9429.41 lakh. Unlike in the case of the three missions, the entire expenditure has to be borne by the government.

Table 4: Cost of Implementation, Human Resource Development, M & E and Others

S. No.	Broad Category	Item of Expenditure	Amount (Rs. Lakh)
A.	Implementation Process	Recurring expenditure	2022.77
		Mini trucks (10 no)	80.00
		Jeeps (10 no)	60.00
		Support to co-operatives	400.00
		Total cost of implementation process	2562.77
B.	Management Information System (MIS)	Installation charges	13.84
		VSAT rental and connectivity charges	39.78
		BSNL rental and connectivity Charges	3.98
		Expenditure on salaries	186.82
		Contingencies	12.22
		Total cost of MIS	256.64
C.	Human Resource Development (HRD)	Moss mobilization campaigns	20.00
		Beneficiary orientation Programmes	200.00
		Training for trainers	9.00
		Orientation workshops for farmers	40.00
		Capacity building for stake holders	241.00
		Total cost of human resource development	510.00
D.	Engaging Civil society	Support to co-operatives	1000.00
E.	Monitoring& Evaluation	Total	100.00
F.	Convergence Corpus fund	Total	5000.00
	A+B+C+D+E+F	**Total cost of implementation, HRD, MIS, M&E etc.**	**9429.41**

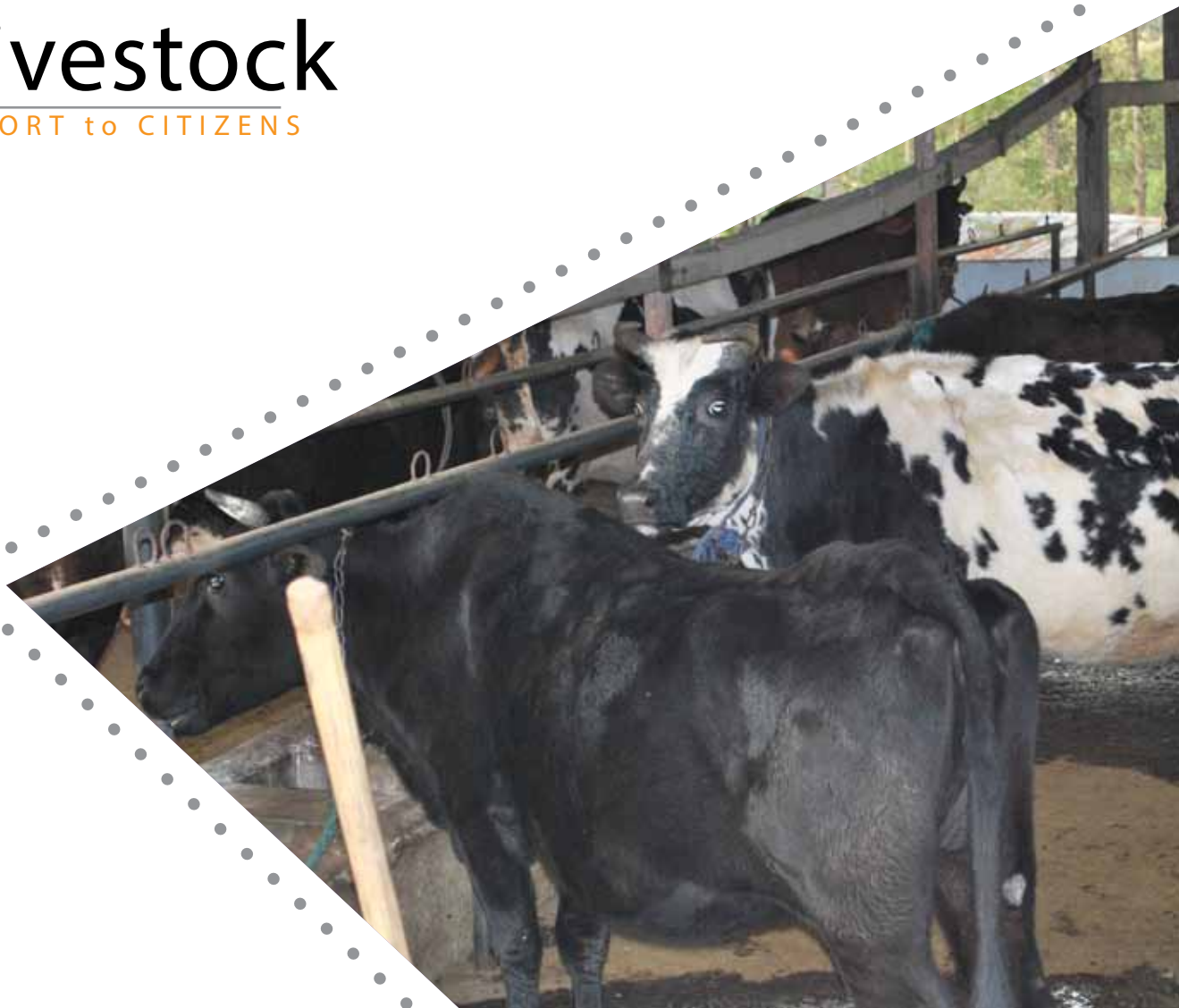
The total cost of the MSHM is estimated at Rs. 53811.55 lakh for five years. The amount includes the support of Government of India, loan component of commercial banks and private investment, besides the assistance provided by the Government of Meghalaya. The funds for the Government of Meghalaya may be coming from various sources like 13th Finance Commission, RKVY, BRGF or plan funds for gap filling. The assistance of Meghalaya is estimated at Rs. 36,092.17 lakh, which forms two-thirds of the total cost of the Mission. One important component to be included is the rope way at important locations of orange plantations in the valleys to bring the produce out of the valley without causing much waste of the harvested produce. However, detailed study of the existing rope ways and their functioning has to be taken into account before taking up new schemes.

Table 5: Total Cost of the Mission and Sources of Funds

Item	Total Expenditure	Sources of Funds			
		Government of Meghalaya	Government of India	Commercial Banks	Private Investment
Mini Mission I	38,106.24	23,008.69	-	6,203.84	8,893.71
Mini Mission II	2,560.12	1,914.84	-	403.30	241.98
Mini Mission III	3,715.78	1,739.23	1,292.76	441.32	242.47
Others	9,429.41	9,429.41	-	-	-
Total Cost of MSHM	**53,811.55**	**36,092.17**	**1,292.76**	**7,048.46**	**9,378.16**

Livestock

REPORT to CITIZENS



T

Mission

Initiatives

6

Ganol River

Expedition – WGH

On the of April 9, 2013 a fast-track Training of Trainers (ToT) programme was organised on PRA Tools and its implementation strategy. The programme was conducted by the IBDLP, Basin Development Unit, West Garo Hills, Tura. The training programme was attended by several officials and executives from different line departments, MRDS, BDU Interns, NGOs etc. A total of 35 people participated in the training programme.

The objective of ToT programme was to prepare the individuals on the PRA tools application and its comprehensive usefulness on planning and strategic decision making process at higher ends. The need of the training was to prepare the teams for conducting the PRA Exercises in the selected villages of Ganol River Basin.

Villages selected for the PRA Exercises

Upper Stream	Middle Stream	Lower Stream
1. Sakalgre	1. Boldorengre	1. Lower Damalgre
2. Baladingre	2. Akilangre	2. Jewilgre
3. Sasatgre	3. Matchurigre	3. Dorambokgre
4. Durakalakgre	4. Selbalgre	4. Mukdangra
5. Tosekgre	5. Soragre	5. Harigaon
6. Chandigre	6. Chibra Agal	6. Sangkharigre
7. Bibragre	7. Ganol Songma	7. Chisregre
8. Misimagre	8. Durakantragre	8. Dengasi
	9. Darechikg	

- Total No. of days for PRA in each village= 3 days (2 Days field visit + 1 day report compilation of tools and analysis)
- Dated April 12, 2013 – HARIGAON Village on lower stream of Ganol River Basin taken up for the PRA Exercise as the hands on experience for the entire team.
- The teams then moved along with respective team members to conduct the PRA in the allocated villages between April 15, 2013 and April 28, 2013.
- All the teams met on April 29, 2013 for final submission of PRA data and analysis at SMELC, Tura

PRA Tools used for Ganol River Basin Project- WGH

S.No.	PRA Tools	Description on tools
1.	Transact Walk	Used for understanding the physical terrain of the village, its resources , property, houses etc.
2.	Social Map	Used for understanding the social infrastructure of the villages. Caters wish list from the community on the social sector aspect and infrastructure etc
3.	Data Processing Sheet	Part of the social map tool containing detail of each HH, family members, their land holdings, livestock details, water resources, etc
4.	Resource Map	Used to identify the resources of the village (cultivated land, water resources, forest resources etc)
5.	Seasonality Tool with emphasis on weather events & Severity Ranking. Contains Climate Change Adaptability Tool No.3 & 4.	It comprised of components such as weather events like rainfall, dry period, heat, flash flood etc. It also contained components on income, expenditure, food availability, water availability etc. in the span of 12 months of the year
6.	Institutional Mapping and plotting	Comprised of the general concerns and requirement of Institutions within and outside village. Special attention was given on water specific need assessment and need for concern departments and need of such institutions by the community
7.	Inflow and Outflow Analysis	Contained detail on community resources going out from the village and coming from outside to the village, with focus on monetary implication and the quantum of the resources
8.	Daily Activity Chart (Gendered : Men/Women)	Used to understand the day's activity and time consumed for the activity by women and men individually. It will contain special focus in context to water study.
9.	Mobility Pattern in line with the water resources/infrastructure (Gendered : Men/Women)	Contained inform on the mobility pattern of men/women individually to access to the water resources (with special focus). It also figured other institutions and men and women accessing those institutions with frequency of visits and reasons for visits thereof.
10.	Time –Trends	Focused on the water study analysis in a time span of 10-15 years (Present scenario of water and the past scenario of water resources and availability)
11.	Seasonal Dependency Matrix (Tool 1 of the Climate Change Adaptability Analysis)	Focused on resources at various level viz. rain fed areas, irrigated areas, forest areas, garden, water resources and aquaculture species etc.) It provided resource availability in a time span of 12 months in a year.

Functioning of **MMFC**

REPORT to CITIZENS

Mobile Multi Facility Centre aims to create awareness amongst the rural population through documentary films about IBDLP, distributing leaflets and pamphlets and setting up audio-visual presentations encouraging livelihoods and sustainability. The Mobile Multi Facility Centre has emerged as a powerful audio-visual medium for reaching out to the people of the rural hinterland and sharing information about the goals of the ambitious programme, its rationale, its approach and its nine defining missions and accompanying measures.

The first of its kind, Mobile Multi-Facility Centre (MMFC) under IBDLP in the state of Meghalaya was inaugurated by the Hon'ble Chief Minister Dr. Mukul M Sangma on November 12, 2012 during the event 'Capacity Building Workshop for Nokmas'. The event was organized for the Nokmas of Garo Hills with an agenda to inform all the Nokmas about the IBDLP livelihood programme. On the first day of MMFC operation, it delivered a message on various programmes and missions to the Nokmas through audio –video display of success stories and its objectives and goals of the programme in the coming years. More than 400 Nokmas were present during the curtain raiser programme of MMFC vehicle. The fully air conditioned vehicle is well equipped with all the latest technology & gadgets, thus facilitating better dissemination of information about the programme and success stories of livelihood interventions to the people in Garo Hills.

An awareness Programme for the differently abled persons "Badhte Kadam-IV" was organized at Monfort Centre for Education, Tura on November 20, 2012. The Programme was organized by Meghalaya Parents Association for the Disabled (MEPAD) and District Social Welfare Department, Tura in collaboration with the line departments.

Basin Development Unit, West Garo Hills Tura participated actively with display of MMFC in the event at Monfort Centre for Education, Tura with the display of various pamphlets, success stories and video documentaries. As many as 1500 people, who had attended the event, were a part of this display and show organized by BDU, Tura. A huge number of people including District Administration, Principal, Teachers and Students actively participated in the Programme. MMFC also registered eight differently-abled but skilled candidates.

Notable Deployment of MMFC

- Inauguration of Enterprise Facilitation Centre, Selsella on November 23, 2012
- Recruitment of Interns for MBDA at Christian Girls' Higher Secondary School, Tura on November 24 2012
- Laying down of Foundation of the Multi-Facility Centre at Salmanpara on December 3, 2012
- AHAIA Tura Winter Festival at Tura, Chandmari Playground on December 6 to 8, 2012
- Laying of Foundation Stone of the First Medical College in Garo Hills at Balagre/ Jewilgre on December 12, 2012
- Ampati Winter Festival on December 18 to 20, 2012
- Republic Day Celebration at MP Stadium, Tura on January 26, 2013
- Convergence Initiative with NERCORMP, Tura at Dopogre, Gambegre block WGH on March 16, 2013
- NE Agri Fair, 2013 at Sangsangre, College of Home Science, WGH on March 19 to 21, 2013
- Community Outreach Programme in convergence with NERCORMP at Baljek Songitcham at Dadenggre Block WGH on March 21, 2013
- Community Outreach Programme in convergence with NERCORMP at Jongbuchiring at Gambegre Block on March 22, 2013
- IBDLP Awareness Programme at Rongram Bazar. WGH on April 15, 2013
- National Seminar on Entrepreneurship: A drive towards socio economic development of NE Region at NEHU Tura, WGH on June 4, 2013
- Environment Day &Green Earth Day under Sustainable Development Conclave 2013at Multi- Venue in Tura on June 5 and 6, 2013
- Workshop on Leadership, Team Building and Motivation at DRDA Conference Hall, WGH on June 20, 2013

Narwan **O**ranges **B**randing

REPORT to CITIZENS

Narwan is a small village situated in the coal mining areas of the East Jaintia Hills District. It is famous for traditional Khasi Mandarin Orange, known for its unique aroma, colour and sweet taste. Narwan is inhabited by traditional citrus growers who had migrated from Shangpung village. As many as 350 households are engaged in Orange cultivation in the village. Most of the orchard trees are almost 100 years old. Orange trees in Narwan yield fruits which last till February and March, by which time most oranges from other places are already exhausted. Over the years, these farmers have been growing oranges by traditional method. They have learnt the art of maintaining distance between the trees allowing the tree enough space for spreading and arching, permitting deep penetration of sunrays to the core of trees, thus enhancing better assimilation and translocation of desirable quality fruits in terms of size, production and sweetness.

However with the change in climate, pests and diseases have started to attack most of the orchard trees resulting in low production of fruits. Moreover, the fruit growers still practice the age old custom of selling their produce through middlemen, who fix the price of the oranges.

By intervention of the Technology Mission Scheme and National Horticulture Mission for North Eastern Region, the farmers were given an awareness programme on orange orchard management. Demonstration on different aspects of the subject was also given to the farmers within their orchards. One important component of the scheme known as "Citrus Rejuvenation Programme" for senile orchard was also implemented in this village during 2009-10 and 2011-12 by distribution of free inputs of nutrient supplement and pesticides. There are owners who have initiated scientific approach in orchard plantation with the help of Horticulture Department.

With the implementation of the Integrated Basin Development and Livelihood Promotion Programme (IBDPL) in the District, promotion of Narwan orchards was taken up as a focused intervention under the programme. Narwan village produces very good quality oranges, but only through proper branding and marketing of the products, value addition will lead to higher profit for the growers. Thus, training of the farmers for processing, packaging and labelling of the product is very important. In order to build the capacity a group of the farmers from Narwan village were sent to NRC Nagpur for an exposure visit where they received training in proper maintenance, packaging, marketing etc. The formation of the Integrated Village Cooperative Society will play a vital role not only for improving the market linkage for the oranges but will also look into the maintenance of the orchards and help in organizing the entire system of production, processing and marketing of the various products from the village.

Jackfruit Festival

REPORT to CITIZENS

The Basin Development Unit of East Garo Hills District under the aegis of Meghalaya Basin Development Authority organized a two day Jackfruit Festival at Williamnagar Police Parade ground on July 11 & 12, 2013. The festival was aimed at creating awareness about various uses and products of jackfruit as well as to encourage enterprising in jackfruit value added products. This is the first ever Jackfruit Festival in entire North East India. Thousands of people all over from Garo Hills visited the festival.

Self Help Groups displayed various value added jackfruit based products in total of 20 stalls. The products include Jackfruit Cakes, Jackfruit Muffins, Jackfruit Chips, Jackfruit Biscuits, Jackfruit Bread, Jackfruit Chocolates, Jackfruit Pickles, Jackfruit wine, Jackfruit Juice and Jackfruit Jam.

Tura Polytechnic made a presentation on preparation of Jackfruit wine, chips, juice and jam. Samanda SHG demonstrated the preparation of Jackfruit Chutney. Tura Home Science College demonstrated preparation of "Jackfruit Puri" and "Jackfruit Chips".

Williamnagar Jackfruit Festival, 2013,

was inaugurated by Smt. Deborah C Marak, Hon'ble Minister, Social Welfare Department. Fisheries Department.

Home Science College from Tura, Bethany Society from Tura, Mendipathar Mutli Purpose Cooperative Society from Mendipathar, Sangma Bakery from Willimanagar, Marak Bakery from Williamanagar, Romgpi Food Paradise from Williamnagar, DCIC of East Garo Hills, MRDS of East Garo Hills and 12

Collin Marak from Upper Rongjeng, with his jackfruit weighing at 29 kg. With Jackfruit 26.7 kg, the award for runner up went to Shri. Starlin Marak.

A Jackfruit in which eating Competition was also organised 61 female participants and 164 male participants competed. Many enthusiastic spectators cheered the participants throughout the competition. Jackfruit cooking competition also witnessed enthusiastic participation. Apart from competitions there was also a workshop on jackfruit based products.

The first ever jackfruit festival concluded successfully. Many people expressed their wish to see many more such festivals in future.

Simsang **B**ridge

REPORT to CITIZENS

One third of the population of Samanda C&RD Block resides on the southern side of Simsang River. This area is sandwiched between Durama Hills and Simsang River. The only way for the people of this area to reach Williamnagar is to cross the Simsang River. The river allows crossing the by vehicle for only four months in a year i.e., during dry season. Rest of the year, the only way to cross the river is by traditional boat called "ring" in local language. Every day hundreds of vegetable vendors, students, teachers, patients and others cross the river.

A bridge is eluding them for the past many years. One bridge which has been under construction for last 30 years could not be completed due to various problems. After inception of MGNREGS, the VECs across the river took up many useful works to improve communication. 5 VECs came together and decided to construct a suspension footbridge jointly and approached the District Administration.

IBDLP supported the project by way of providing the Critical Gap Funding and also getting the project technically vetted by IDFC. IBDLP is contributing 18.5% of the Project Cost under Convergence. The rest of the project cost is being funded by MGNREGS and community contribution. Officials from IBDLP and IDFC have been visiting the site and providing technical guidance from time to time.

Every day hundreds of vegetable vendors, students, teachers, patients and others cross the river

Bio **F**uel **P**lantation

REPORT to CITIZENS

Climate change has become a major issue in recent times and measures have to be taken to reduce its speed. Biofuel plantations help in this direction both by absorbing carbon and reducing the release of carbon-dioxide through reduction in the use of fossil fuels. Pongamia is a tested tree among several varieties and is native of India. The tree can be grown under divergent climatic and soil conditions. However, its productivity is influenced by soil and moisture conditions.

The high rainfall and vast extent of waste land not suitable for crop cultivation is available in the State and it can be availed for environmental protection and livelihood generation.

The project aims at development of Pongamia plantation in 500 hectares in East Jaintia Hills district where soil degradation due to coal mining has become a serious problem.

The seed produced in the project cannot find market as transport cost will be heavy. Processing of seed will be done in the project area itself. For this a minimum of 750 tonnes of oil will be produced per annum. For this, there is a need to produce 3000 tonnes of seed. If each tree produces 30 kg seed, there is a need to plant one lakh trees.

If high density plantation is taken up, it is possible to plant 250 trees per hectare and develop 400 hectares under the plantation. In order to allow for more area for intercropping, a moderate density of 200 trees per hectare will be adopted and an extent of 500 hectares will be developed under the project. There will be 500 members taking care of these trees along with the intercrop.

The project cost has four broad components – land development, development of Pongamia plantation and development of intercropping and cost of technical services.

The total cost of the project for eight years is estimated at Rs. 278.21 lakh, of which government assistance will be to the extent of Rs. 132.55 lakh and bank loan Rs. 54.13 lakh. The balance amount of Rs. 54.13 will be invested by the beneficiaries.

There will be a three tier institutional structure for the implementation of the project. At the State level, the Meghalaya State Rural Livelihood Society (MSRLS) is implementing the project. There is a Task Force at the State level with the Principal Secretary, C & R D Department as the Chairman and CEO, MSRLS as the Member Secretary to guide the implementation of the project. The MBDA is providing the necessary support at the State level and it will act as the key agency at the district.

At the district level, the MBDA is the nodal agency to monitoring the project and the Deputy Commissioner, who is in charge of IBDLP activities, will be the Chairman of the district level Task Force. Officers of relevant departments at the district level are members of the district level Task Force.

The third institution is the Farmers' Society at the grass roots level. All the farmers interested in the development of biofuel plantations have formed a society known as the East Jaintia Hills Biofuel Farmers Society. The Society mobilises funds for its own investment and takes loan from the selected commercial bank.

Since Pongamia plantation has not yet become popular in the country, the Society has availed the technical services of an organisation doing research on the subject. Tree Oil India is found to be one of such companies. There is a tripartite agreement between MSRLS, Farmers' Society and the technical services provider.

To make the farmers understand the salient features of Pongamia, one day training was organised by the service provider. The total

amount of the loan outstanding at the end of the sixth year comes to Rs. 78.10 lakh. The Society will be able to repay the loan in sixth year. Monitoring of the project is the responsibility of the technical service provider. The agency will send a report on the condition of plantation to the society as well as the Deputy Commissioner.

An independent organisation will be engaged for evaluation in the seventh year of the project. The funds for the study will be provided by the Farmers' Society. An amount of Rs. 5 lakh, adjusted for price changes, will be provided for the study.

Oil expeller with a capacity of 2 to 5 tonnes per day will be established in the sixth year. Local educated boys will be trained in managing the machinery.

There is a Task Force at the State level with the Principal Secretary, C & R D Department as the Chairman and CEO, MSRLS as the Member Secretary to guide the implementation of the project

Pongamia oil can be used in static engines, as lubricant and as bio pesticide. Demand can be created locally for the oil through demonstrations. There is export demand for the oil and the present price is 500 US dollars or Rs. 30,000 per tonne. Thus, marketing is not a problem once oil is produced.

According to the Kyoto Protocol this, industrialised countries will have to reduce their collective emissions of greenhouse gases by 5.2% from the level observed in the year 1990. A developed country can take up a greenhouse gas reduction project activity in a developing country where the cost of GHG reduction project activities is usually much lower. The developed country will get credits (Carbon Credits) for meeting its emission reduction targets, while the developing country where the project is implemented would receive the capital and technology to implement the project.

Seed Festival

REPORT to CITIZENS

Meghalaya organized its first ever seed festival on April 6, 2013 at Williamnagar in East Garo Hill district. The festival was organized to provide the farmers with a common platform where they could procure quality seeds of various crops and plants at a single place. The festival had an added incentive for farmers to attend as prominent agriculture and horticulture officials spoke to the farmers and gave them information on best agricultural practices.

The festival was organised by the District Basin Development Unit, East Garo Hills, under the Meghalaya, Integrated Basin Development and Livelihood Promotion Programme.

During the festival, farmers also availed various technical knowhow of modern methods of cultivation practices or post harvest management practices. The farmers also shared their individually developed methods and accumulated knowledge over the time, amongst themselves.

March-April is the sowing season and most of the farmers do not have many options when it comes to quality seeds. The seed market is not fully developed in Williamnagar or Tura, so the Seed Festival also acted as a seed market for the sellers and buyers.

Altogether 17 stalls were established, which were occupied by government-approved seed suppliers from Guwahati, Tura and Williamnagar. Some of the prominent nurseries in Garo hills also participated in the festival. The District Horticulture Officer, the District Agriculture Officer spoke to farmers on best agricultural practices and also answered various questions from farmers.

Two more similar seed festivals were organized in the district at Songsak on April 9, 2013 and another at Rongjeng on April 13, 2013. The tremendous response of the agricultural community towards the seed festival has prompted the planning of many such events across the state at regular intervals.

Setting up of **B**riquetting **U**nit-**MCCL**

REPORT to CITIZENS

Energy is the key input in the economic development of any nation and there is a strong co-relation between availability of energy and future of nations and mankind as a whole. From running the kitchens to heavy industries, energy is the most ubiquitous requirement for life on the planet. However, the rapacious exploitation and usage of energy sources (fossil fuels) over the last few decades has led to steady increase of atmospheric global carbon dioxide concentrations and resultant global climate change. It is projected that a third of humanity, mostly in Africa and South Asia, faces the biggest risk from climate change in the years to come. The world is today, therefore, seeking cleaner energy solutions which can provide the much needed energy for economic growth without adding to the global carbon load.

The project of producing briquettes from pine needles was conceived against this background with the twin objectives of generating cleaner energy and substituting the use of fossil fuels and creating sustainable livelihood opportunities for the rural communities of the state.

Meghalaya is blessed with large tracts of pine forests in the Khasi Jaintia Hills region. The pine tree sheds copious amounts of needles during the winter months (December to March) which form a carpet and cover entire pine forests. Since the needles have a high calorific value, they cause forest fires distressing communities and degrading environment. Communities view the pine needles as a bane and use multifarious methods to prevent and tackle forest fires caused by them.

Learning from success stories of converting agro residues into briquettes and bio- coal, the Meghalaya State Rural Livelihoods Society (MSRLS) has partnered with Mawmluh Cherrra Cements Ltd. (MCCL), Sohra to examine the feasibility of briquetting pine needles and using the briquettes to at least partially substitute coal (30,000 MT annual consumption at MCCL factory) in the cement production process.

Accordingly, pine needles were collected and sent for briquetting and testing to an industrial unit at Siliguri and to the Bio energy Department at TNAU, Coimbatore. The briquettes were also tested at the laboratory and the hot air furnace at MCCL factory with very encouraging results both in terms of calorific value and burning behaviour.

MSRLS and MCCL have therefore decided to set up a pine needle briquetting unit at MCCL factory, Sohra. MSRLS will be responsible for:

- Mobilising of communities for supply of Pine needles in bales to the briquetting unit.
- Finance the setting up of unit at MCCL factory campus, Sohra.
- Providing working capital for operationalising the unit.

MCCL will be responsible for:

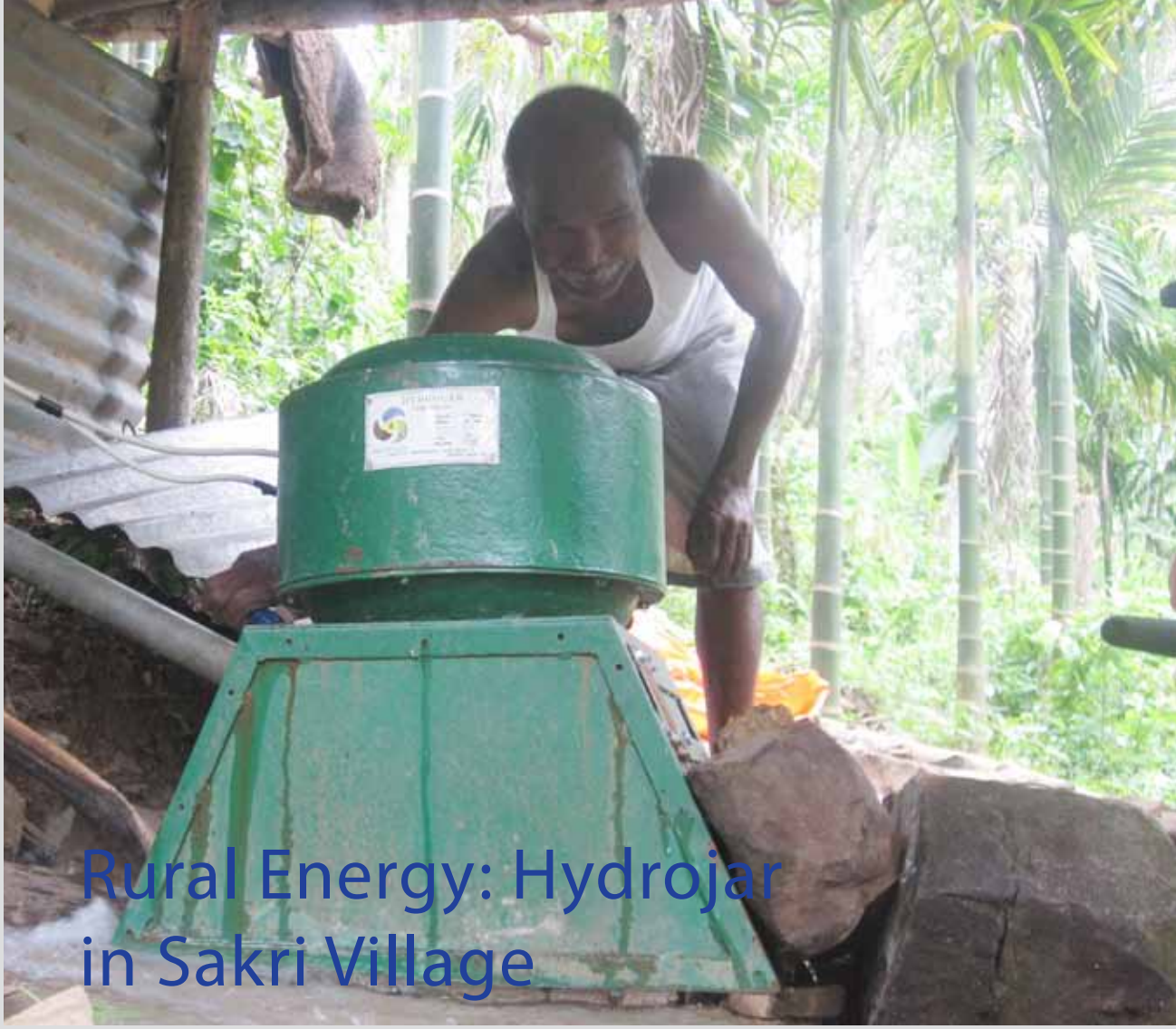
- Setting up the unit by procuring briquetting equipment following the procurement policies of the company.
- Buying all the pine needle supplied by the village communities.
- Utilising the briquettes in for the operations of the cement factory and atleast partially substituting the use of coal.
- O& M of the factory.

The price for the purchase of pine needles from the communities and the quality standards of the supplied pine needles will be jointly decided by MSRLS and MCCL. The project is monitored by a committee comprising with the following members:

1	Principal Secretary, Community & Rural Development Department	Chairman
2	MD, MCCL	Vice- Chairman
3	Representative from Industries Department	Member
4	Director, C and RD	Member
4	General Manager of MCCL	Member
5	Representative from the pine needle selling communities	Member
6	CEO/ Director, MSRLS	Member Secretary

Innovations

7



Rural Energy: Hydrojar in Sakri Village

Situated alongside NH-44 at Khliehiriat block, East Jaintia Hills is the quiet and small village of Sakri. A village of around 30 households, the villagers of Sakri are involved in activities like farming, cultivation of betel nut and leaves among others.

Since the village is not connected by road, the villagers have to face a lot of issues and have to trek for an hour to get to the nearest road, NH-44. However, due to a recent initiative the village now for the first time has been able to receive electricity which has brought about a tremendous change in the lives of the people of Sakri. The Hydrojar project in Sakri enables every household of the village 4 points of LEDs and this facility is available to them for Rs 15/- per month as a maintenance charge. NEPED Nagaland has provided technical assistance.

The farmers of the village who work in the fields in the day and come back home in the evening are relieved with the number of ways electricity has helped them to finish their remaining work to ready the produce for the markets. Even the women of the households are equally relieved since it helps to do a number of chores in the house.

The village which has a school till Class III and it plays an important role in the lives of around 40 children of the households of the village. Electrification of the village has helped the children to continue their education at night.

There are a number of villages in Meghalaya who due to their geographical location are deprived of a lot of basic facilities including electricity which could help them improve their livelihoods in terms of farming, household activities, and education among others.

Agriculture

REPORT to CITIZENS

Indigenous rice development

Meghalaya – a GIZ initiative

Rice is the staple food of communities in Meghalaya. Maintaining and enhancing steady rice production is crucial to ensure food security. On the other hand, preserving traditional varieties of rice seeds can contribute to enhanced adaptive capacities in the context of higher climate variability. Local communities have rich traditional knowledge of rice cultivation. The indigenous rice development initiative in Meghalaya provides an excellent opportunity for seed sharing and exchange for ensuring preservation of local rice varieties that can withstand climate variability and are more sustainable than hybrid varieties. Indigenous rice varieties are less water intensive, resistant to temperature rise, humidity and parasites and are superior to hybrid rice in terms of nutritional value.

The program will work closely with the farming communities in three selected villages spread across different agro-climatic zones of Meghalaya who are expected to spearhead the indigenous rice development initiative. Furthermore, the program works with extension workers drawn from the Department of Agriculture and research wing of departments.

Tourism **T**hrough **C**ooperatives

REPORT to CITIZENS

The rural tourism project at Chandigre is a project funded by the Ministry of Tourism, Govt. of India, to promote community based tourism at the village level. The main objective of the project is to promote village life of India to people travelling to the country. The Chandigre Rural Resort was opened to public on January 9, 2013. The resort was inaugurated by Hon'ble Chief Minister of Meghalaya, Dr. Mukul M. Sangma.

Rural Tourism Project at Chandigre was taken up in view of the proximity of the village to places of interests like Nokrek Biosphere Reserve, Rombagre Fish Sanctuary, Selbalgre Hoolock Gibbon Reserve and the village of Sasatgre which is a traditional village of Garos. The rural tourism project therefore envisages to promote the local culture and tradition through community participation whereby the benefits goes directly to the villages involved.

It is one of the success story of convergence initiative and viability gap funding (VGF) fostered by Department of Tourism, Department of Horticulture and the IBDLP.

Chandigre Rural Resort is located in a pristine location of the Nokrek biosphere in the Rongram block of West Garo Hills District, Meghalaya. Chandigre is 13.6km far from its district main city of Tura. It is 165km far from its state capital city of Shillong.

The inhabitants in and around Chandigre are of the Garo tribe.

Project Attractions

- Accommodation in a scenic location ideal for rest and relaxation.
- Comfortable rooms
- Attached bathroom
- Spacious sitting room
- Well lighted and electrified rooms & surroundings
- Extravagant & lavish lawn
- Indigenous slow food and hygienic food available
- One day workshop and meeting facilities available
- Parking space
- Helipad space available
- Availability of hand woven products, handicrafts & bamboo products skilfully made by the rural youths and women SHGs
- Sightseeing
- Exposure to various interventions, orange orchards, coffee and tea garden etc.
- Perfect place for meditation, self evaluation and inner peace

Documentary **F**ilms made by the **MBDA** **M**edia **T**eam

REPORT to CITIZENS

Knowledge Management is of the central pillars of the IBDLP and is a cross-cutting theme across all the four pillars including the nine missions. Part of the Knowledge Management strategy of the IBDLP is to capture, create and store knowledge of some of traditional knowledge of communities, including best practices which can be replicated. As part of this strategy the MBDA Media Team has made documentary films, which is meant to inspire potential entrepreneurs by the screening of films at the EFCs and through the MMFCs. A dedicated YouTube Channel showcasing these films has also been launched. The list of documentary films made so far are:

Bamboo

The thriving enterprise of Bah Ben Myrboh from Umroi, East Khasi Hills was captured here covering the complete value chain of a bamboo based enterprise.

IBDLP & entrepreneurship

This film was made to spread awareness about IBDLP (Integrated Basin Development and Livelihood Promotion Programme) among the stakeholders of the Programme including masses, line departments, and partner organizations, among others.

Apiculture

Bah Stiaw a farmer of Pynursula, East Khasi Hills is a farmer practicing Apiculture as a main source of livelihood. This documentary was made capturing the basic guidelines to practice apiculture as a means of living.

Mawlynnong

Mawlynnong is a village popular among the tourists for its cleanliness, scenic beauty and hospitality. The transition of Mawlynong from a isolated village near the Indo-Bangla border to a tourist hub was captured here to inspire similar villages across the state.

Rombagre Fish Sanctuary

The fish sanctuary of Rombagre Fish Sanctuary is a fine example of preserving fish sanctuaries across the state for to ensure better livelihood. Opportunities in sectors like Tourism, Water, Aquaculture, etc. in regards to fish sanctuaries were also highlighted in the film.

SMR Documentary

A convergence project in Mawthawtieng involving MBDA and other line departments was documented to highlight the aspects of a convergence project.

Strawberry

The village of Sohliya and its booming business of strawberry cultivation is an excellent example to inspire people and look at the possibilities of implementation of the same in similar villages across the state.

Wah Umkhrah

A film documentary was made as part of the awareness campaign in regards to the degradation of the river Wah Umkhrah in East Khasi Hills.

Aloe Vera

The value chain of Aloe Vera based enterprise in Garo hills was documented to consider similar possibilities of setting up enterprises in the State of Meghalaya.

Chandigre Rural Tourism

The rural tourism project taken up by the Tourism department in convergence with the Horticulture Department in the traditional Garo village of Chandigre, West Garo Hills in the form of a tourist resort in order to promote the traditional way of life through village stays, trekking, display of local culture, traditions and cuisines etc, to visitors and tourists was captured here in order to develop rural tourism in other villages of Meghalaya.

Silk – Vivian A Sangma

Miss Vivian Sangma an entrepreneur of Daldagre village, near Tura town, West Garo Hills and her enterprise - M/S V. A. Silk Industry, the first and only one of its kind in Meghalaya where locally grown muga and eri cocoons are converted into yarn and finally into silk fabrics was documented in this documentary

Khera Mikilsimgre

The spectacular change in the lives of the people of the Khera Mikilsimgre as a result of convergence and integrated action of the Soil and Water conservation department, the Horticulture department, the Meghalaya Rural Development Society and the village community by making cultivation of strawberry possible in Garo Hills was documented to inspire similar interventions in or around the state of Meghalaya.

Fossils of Mawlyngbna

Recently, pre-historic fossils were found in the village of Mawlyngbna, East Khasi Hills. A documentary was made in order to spread awareness about the fossils and its importance in field of research.

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