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# In Conversation with People of Meghalaya

Knowledge Management



come partner with us **EFC**

**(ENTERPRISE FACILITATION CENTRE)**

Under

**Integrated Basin Development**

and

**Livelihood Promotion**

**(IBDLP)**

*Come partner with us*

Rongram, West Garo Hills



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# Foreword

The quest for knowledge is an integral function of the human mind. From time immemorial we humans have hunted for knowledge in every aspect of the known and unknown. Evolution has endowed us with this beautiful mission and enabled us to move beyond the limits of living being into the domain of thinking being. It is the spirit 'to seek', 'to understand', and 'to experience' that differentiates us from the other beings of the world. In essence, 'Knowledge' is the key to our ability to adapt, evolve and innovate.

Knowledge has different meaning for different people, for a 3 year old child,  $2+2=4$  is knowledge, whereas for some,  $e=mc^2$  is knowledge. Knowledge cannot be understood in confinement to a subject or issue, but it should be comprehended from the point of view of the person who seeks to utilize it. Therefore it is essential to generate, create, tap, maintain and preserve knowledge in order to provide it to its seeker.

As 'Knowledge' is never redundant, therefore managing it is a continuous and progressive process which keeps on evolving with the needs of times. In today's world 'Knowledge Management' is considered to be the one most crucial aspects of human society as it forms the crux of all sustainable development activities to help humans adapt, evolve and innovate in accordance with the changing global conditions.

Today, Knowledge performs a key process in dealing with the issues of poverty alleviation, employment

generation & livelihood promotion. For successfully implementing climate change adaptation initiatives it is important that intellectual capital that the humans possess be used effectively. To facilitate such usage, it is important that an appropriate knowledge management policy is formulated.

The State of Meghalaya is an eclectic mix of traditional and modern knowledge, both of which are used for the various developmental processes that are carried out in the State. The Integrated Basin Development and Livelihood Promotion (IBDLP), the flagship programme of Government of Meghalaya, is designed to address the issues of increasing poverty & food insecurity as well as increasing the livelihood options for the citizens of the state. Knowledge Management is a crucial pillar of IBDLP and the most vital aspect of the entire programme. Other pillars of IBDLP - Enterprise Facilitation, Good Governance and Natural Resource Management are, in principle, dependent on this fourth pillar, to create a credible mechanism for implementation of policies and practices.

This issue of 'In Conversation with the People of Meghalaya' is a small step to expound on the Knowledge Management aspect under the IBDLP programme. Through this we aim to convey the Knowledge Management policy, framework, and mechanisms to our readers with a hope that everyone would be able to contribute in their own special way for the success of IBDLP.

Editorial Team  
MBDA

# Knowledge Management: The IBDLP Perspective

Knowledge is the most important foundation of all sustainable development practices for any organization dealing with issues of poverty alleviation, employment generation & livelihood promotion. Any organization that has a strategic objective to create an environment for sustainable development and promote inclusive growth, needs to develop and implement an appropriate Knowledge Management Policy, that fosters initiatives, procedures and tools, that allow for effective utilization of the intellectual capital it possesses.

Integrated Basin Development and Livelihood Promotion (IBDLP), the flagship programme of Government of Meghalaya, is designed to address the issues of increasing poverty & food insecurity as well as increasing the livelihood options for the citizens of the state. Its implementation is based on creation of an institutional mechanism which is transparent & community driven and based on the concept of good governance. In fulfilling its mandate to promote inclusive growth in the state, the programme focuses on effective knowledge generation, management and dissemination.

Knowledge Management is central pillars of IBDLP and the most crucial aspect of the entire programme. Other pillars of IBDLP - Enterprise Facilitation, Good Governance and Natural Resource Management are, in principle, dependent on this fourth pillar, to create a credible mechanism for implementation of policies and practices.

The most critical knowledge for IBDLP is related to the practice of development. The IBDLP, being a framework programme of the government, seeks to use the institutional strength and reach of the government machinery in implementing the goals of the programme. This is to be achieved by an implementation model that focuses on a mission centric approach envisaging convergence, whereby the rural population is seen as 'partners' in development and not 'beneficiaries'. Thus the knowledge of existing development practice is crucial, while at the same time allowing scope for innovation, with the greatest asset being the knowledge from the partners. Thus the challenge is to create the right kind of knowledge as the primary driver and foundation for implementing IBDLP-sponsored missions and activities.

## Knowledge Management Vision of IBDLP Programme

The IBDLP strives to cultivate a culture of collective learning & development. It learns systematically and collectively from its own programmes and missions. It strives to gain knowledge from the experience of its partners, particularly rural people, in order to deliver high-quality services. It facilitates its partners to find innovative ways to overcome poverty by the use of knowledge and formulates pro-poor policy reforms

based on knowledge it has acquired. The IBDLP generates & shares information and knowledge related to good practices in governance, natural resource management and enterprise promotion in order to scale up innovations and influence policies, thus positioning the state to reduce rural poverty as a priority.

## Knowledge Management Principles of IBDLP

- a) Knowledge is the principal resource of the organization, both in implementing different projects and in gaining new mandates
- b) Knowledge management, in the IBDLP, places priority on fostering a conducive, motivating and learning environment throughout its ambit
- c) All individuals in the domain of IBDLP should respect the knowledge of other people - especially of local communities
- d) Acknowledging that the staffs of the government departments are a rich reservoir of knowledge owing to their field exposures, the IBDLP appeals to all the government department staff to share their knowledge, particularly that of a tacit and implicit nature, in appropriate format. They should be encouraged to convert their knowledge into an explicit format that can be readily shared with others
- e) IBDLP recognizes the importance of information and communication technology for facilitating exchange of knowledge across geographical distances, and invests in its development in accordance with the needs of the organization
- f) IBDLP encourages the introduction, use and development of tools for knowledge capturing, recording, storing, sharing and learning between its missions, schemes, partners and stakeholders
- g) IBDLP recognizes that not all operational staff feels comfortable with using information technology, writing reports or making public presentations. In such cases, it supports individuals in developing these skills and/or other skills required to capture their knowledge by other means
- h) IBDLP to work closely with its stakeholders for fostering knowledge sharing culture
- i) IBDLP emphasizes knowledge sharing on the web and thus has created its own web portal in a user-friendly template



## Knowledge Management Strategy (in IBDLP):

### **The Knowledge Management strategy of the IBDLP:**

- Build incrementally on IBDLP's existing assets, processes and partnerships
- Identify the specific instruments needed to improve learning and knowledge sharing at every level of programme implementation
- Identify the cultural and behavioural changes needed for implementation
- Identify the incentives and training that must be put in place to bring these changes
- Ensure cost-effectiveness by harnessing resources and efforts by integrating them into a coherent and time-bound result based framework

### **The strategy has four strategic components:**

- Strengthening knowledge-sharing and learning processes
- Equipping IBDLP with a supportive knowledge sharing and learning infrastructure
- Foster partnerships for broader knowledge-sharing and learning
- Promote a supportive knowledge-sharing and learning culture





# Knowledge Resources of IBDLP

IBDLP has a wide range of knowledge assets, some of which are fully developed and functional, whereas, in some areas new knowledge management systems are required. The existing knowledge management system provides IBDLP with sufficient knowledge to establish a relative understanding about overall

rural development in the context to Meghalaya. The challenge is to build on these and convert them into a strong knowledge base to derive the desired results of socio-economic development in the deprived rural areas of the state.

## These institutional assets include the following:

- A Knowledge base accumulated through past many years by line departments of the state in their concerned sectors, which are supporting poverty reduction, food security, skill development, livelihoods and rural development. Though, most of this knowledge is tacit and needs to be systematized to ensure its availability to all as a public good.
- The IBDLP is aware of the importance of enhancing knowledge management for developmental effectiveness. Staff awareness of this is now being reinforced by strong senior management commitment and leadership.
- Advanced archival and records management systems has been emphasised by the different institutions created under IBDLP in order to hold their institutional memory. To achieve full potential, IBDLP has stressed that information be stored properly and easily retrieved for knowledge management purposes.
- Information technology platforms – including Internet, Intranet, the proposed State Knowledge Portal, Rural Web-enabled workspaces etc., are at different levels of conceptualization and implementation under IBDLP.
- A range of knowledge-based instruments developed by the different line departments, agencies and R&D institutions over the years which includes status reports, monitoring and evaluation (M&E) reports and implementation reports – all furnish valuable base for systemic learning and sharing. However, these remain somewhat fragmented; the challenge of a knowledge management strategy is to achieve connectivity among them and to make them available when required.
- Independent evaluation, including the annual report on the results and impact of operations, is a key instrument for refining and institutionalizing some of the lessons learned while providing for accountability. A major challenge for independent evaluation is to find the right balance between the accountability and the learning functions.
- Knowledge events and research publications, informal and formal meetings around key development issues, with contributions from high-profile scholars and visitors from peer organizations.
- Different publications to share knowledge and research findings also offer important potential, but need to be systematized within a broader framework of institutional knowledge management.
- At the policy level, there are an increasing number of policies to guide IBDLP Management and staff. Two processes contribute to extracting tacit and explicit knowledge into policies:

- At the policy level, there are an increasing number of policies to guide IBDLP Management and staff. Two processes contribute to extracting tacit and explicit knowledge into policies:
  - i. The IBDLP's Policy Forum, which furnishes discussion space and can act as a key link between different sources of Knowledge within the organization
  - ii. IBDLP's policy reference groups (cross-departmental groups to address policy issues).
- At the operational level in IBDLP headquarters, it is suggested to have three main knowledge management mechanisms:
  - i. Learning Notes –an initiative to provide concise guidance on the design and implementation of investments in sustainable rural development.
  - ii. Programme development teams – This is a peer review and knowledge-sharing mechanism to improve programme development and improving project implementation.
  - iii. Thematic groups on governance, natural resource management, livelihoods, rural finance, enterprise promotion etc.
- Portfolio reviews to monitor equity and other investment portfolios.
- Working Group on Knowledge Management /Knowledge Management Task Force: At the level of the state head quarter of the Meghalaya Basin Development Authority, a working group on Knowledge Management has been constituted to examine the status of traditional knowledge assets of the state and to suggest methods for its recording & proper documentation. The working group is chaired by the Commissioner & Secretary (Planning), Government of Meghalaya & the deputy Chief Executive Officer, MBDA.
- At the decentralized (regional, district, block and cluster) level, initiatives to stimulate knowledge-sharing and learning include the following
  - i. Regional networks to share ideas, issues and experience, and improve communication among districts, as well as between IBDLP headquarters and other partner organizations. These networks need to be further strengthened and focused on delivering effective knowledge sharing services to a larger number of partners, and on fostering learning initiatives (at local level) among the partners.
  - ii. The project development and implementation partnership is a mechanism for field-level stakeholders (including community and farmers' organizations) to discuss key local development issues, exchange experience, steer projects, review lessons learned and guide programmes. A variant on this is the linking of local learners initiative, which aims to facilitate local learning for small entrepreneurs







# Knowledge Partners of IBDLP

## 1. NBRI Shillong Center – Sector : Agriculture & Horticulture

The CSIR-NBRI, Shillong Centre is a joint initiative of CSIR-NBRI and MBDA in collaboration with BRDC under the aegis of Integrated Basin Development and Livelihood Promotion program (IBDLP). CSIR-NBRI has selected few technologies like the Bio-inoculants, Bio-prospecting of Medicinal and Aromatic Plants (MAPs), Floriculture & Dry Flower Technology befitting the soil and climate in Meghalaya. The objective is to ensure effective conservation and sustainable utilization of resources like the medicinal plants, aromatic plants, orchids, wild flowers and other indigenous species in the state.

At present, NBRI is associated with the following activities:

1. Technical support in cultivation and propagation of medicinal aromatic plants
2. Awareness and distribution of Phosphate Solubilising Bacteria
3. Dehydrated floral crafts
4. Extraction of essential oils from medicinal and aromatic plants

## 2. AFC India Limited- Sector : Apiculture

AFC India Ltd. is the strategic partner for building of Apiculture Clusters in Meghalaya. They have conducted a state wide scoping study on the status and potential of apiculture in Meghalaya. 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 and quality, with little or no value addition. 16 farmers from East Khasi Hills and 15 from Garo Hills have been trained on various aspects of apiculture and cluster development at RRTC, Umran. The business and financing model for 500 farmers (@ 25 farmers per cluster) has already been finalized.

## 3. North Eastern Space Application (NESAC)- Sector: GIS

NESAC is one of the key resource partners, with their state of the art infrastructure and access to the most recent satellite imagery, The Meghalaya Basin Development Authority has partnered with the North Eastern Space Applications (NESAC) in helping with the proposed Village Level Mapping. The GIS Technology will help MBDA in developing the Integrated Village Development Plan (IVDP) for the state of Meghalaya.

## 4. Appropriate Technology India (ATI)- Sector: Market Linkage

ATI is an organization working with MBDA on value chain development of Ginger, Turmeric and Silk Products. ATI will work on value chain development, formation of farmer producer cooperatives and in creation of market linkages.



## 5. SFAC Small Farmers Agri-business Consortium

MBDA has signed an MOU with SFAC to meet the various goals set out in the policy document for development of some crops specific value chains which would involve linking up with various stakeholders and in delivery of any/or all of the following services:

1. Identification of specialized consultants and services on demand
2. Promotion of Farmer Producer Organization(FPO)
3. Technology Extension
4. Supply of Inputs
5. Financial and other value added services
6. Value addition , processing and other forms of market linkage
7. Conducting studies, reviews, seminars, workshops, conferences etc
8. Venture Capital assistance to qualifying units supported by MBDA
9. Public Private Partnership for Integrated Agricultural Development

## 6. Infrastructure Development & Finance Company (IDFC)

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

IDFC Foundation is also developing the "Local Area Development" framework and under this special project it is being identified to address the needs of village clusters on holistic basis for social infrastructure and income generation opportunities.

IDFC Foundation is also looking at the Rural Markets. A baseline study is being conducted to help prepare the strategy for rural market access, infrastructure and transaction mechanism for better price realization for the farmers.

## 7. National Institute of Smart Government (NISG) – Sector: Governance

NISG is an institution of excellence in the area of e-Governance providing consulting services in Strategic Planning, Project Development, and Capacity Building. NISG has identified 4 missions; sericulture, livestock, horticulture and forestry for which it has designed the required intervention services. NISG is tasked to identifying a list of twenty (20) services to be delivered through the EFCs and prepare process maps for each service.

## 8. BAIF Development Research Foundation - Sector: Livestock Mission

BAIF is to provide consulting services to Meghalaya Basin Development Authority and Animal Husbandry & Veterinary Department for the state Livestock Mission.

## 9. NABCONS – Sector: Water Mission

NABCONS is to provide consulting services to Meghalaya Basin Development Authority, Animal Husbandry & Veterinary Department for Livestock Mission and to Water Resources Department on Water Mission. NABCONS is working on the project proposal for the identification of suitable sites for minor hydropower generation sites in Meghalaya.

## 10. International Finance Corporation(IFC)

IFC a member of The World Bank Group is an international organization whose mission is to promote sustainable private sector investment in developing countries, helping to reduce poverty and improve people's lives. MBDA and IFC have signed a MOU to develop the implementation of the Meghalaya Knowledge Partnership Program. The project would aim to create the environment necessary to facilitate the private sector-led growth in building agribusiness value chains in the spices sector in Meghalaya as well to improve and simplify access to finance by improving financial inclusion in the state.

## 11. The Livelihood School(TLS):

Meghalaya Basin Development Authority (MBDA) has engaged the services of The Livelihood School (TLS) to strengthen the Entrepreneurship Facilitation Centres (EFC) for Enterprise Development in Meghalaya. Entrepreneurship Facilitation Centres (EFCs) are being established in each of the 39 blocks of the State. Each EFC is manned by two Entrepreneurship Resource Persons (ERP) and Field Business Advisor (FBA). TLS has been working on how to facilitate "Livelihood mapping" in the blocks by enhancing the capacities of the ERPs(Enterprise Resource Persons). TLS is currently working on the Identification of appropriate interventions, as well as designing the intervention strategy.

## 12. Bio Resource Development Centre (BRDC):

The Bio Resource Development Centre (BRDC) is an institute of Government of Meghalaya with a mandate to promote & popularize innovative techniques in the areas of natural resource management. BRDC has promoted innovative cultivation techniques with introduction of PSVs and Trichoderma to enhance crop production within the framework of organic cultivation. It has also taken up initiatives for conservation, cultivation and sustainable use of aromatic and medicinal plants in Meghalaya. BRDC has also promoted entrepreneurship in dry flower crafts among rural entrepreneurs. BRDC is a valuable partner of the IBDLP in the sector of natural resource management.

## 13. North East Centre for Technology Approach & Research (NECTAR):

North East Centre for Technology Approach & Research (NECTAR), under the department of science & technology, government of India, is associated with the IBDLP to provide required technology for the development of small & medium reservoirs, drip irrigation with bamboo based technology, adoption of technology for restoration of water quality in coal mine areas etc.



#### 14. Indian Water Foundation (IWF):

Indian Water Foundation is a partnering with the government of Meghalaya to achieve complete water security in the state.

#### 15. Pricewaterhouse Cooper Pvt Ltd (PwC):

Pricewaterhouse Cooper Pvt Ltd (PwC) has been engaged with MBDA to conduct a study on Poverty and Gender Analysis in the state of Meghalaya with the following objectives:

- i. To provide an assessment of the occurrence and depth of poverty that can be used to provide additional insights alongside secondary sources.
- ii. Gain an understanding of the causes and consequences of poverty and vulnerability.



# Integrated Village Development Plan: A knowledge instrument

The Integrated Village Development Plan was conceived by the Meghalaya Basin Development Authority (MBDA) under the IBDLP programme to create an atmosphere of participative planning by the community for their own socio-economic development. The IVDP entails the generation of a comprehensive database of Knowledge for each and every village in the state. The database thus created would form a 'Single Window' knowledge centre wherein Developmental Agencies can view and analyse Village level data for planning interventions as well help communities plan their own development path.

Meghalaya has about 80 % of its population living in about six thousand villages, thus the rural areas need provisions 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. Parallely, 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, 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 to have a consolidated effort from all fronts to try to empower the Human Development Indexes 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 endeavour is a people driven approach to bring about a significant change in the quality of life particularly that of the vulnerable section through people's participation in their own development efforts.

Community dialogue process is the central methodology through judicious application of tools and exercises (such as a simple Household Survey, Venn diagram, Social Map, Resource Map) for engaging 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 constraints in mind. Based on the learning's of 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 a 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 such 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 people take the responsibility for monitoring progress. 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.

The IVDP Templates consists of the following:

1. Timeline
2. Social Map
3. Resource Map
4. Seasonality Calendar
5. Data Processing Sheet
6. Inflow & Outflow

7. Well Being Ranking
8. Livelihood Portfolio Mapping
9. Venn Diagram Analysis
10. Vision Building

Till date 110 village exercises have been completed. Digitization and analyzing of villages' data is in progress. Once the analyzing is done the same will be shared with the Line Department at the District Level with Deputy Commissioner as the Chairman. Representatives from these villages will be invited to understand how the line department can assist them so that their vision is achieved. The team is also working on developing software to assist in analyzing and monitoring interventions done in the villages. The team has also tied up with WEBCON to do a participatory GIS mapping so that there is a scientific component to the PRA exercises of 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.



# Village Biodiversity Register: A bio-diversity Knowledge An Experience of East Garo Hills

The East Garo Hills District of Meghalaya is rich in flora and fauna and the ethnic communities of this pristine land depend on the nature for various livelihood activities related to agriculture, agro forestry produce, Non Timber Forest Produce (NTFP), Medicinal and Aromatic (MAP) plants for usage in customs and rituals. Inhabitants normally live in small hamlets that are scattered, hence large areas of the forest lands are endangered due to agriculture practices or expansion of settlement areas. Land allocation is normally done by the Nokma (Traditional Heads) as per the area his Aking (Area/Territory) covers.

As the settlements grow, there will be tremendous pressure on the forest resources for food, timber, fuel wood and other forest produce. Another major impact is the reduction of flow of water in the various carrying agents like streams, rivulets due to siltation, pollution and garbage, thus clogging the natural flow of the river.

Looking into the prospects of conserving the rich natural resources of this pristine region, certain perspective action plans are required, which must include proper documentation of the natural resources in the river basin and should create proper awareness about conservation of the resources.

MBDA and its Block Development Units, in collaboration with Nokma Council, (apex body of the traditional institutions) have created awareness campaigns in various buffer zones. The community participation has resulted in protecting various water bodies, forest areas including sacred grooves and termed these as Community Conserved Areas (CCA's). This process is being followed by the development of Village Biodiversity Register, an initiatives at the community grass root level to document out the rich biodiversity of the village to plan out the steps to preserve it.

## Objective of Village Biodiversity Register:

Community Conserved Areas are rich biodiversity hotspots and are being demarcated and protected by communities. The conserved areas are being strictly protected by community implemented rules and regulations. However, rural communities can extract minor forest produces, medicinal herbs, etc. for domestic consumption, but not for commercial purposes.

Village Biodiversity Registers are being documented with the support of the village communities. It is expected to serve

- as a tool to document, monitor and provide information for sustainable management of local biodiversity resources
- as a tool to promote biodiversity - friendly development in the emerging process of decentralized management of natural resources
- as a tool to establish claims of individuals and local communities over knowledge of uses of biodiversity resources and to bring to them an equitable share of benefits flowing from the use of such knowledge and such resources
- as a tool for teaching environment and biology
- as a tool to perpetuate and promote the development of practical ecological knowledge of local communities and of traditional knowledge system







## Village Biodiversity Register:

Village Biodiversity Register is being created in participatory mode with communities and it is being processed through a Village Biodiversity Management Committee (VBMC). This Village Biodiversity Management Committee comprise of the Nokma, Sordars, Village Elders, Youth, Church elders, teachers and village students.

The mandate of the Village Biodiversity Management Committee is to:

- a) Prepare People's Biodiversity Register in consultation with the local people. The Register shall contain comprehensive information on availability and knowledge of local biological resources, their medicinal or any other use.
- b) To advice on any matter referred to it by the Competent Authority for granting approval, to maintain data about the local herbal practitioners using the biological resources.
- c) To take steps to specify the form of the People's Biodiversity Registers, and the particulars it shall contain and the format for electronic database.
- d) To take guidance and technical support from Competent Authority and the State Biodiversity Boards for preparing People's Biodiversity Registers.
- e) To maintained and validated The People's Biodiversity Registers.

### **i. Documentation of Traditional Knowledge (TK) related to biodiversity**

Proper documentation of the Traditional Indigenous Knowledge of the rural community in term of agricultural practices, water conservation, forest rules and regulation, sacred grooves restoration and conservation, use of locally available herbal drugs either for human or for livestock's use etc.

### **ii. Mapping of Village Water Bodies**

Village water bodies and catchment areas should be clearly indicated in the map as well as documented properly. This documentation will enable in proper identification of the water resources and can be further planned for undertaking various activities like construction of check dams, spring taps, creating potable water tanks, undertake afforestation programs in catchment areas etc.

### **iii. Networking of Forest:**

Networking of forests and identification of the sacred grooves, village reserves will help in undertaking other developmental activities without disturbing the natural ecosystem, further fallow lands available in the village can be used for other developmental activities like creating opportunities for fodder cultivation, energy plantation, horticulture, agriculture, and fishery or for undertaking certain agro-forestry activities.

### **iv. Identifying various NTFPs and MAPs**

Rural communities depend on various Non Timber Forest Produce (NTFP) and Medicinal and Aromatic (MAP) that are abundant in the forest zones. Proper identification of these resources, documentation, identifying of viable markets can be useful in formulating strategies of technical and business intervention.



#### **v. Networking of village roads**

Roads play an important role in reaching various developmental goals. Identifying and mapping of connecting roads with the village will help in transfer of goods and materials to and fro from the village.

#### **vi. Identification of Village Herbal Practitioners and TIKs personnel**

Identification of village herbal practitioners and Traditional Indigenous Knowledge personnel will help in proper identification of the herbs and also proper documentation of the Traditional Medicine.

#### **viii. Resource Mapping:**

- a. Resource mapping for community based eco-tourism spots and networking e.g. elephant/wild life corridor, indigenous bird's sanctuaries, fish sanctuaries, pitcher plant sanctuaries etc, identification of travelling route/picnic spots.
- b. Safe guarding/maintenance of sacred grove (Kosi) at every village and appointment of care takers.
- c. Energy plantation /community based social forestry
- d. Reviving the practices of traditional art and culture through songs, dance, games, skills etc.
- e. Village disaster mitigation plan from forest fire, floods, earth quakes.

#### **ix. Convergence:**

Village Biodiversity Register will be a document that will surpass everything, be it Agriculture, Horticulture, Soil and Water Conservation Measures, Livestock, Forestry, Knowledge Management etc. The Line Department, Financial Institutions, R & D Institutes, Educational Institutions can fill in the gaps and constraints that is present in the village and further improve the livelihood of the community by undertaking various developmental activities.



# Knowledge Perspective in Natural Resource Management in IBDLP

Natural Resource Management (NRM) is one of four main pillars on which the Integrated Basin Development & Livelihoods Promotion Programme (IBDLP), Meghalaya, has been conceived. In IBDLP, conservation & sustainable management of water plays the central role. For this, protection of the catchments of the rivers, streams and the other natural water bodies through community awareness & participation has been emphasised in all the NRM related interventions taken up under the IBDLP. Communication of appropriate knowledge to the community, in this regard, is crucial for enabling the people to take informed decision while planning any conservation and development activity utilising their scarce natural resource base.

Knowledge makes people more updated about the existing status of their natural resources and thereby empowering them to initiate natural resource based activities in a more sustainable

manner. A community empowered by appropriate knowledge inputs, is more likely to make better decisions regarding selection or prioritization of different natural resources based livelihood options which will be viable both economically and ecologically in the long run. Knowledge Management facilitates the community to properly identify and document the different elements of bio-diversity, while preparing a suitable action plan for their cultivation, conservation and sustainable utilization.

Knowledge management provides a holistic understanding of the dynamics of inter-dependence between all the elements in a natural eco-system. This understanding help the community to take firm decision regarding what should be and what should not be encouraged in their respective localities, what interventions are required, how to implement it and how to source further linkages.





# Knowledge Inputs to Improve Water Management

Knowledge Management is important to water management as it empowers people to have a holistic understanding of the prevailing status of water bodies in their micro, mini and watershed levels. It provides the status of forest cover in the catchments of the rivers, regulates streams and other water bodies. With this type of knowledge empowerment, the communities become aware about the present water situation and take suitable measures for protection of catchment area which will ensure water availability round the year.

GIS based knowledge empowers the communities to take up decisions about irrigation practices, type of infrastructure required, where the infrastructure be set-up and how to manage them. In rural Meghalaya there has been lot of interventions in the sectors

of preservation of surface water and supply of the same, both for drinking and irrigation purposes using traditional skills.

The split bamboo drinking water supply channels, based on indigenous traditional knowledge, are running effectively till date in many parts of Garo, Khasi and Jaintia hills. However, at times, these systems have certain inherent technical drawbacks. Here proper scientific knowledge inputs may play a significant role. Modern scientific knowledge & technology available with the concerned departments, institutions & agencies may be judiciously blended with the existing traditional systems, thereby increasing their efficiency & sustainability.



## District Knowledge Centres

Meghalaya is a land of rich traditions and culture. The indigenous people of the state, since ages, have been living close to nature. The traditional institutions of the state have been the custodian of the vast natural resources & bio-diversity of the state. The traditional herbal medicine practitioners, the craftsmen, the artisans and the traditional farming practitioners are some of the store-houses of traditional knowledge in their respective domains. However, due to several factors associated with rapid urbanization of lifestyle and migration of people, especially the youths, from rural to urban settlements for education & livelihoods, the younger generation have lost interest as well as opportunity to conserve & further the traditional knowledge of their forefathers. Due to total absence of documentation, most of the age-old knowledge have either been forgotten or lost forever.

On the other hand, with rapidly changing socio-economic scenario, it is of utmost importance that the advancement of the modern scientific knowledge in different sectors like agriculture & allied, education, health care etc. be passed on to all sections of the society so that the community can reap the harvest of those scientific advancements. The scientific researches in the field of agriculture have

demonstrated the modern ways of farming & farm management which leads to enhanced productivity, effective control of insect & pest attacks and value addition to the harvested produces. However, due to lack of crucial infrastructure and communication, most of this modern scientific knowledge is never accessed by the rural community of Meghalaya.

It is therefore of utmost importance that suitable knowledge-infrastructure be created at different levels in the district, so that the right knowledge can be passed on to the right person at the right time. At the same time, it is crucial to access, tap and document the traditional knowledge present at the grass-roots so that it can be conserved, furthered and disseminated to suitable users.

This is against this background that it was felt that a suitable knowledge facility, called District Knowledge Centre (DKC), be created at the district level, under the aegis of the IBDLP, which will work in both the ends of the knowledge continuum, i.e., on one hand it will source & access traditional knowledge, both explicit & tacit, from the field; while, on the other hand, it will disseminate appropriate scientific knowledge to the different knowledge audience of the district.





## Objectives:

The District Knowledge Centre will have the following major functions:

- Information dissemination (such as weather, trade, market, transport etc)
- Sourcing & documenting traditional knowledge
- Supporting governance for delivering development with least social and economic transaction cost.
- Human Resource Development (and skill building)

## Elaboration:

1. Through the DKCs, different types of information such as new government schemes, prices of the commodities, examination results, importance of hygiene and its correlation with health, loan schemes by the government, certificates issued by the government, etc will be provided.
2. The DKCs will aim to improve agriculture by imparting knowledge to the farmers, regarding new developments, techniques of agriculture, improved varieties of seeds, methods of cultivation, etc.
3. The DKCs will also disseminate weather information, latest market price and information regarding diversification of crops etc. to the farming community.
4. The DKCs will access & document traditional 'domain' knowledge, specially in the fields of medicinal & aromatic plants, herbal medicine, traditional healing techniques, traditional knowledge on farming & livestock rearing, traditional food habits etc.
5. The DKCs will access & document the traditional arts & crafts, folklores, culture, ethics & values which are forgotten & disappearing fast.
6. The DKCs will strengthen the governance at district & local levels by bringing in appropriate knowledge on governance issues.
7. The DKCs will bring in knowledge products to develop human resources, especially in enhancing the entrepreneurial skills of the youths.

## The Knowledge Matrix of District Knowledge Centres:

Broadly, the DKC will handle the following 4(four) categories of knowledge:

- i. Knowledge on Natural Resources Management (includes, among others, production, conservation & management of natural resources) & Climate Change
- ii. Knowledge on governance
- iii. Knowledge on enterprise, value chains & market.
- iv. Knowledge on human resource development (includes capacity & skill building)

The followings are the target users of knowledge at the district level:

- i. The farming community
- ii. The educated unemployed youths
- iii. The rural entrepreneurs
- iv. The student community
- v. The traditional institutions & traditional leaders (durbars, nokma councils, dolois, nokmas etc.)
- vi. The traditional knowledge practitioners (ojhas, craftsmen, artisans etc.)
- vii. The development professionals
- viii. The government employees, teachers and scientists.





## Knowledge Management on Rubber Training

Most of the planters (Rubber growers) in Meghalaya are small growers having holding of 5 ha to 2 ha. The planters /owner do not have the appropriate knowledge about the technology of tapping. They offer their garden on lease to a third party who is interested only in extraction of latex without following any scientific method. The leasing to the third party is offered as to get advance lump sum amount to meet their unforeseen expenditures like treatment, higher education etc.

Daily tapping, as often as twice everyday, is carried out by the lessees, whereas the recommended system is to tap every alternate day. Moreover the slope, angle of the tapping panel is not followed as per Rubber Board's recommendation.

Hence, off-campus training of the owner of the garden and also any person from the village who can take up the task as per the growers' recommendation will be organized by the Rubber Board. The latest recommendation of Rubber Board is tapping one day after every two days. It does not affect the yield but extends the tapping period i.e. more than 25 years tapping can be carried out. It also cuts down the cost of the training. Most of the growers in Tripura are following this system without any shortage of yield.

It is therefore of utmost importance to build up the knowledge of Rubber growers in the perspective of tapping for longer and higher economic benefits.



# Mobile Multi Facility Centre (MMFC): A Mobile Knowledge Dissemination Platform

The Integrated Basin Development and Livelihood Promotion Programme had already mobilized and organized the stakeholders and have generated unprecedented interest. It is now time to build capacities of the end users as also the delivery managers and implement plans on a project mode. It is time to evolve specific action plans in a mission mode specific to each of the identified sectors, plan for viability gap funding and facilitate private investment flows wherever possible.

The concept of Mobile Multi Facility Centre evolves and emerges as a powerful audio visual medium of reaching out to the people of the rural hinterland and share information about the goals of the ambitious programme. The MMFC is setup in a vehicle with an objective of knowledge dissemination to the people of the state and bridging the communication gap between people and the Government.

As a knowledge platform, MMFCs perform the following activities:

- i. It provides knowledge inputs to the people on the IBDLP, its objectives, missions & initiatives.
- ii. It provides knowledge inputs to the people on the different activities undertaken by the BDUs in different blocks of the district.
- iii. It provides information on different schemes of the government & how to access them
- iv. It uses audio visual medium of communication to showcase different achievements and successful initiatives taken up across the state under the programme.
- v. It records peoples' concerns on different issues concerning livelihoods and facilitate linking them with concerned departments/agencies.
- vi. It distributes knowledge materials in the form of pamphlets, booklets and other published material on different sectors of livelihoods & entrepreneurship to empower people to take informed decision.

The Mobile Multi Facility Centre attempts to address the communication gap that insulates the people from the process of inclusive development and participative planning. It shares with the people the calendar of events, training, workshops and skill development programmes to be taken place. In days to come, MMFCs will also have services like mobile soil testing facility; carrying forms for enrolment in skill based training programmes, registration of entrepreneurs and shall have facilities to record feedback of the people. At present the MMFC facility is available in Tura, Garo Hills.







# Audio-Visual Documentaries as a tool of Knowledge Management

Meghalaya has a rich history of traditional and sustainable model of agricultural practices that has a lot of relevance in the context of today's world. With a lot of emphasis laid on sustainability, many lessons could be learned from these age old traditional practices. Without proper documentation of these traditional practices, most of it has been lost. MBDA Media Team is engaged in documenting all these traditional practices, with the hope of preserving this indigenous knowledge of the state. Documentation of these said practices would not only help preserve a part of the cultural heritage of the state but would also act as a base from which many new practices could be formulated.

Besides these traditional practices, our state also has had a lot of entrepreneurs who have had success in their enterprise which they have built up with the active participation of the various departments of the

government. The MBDA Media Team, documents these entrepreneurs and makes success stories to inspire our potential stakeholders to register and build successful enterprises on their own. The Media team is an integral part in the working of Knowledge management. The Media Team sources stories and best practices and documents them either in written format or through audio visual mediums. These documented stories then form a part of the knowledge Management data base which is then disseminated through various means to our potential stake holders.

Hence, the documentaries that the Media Team has made and will make are with the hope that these traditional practices are preserved, success stories inspire citizens and best practices are replicated. 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 Mawlynnong 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 Umkhras**

A film documentary was made as part of the awareness campaign in regards to the degradation of the river Wah Umkhras 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 Mikilsingre**

The spectacular change in the lives of the people of the Khera Mikilsingre 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.

The broader aim of knowledge management is to create convergence amongst various line departments so that the knowledge gathered by one department is shared by all. This creates a culture where knowledge is shared between all departments which in turn results in a more holistic approach to the development of the state.

















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