**Introduction:**

Capacity Building Encompasses the State’s Human, Scientific, Technological, organisational, institutional and resource capabilities. A fundamental goal of Capacity Building is to enhance capabilities to evaluate, address and implement Developmental activities, through honing the Skills and understanding the needs perceived by the target clienteles.

Capacity Building is much more than Training and includes
-A process of equipping individuals with the understanding, the skill and access to information, knowledge that enables them to perform effectively.
- Organisational and Institutional development, Management structures and Framework that enables enhancement in Capabilities in all sectors.

The Department of Fisheries, Government of Meghalaya, addressing the huge potential of the State in the Fisheries sector has brought about an exodus in, through the Mission mode approach of the Meghalaya State Aquaculture Mission. With a greater task at hand in promoting Fisheries and Aquaculture as a mode of Livelihood in the State and moving ahead to self sufficiency from dependence in the sector, the need of the hour is to see that these Developmental Activities of the Mission are efficient and effective.

Addressing this need the Mission devotes a whole Mini Mission IV for Capacity Building and Human Resource Development, strengthening its base with the concept of education, training and skill development at the heart of all these Developmental Activities.

For the Session of 2014 – 15 the Training Titled “Aquaculture and Advanced Techniques for Fish culture” at Meghalaya State Fisheries Research and Training Institute, Mawpun, has been co-funded by the National Fisheries Development Board (2013 – 14). the training is for enhancing the knowledge, Skill and Attitude of Rural Functionaries in Fisheries Developmental Activities to promote Livelihood, generate employment and entrepreneurship, and increase the Fish and Fish seed Production in the State along Scientific and sustainable lines.

**Objectives:**

1. Raise general awareness.
2. Improve Knowledge, Skill and Attitudes of Participants in/towards the Sector.
3. To expose the fish farmers with the latest innovation in scientific fish farming and progressive practices in the field in the State.
4. Improve production of fish.
5. Encouraging farmers and Increase fish farmers’ confidence in adopting Fish Culture as a mode of Livelihood.

**Course Content:**

1. Introduction to Fisheries and Fish Culture.
2. Water Quality Analysis (Practical).
4. Techniques of Fish Production of IMC and Exotic Carps through induced Breeding.
6. Hand on Experience on FRP Hatchery & Identification of male and female, selection of brooders and induced breeding technique of carps (practical).
7. Principles of Composite Fish Culture.
8. Management of Nursery pond and Rearing for raising quality seed.
9. Emerging Opportunities in Fisheries Sector Scope of culture of Freshwater prawns & Minor carps.
10. Overview on principle of conservation.
11. Technique of feed formulation
12. Overview on Integrated Fish Culture.
13. Hazards and Disease Management.
14. Culture and Breeding of Clarius batrachus.

Inaugural Function:

The 5th (Fifth) batch of Fish Farmers to be trained during the Session were from West Jaintia Hills District with effect from the 9th June to 13th June, 2014.

The Programme was inaugurated by the Principal of the Institute, Smti P. Phawa and moderated by Smti. M. A. Khongjiliw, Fishery Officer. The Principal in her Speech welcomed all the Participants and in her speech stressed on the potential that fisheries sector has in the whole State of Meghalaya. She highlighted to the various avenues of livelihood that the sector offered and encouraged them to grab the various opportunities it offered. She further went on to encourage them to learn the activities and lectures to be discussed during the Five day by an actual Participatory process. She expressed her believe that after the five day programme the farmers would be able to identify the Practices best suited for their specific areas of interest and would someday partner with the Government in making Meghalaya Self Sufficient.

Participants:

A total of 30(Thirty) nos. of participants attended the training from Ranikor C& RD Blocks of the South West Khasi Hills District. These were mixed groups of Fish Farmers as well as potential fish Farmers. (Annexure I)

Training methodology

The focus of the programme is on “performing” and not just on “Knowing”. Lecturing is restricted to the minimum necessary and emphasis is given on learning through active participation and involvement. The training methods are need based and farmer centric to make each person a competent one. The methods adopted for the programme are :

1. Lecture cum Discussions using Audio Visual Aids.
2. Group Activity
3. Field Demonstrations
4. Field Visits and Exposure Visits.

Duration
The duration of the training programme is for 5 (five) days only, encompassing (4) four days of Lecture from Resource persons / Departmental Officers and Practical Field Demonstration and Classes and 1(One) Day of Field study and Exposure Visit.

**Theory and Practical Classes:**

The Theoretical Instructions were imparted at the Lecture Hall at MSFRTI by Resource Persons who were senior Officers from the Department of Fisheries, Meghalaya. The courses were chalked out in a way that thematic approach to the subject would be brought out for the farmer to comprehend relations in subjects that would allow them to understand and remember the topics discussed each day.

In his batch a Departmental Guest Lectures were invited to deliver Important Lecture that required experiences in the field. The idea was to bring forth the adaptation of national standardised Fisheries Technologies in a manner that is not just regional, location specific but also site specific & need based.

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<tr>
<th>Sl. No.</th>
<th>Departmental Guest Lecturer</th>
<th>Date</th>
<th>Topic &amp; Content</th>
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<tr>
<td>1.</td>
<td>Smti. Riwan Laloo, Programme Manager, Jaintia Hills</td>
<td>11.06.2014</td>
<td><strong>Emerging opportunities in the Fishery Sector:</strong> The Lecture contained special context on the prospect of post harvest / processing and value addition of fish. Here the Technique of producing the “ Kha Rang” a smoked fish product of Jaintia Hills, found to be a delicacy among the local people was introduced. The farmers were introduced to a new form of marketing their Fish by value addition through Smoking of Fish. The idea of the Lecture was to introduce to the farmer a new avenue in Fish production which is the production of not just live Table size fish but an easy technique of value addition already practiced in the State.</td>
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<td><strong>2. Over view of Fish Conservation:</strong></td>
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<td>The Lecture unfolded the need and concept of Fish Conservation. Citing local examples of Nong Bareh Fish Sanctuary, Rombagre Fish Sanctuary and many other potential sites, the lecture concentrated on protection of river systems to conserve indigenous fish fauna like the Kha saw, the Kha lad and many more. The lecture brought to them the prospects that came along with the efforts of fish conservation such as Eco – tourism, Community income generation, Employment generation to the local youths and most importantly healthy ecological System. The lecture also stressed on the need of community participation and co operation in such efforts, proper law and administration, and Interest.</td>
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Practical Classes for basic needs for Fish culture; Site Selection, Water Quality Analysis, Liming, Fertilisation and Hatchery Operation were carried out in the Farm of the Institute.
Itself which allowed the Farmers to have a clearer and better understanding of the Topics and Confidence to practice the Knowledge gained after a Lecture or discussion.

Field Visit:

The Farmers were taken for a field visit to the Project of Shri. A.F.Syiem, Nongkohlew, Mylliem C & RD block, East Khasi Hills, a beneficiary of Department of Fisheries under the Meghalaya State Aquaculture Mission for the Construction of Eco - Hatchery for quality fish seed production.

An Eco – Hatchery is an artificial infrastructure that is used for induced breeding of carps. The Concept behind an Eco hatchery is to provide the fish a conducive environment that replicates the natural breeding grounds of the carps. Here apart from the internal stimulus of the hormone and external environmental stimulus of rain and flow /current of water is provided for the breeding of the fish.

Fish seed and fish feed are the two most important component for Fish Culture. The need for quality fish seed production arises with more farmers trained in the field of Fish farming. The farmers should also identify quality fish seed producers that are biologically viable and disease free.

The project of Shri. A. F. Syiem is also an ideal model for integration. The farm model’s Integrated Farming System, it emulates the basic concept of sustainable usage of land and resources. Following the concept of integration Shri. A.F. Syiem tries to make his farm a zero waste farm, where the waste of one activity is utilised for another activity in the farm. For example Mr. A. F. Syiem had a number of ponds: nurseries, rearing ponds and stocking ponds; most of the ponds are fertilised using manure of Pigs, Cows and Poultry being reared by him. The excess foods that are also wasted by these animals are being washed into the ponds and this in turn feeds the fish. So he minimises his expenditures in feed and manure for the fish pond whereas the waste produced are also utilised for the farm production.

The field visit served two purposes;

It allowed the farmers to interact and see the infrastructures that are required for seed production of carps. It revealed to them the intricate detail of Management of Hatchery and the care and hard work that is required for Breeding of carps and most undeniably the profit and income that could be generated from this activity. A face to Face interaction with a Private entrepreneur taking up Fish Seed production at the local level gave the farmers a clearer and trusted source of field application of technologies.

It also opened up a new idea of Sustainable usage of available land resources and Multiple Income generation through the practice of Integrated Farming.
The Trainess expressed happiness and excitement that the visit gave them through interaction with Shri. A.F. Syiem and for them to physically witness such Projects that could be Live examples of what they were theoretically taught.

**Valedictory:**

After a rigorous five day training programme of theory and practical on aquaculture and its advance techniques the valedictory for the participants of South West Khasi Hills District was held on the 13th June, 2014. The programme was moderated by Smti. M.A. Khongiliw, Fishery Officer and chaired by the Principal of the Institute Smti. P. Phawa. The Chief Guest of the Occasion was Smti. D.G. Lyngdoh, Superintendent of Fisheries, South West Khasi Hills. The Principal in her valedictory speech congratulated all participants on successfully completing the training and encouraged them to practice the Knowledge they have gained through the five day training programme she stressed on the need for them to partner together with the endeavours of the Government to provide livelihoods to rural population of Meghalaya.

Smti. D.G. Lyngdoh, Superintendent of Fisheries, South West Khasi Hills expressed her happiness that farmers from her Districts had received the training and further encouraged them actively participate with the Government in making Fish Culture / Aquaculture a mode of Livelihood promotion and income generation.

The Participants also shared their views and opinions on the training Programme and expressed their gratitude and Satisfaction on the whole Programme. The Programme ended with the Vote of Thanks from Shri. P. Lamin, R.A. MSFRTI.

**Conclusion:**

The Whole Programme was a success. A Pre and Post Training assessment revealed that the participants arrived for the Training with only 13% (Thirteen) Percent of the Trainees having Knowledge on Fish Culture and Aquaculture Activities and through the Training Programme we were able to achieve a Knowledge gain of 83% (Eighty Three) Percent of the total number of Participants to walk out with Information and Knowledge on Fish Culture and Aquaculture Activities. The Participants were encouraged to give Feedbacks on the whole training Programme. The Overall Feedback revealed a sense of Satisfaction from the participants on the whole Learning Process

**Principal**

Meghalaya State Fisheries Research
And Training Institute, Mawpun
Technical Classes (1) Smti. Riwan Laloo, Programme Manager (2) Smti. M.A. Khongjliw, Fishery Officer

Practical Classes (1) Shri. P. Lamin, Research Assistant (2) Smti. M.A. Khongjliw, F.O.

Practical Classes by Shri. P. Lamin, Research Assistant
Field Visit to Project of Shri. A.F. Syiem, Nongkohlew, Mylliem C & RD Block, East Khasi Hills District, Meghalaya

Field Visit to Project of Shri. A.F. Syiem, Nongkohlew, Mylliem C & RD Block, East Khasi Hills District, Meghalaya

Valedictory Function  Distribution of Certificates