BRIEF WRITE UP ON

Integrated Watershed Management Programme (IWMP)

BATCH – I (2009-10)

UNDER RI – BHOI SOIL & WATER CONSERVATION DIVISION NONGPOH

Issued by the Office of the Divisional Officer

Soil & Water Conservation Ri – Bhoi Division Nongpoh
Cum
Project Manager WCDC Ri – Bhoi District

ACKNOWLEDGEMENT

"A true smile on a farmer's face is the key for the Nation Success"

Efforts have been made to prepare this Booklet to cater the needs of every single beneficiary. The success of any Project depends largely on the encouragement and guidance of many others. We take this opportunity to express our gratitude to the people who have been instrumental in the successful completion of this Project. The dedicated works of the in charge of IWMP-I Shri. Y.H Lyngdoh (Range Officer), Shri. A. S. Kharbuli (Beat Officer) & Shri. W.Nongsiej (Range Officer); IWMP – II Shri. F. Syiemiong (AS&WCO) and IWMP – III Shri. L. Sohlang (Range Officer), Shri. K. Iawphniaw (Range Officer) & Shri L.Shabong (Former ASWCO) are the source of inspiration for all the involved functionaries. Technical Expert Shri. Jyswill Lyngdoh and Accountant Shri. J.R. Marak also has immensely contributed their knowledge and expertise in these projects. Rigorous and dedicated working of our Watershed Development Team (WDT) Shri. Frankie Nongsiej, Smt. Maphisha Kurbah & Shri. Kitboklang Matlai have made special emphasis in taking out the actual field data and documenting it properly.

We also express our thanks to all elected representatives of the Watershed Committee and Village Community of Project Area for their heartily devotion , full cooperation, setting the priorities and delving on the issues of inter – regional imbalances. The guidance and support of all the Officials, Watershed Committee Members have given ample contribution in giving the final shape to the Completion of this Project.

(Shri. H.S. Kharpran)
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INTRODUCTION

INTEGRATED WATERSHED MANAGEMENT PROGRAMME (IWMP):

The Integrated Watershed Management Programme (IWMP) is the result of the new and unified approach of the GOI for treatment and development of the new generation watersheds in a realistic and holistic manner. The Government of India through the National Rainfed Area Authority (NRAA) has evolved the Common Guidelines, 2008 for implementation of the Watershed Development Projects. The major areas in which paradigm shift has been made under the programme are, inter-alia, institutional funding of the State Government through the State Level Nodal Agency (SLNA) at the State Level, constitution of District and Project Level Institutions for implementation of the projects for the Participatory Watershed projects with financial, social and economic empowerment to the watershed communities in close coordination with the local institutions. Another aspect is the equity and participatory resources management with due regards to the economically weaker section within the village community.

The Central and State share for the IWMP projects is in the ratio of 90:10.

The main aims of this programme are as follows:

- To restore the ecological balance by harnessing, conserving and developing degraded natural resources such as soil, vegetative cover and water.
- The outcomes are prevention of soil run-off, soil loss.
- Regeneration of natural vegetation.
- Rain water harvesting and recharging of the ground Water table.
- Enabling multi-cropping and the introduction of diverse agro-based activities, which help to provide sustainable livelihoods to the people residing in the watershed area.

The main objectives of this programme are as follows:

- To dissipate soil and water erosion and surface run-off.
- To harvest/recycle surface runoff and rainwater.
- To enhance soil moisture regime/water holding capacity.
- To promote sub-surface flow, base flow and ground water recharge.
- To improve soil health and tilth.
- To improve production and productivity.
- To promote generation and gainful employment opportunities.

The Salient feature of this project duration is from 4 years to 7 years depending upon nature of activities spread over distinct phase viz., preparatory phase, works phase and consolidation phase.
Conservation, productivity and livelihoods: Conservation is to be given priority resulting in productivity enhancement and livelihoods. Resource development and usage is to be planned to promote farming and allied activities to create local livelihoods while ensuring resources conservation and regeneration.
Size: The new approach envisages a broader vision of geo-hydrological units normally of average size of 1,000 to 5,000 hectares comprising of clusters of micro-watersheds.

CHAPTER – 1

GUIDING PRINCIPLES

The common guidelines for watershed development projects are based on the following principles:

I. **EQUITY AND GENDER SENSITIVITY**:
Project Implementing Agencies (PIAs) facilitate the equity processes such as:-
a) Enhanced livelihood opportunities for the poor.
b) Enhancing role of women in decision making processes and their representation in the institutional arrangements and
c) Ensuring access to usufruct rights from the common property resources for the resource poor.

II. **DECENTRALIZATION**:
Project management would improve with decentralization, delegation and professionalism. Empowered committees with delegation to rationalize the policies, continuity in administrative support and timely release of funds are the other instruments for effective decentralization.

III. **FACILITATING AGENCIES**:
Social mobilization, community organization, building capacities of communities in planning and implementation, ensuring equity arrangements, etc need intensive facilitation.

IV. **CENTRALITY OF COMMUNITY PARTICIPATION:**
Involvement of primary stakeholders is at the centre of planning, budgeting, implementation, and management of watershed projects.

V. **CAPACITY BUILDING AND TECHNOLOGY INPUTS:**
Considerable stress would be given on capacity building as a crucial component for achieving the desired results. This would be a continuous process enabling functionaries to enhance their knowledge and skills and develop the correct orientation and perspectives thereby becoming more effective in performing their roles and responsibilities.

VI. **MONITORING, EVALUATION AND LEARNING:**
A participatory, outcome and impact-oriented and user-focused monitoring, evaluation and learning system would be put in place to obtain feedback and undertake improvements in planning, project design and implementation.

VII. **ORGANIZATIONAL RESTRUCTURING:**
Establishing appropriate technical and professional support structures at national, state, district and project levels and developing effective functional partnerships among project authorities, implementing agencies and support organizations plays a vital role**.**

CHAPTER – 2

PARTICIPATORY RURAL APPRAISAL (PRA):

PRA is defined as involving people in their own development process, creating condition for peoples involvement and giving opportunities, resources and authorities to fulfill this goal through the Government and others organization. PRA describes a growing family of methods and approached that enable local people to share, enhance and analyze their knowledge of life and condition, to plan and to act. Actions which were previously conducted by outsiders are carried out by the local people.

Therefore local people were involved in formulation of Watershed Plan. During initial stage of the project, identification and prioritization of activities were made through active participation from the community. Surveys were conducted with the help of local people. Prior to implementation of projects works, community meetings were held to select committee members and identify deserving beneficiaries. Majority of the construction works was done by the local people, the local knowledge and skill were used to make the programme successful as well as sustainable. The local people's knowledge is also being used to develop strategy for conservation and proper utilization of existing water resource for the community as well as for individual. These were done by using PRA tools and method of data collections such as:-

1. Resource Mapping,
2. Wealth Ranking,
3. Venn Diagram,
4. Focus Group Discussions,
5. Transect Walk, etc.

P.R.A. Exercise Project-I

PRA In UMSYEI & UMLATHU

Umlanglut Watershed

CHAPTER – 3

DIFFERENT INSTITUTIONS CONSTITUTED UNDER IWMP

PROJECT IMPLEMENTING AGENCY (PIA):

The State Level Nodal Agency (SLNA) would evolve appropriate mechanisms for selecting and approving the PIAs, who would be responsible for implementation of watershed projects in different districts. These PIAs may include relevant line departments, autonomous organizations under State/ Central Governments, Government Institutes/ Research Bodies.

The **PIA** is to

- provide necessary technical guidance to the Gram Panchayat for preparation of development plans for the watershed through Participatory Rural Appraisal (PRA) exercise,
- form community organization and undertake training for the village communities,
- supervise watershed development activities,
- inspect and authenticate project accounts,
- encourage adoption of low cost technologies and build upon indigenous technical knowledge,
- monitor and review the overall project implementation and
- set up institutional arrangement for post-project operation and maintenance and further development of the assets created during the project period.

Watershed Development Team:

Roles and Responsibilities of WDT:

1. The WDT will guide the Watershed Committee (WC) in the formulation of the watershed action plan. An indicative list of the roles and responsibilities of the WDT would include among others, the following.
2. Assist Gram Panchayat / Gram Sabha in constitution of the Watershed Committee and their functioning.
3. Organizing and nurturing User Groups and Self-Help Groups.
4. Mobilizing women to ensure that the perspectives and interests of women are adequately reflected in the watershed action plan.
5. Conducting the participatory base-line surveys, training and capacity building.
6. Preparing detailed resource development plans including water and soil conservation or reclamation etc. to promote sustainable livelihoods at household level.

Watershed Cell cum Data Centre (WCDC):

A new separate Cell, called the Watershed Cell cum Data Centre (WCDC) has been established at the district level, which oversee the implementation of watershed programme in the district having separate independent accounts.

The functions of WCDC are as follows:

a) Identify potential Project Implementing Agencies (PIAs) in consultation with Zila Parishad/Zila Panchayat/ District Council as per the empanelment process to be decided by the respective State Governments.

b) Take up the overall responsibility of facilitating the preparation of strategic and annual action plans for watershed development projects in respective districts.

The Watershed Cell cum Data Centre (WCDC) Ri-Bhoi District has been set up with the following
members in compliance to the Common Guidelines for approval of Watershed Development Plans under IWMP as well as overall co-ordination, Supervision and monitoring of the progress of works and submission regular reports to the Government.

1. Deputy Commissioner Ri-Bhoi District.	-	Chairman
2. Project Director, DRDA, Ri-Bhoi District, Nongpoh.		
3. District Agriculture/Horticulture Officer Ri-Bhoi District, Nongpoh.	-	Member
4. Divisional Forest Officer, Social Forestry Division, Ri-Bhoi District Nongpoh.	-	Member
5. District Animal Husbandry & Veterinary Officer, Ri-Bhoi District, Nongpoh	-	Member
6. Superintendent of Fisheries, Ri-Bhoi District Nongpoh.	-	Member
7. District Sericulture and weaving Officer, Ri-Bhoi District Nongpoh.	-	Member
8. Executive Engineer, PHE, Ri-Bhoi District Nogpoh.	-	Member
9. Executive Engineer, Water Resources, Ri-Bhoi District Nongpoh.	-	Member
10. District Tourist Officer, Ri-Bhoi District Nongpoh.	-	Member
11. District Social Welfare Officer, Ri-Bhoi District Nongpoh.	-	Member
12. Programme/Project Officer, ICDS, Ri-Bhoi District Nongpoh.	-	Member
13. Representatives from MRDS/NABARD/ICAR for North Eastern Hills Region/ CGW Board/ NESAC/SIRD/MKVIB/NEHU Department of Geography/ Environmental studies/ SBI/MCAB	-	Member
14. District Coordinator SSA/NRHM	-	Member
15. Divisional Soil & Water Conservation Officer, Ri-Bhoi District Nongpoh.	-	Member Secretary, Governing Body & Project Manager

Watershed Committee and its functioning:

The Village Council will constitute the Watershed Committee (WC) to implement the Watershed project with the technical support of the WDT in the village. The Watershed Committee (WC) has to be registered under the Society Registration Act, 1860. The Village council may elect/appoint any suitable person from the village as the Chairman of Watershed Committee. Headman and /or ward member/ Village council members may also be member/ Chairman of WC. The Watershed Committee (WC) will comprise of at least 10 members, half of the members shall be representatives of SHGs and User Groups, SC/ST community, women and landless persons in the village. One member of the WDT shall also be represented in the Watershed Committee (WC). Where a watershed project covers more than one Village council separate committees will be constituted for each Village council. The Watershed Committee (WC) would be provided with an independent rented office accommodation. The Watershed Committee will open a separate bank account to receive funds for watershed projects and will utilise the same for undertaking its activities. The Details are as follows:

Sl.No	Name of Members	Designation
1.	Shri. H. Jana	Chairman
2.	Shri. P.R Pyngrope	Secretary
3.	Shri. Kurnus Synrem	Member
4.	Shri. Hobar Ryntong	Member
5.	Shri. Barley Myrboh	Member
6.	Shri. Ioanis Jyrwa	Member
7.	Shri. Andrias Lamarai	Member
8.	Smti. Khrina Lyngdoh	Member
9.	Smti. Pdianghun Jana	Member
10.	Shri. Philikshon Roy Pyngrope	Member
11.	Shri. C. Rymbai	Member
12.	Shri. O. Marboh	Member

Watershed Committee under IWMP I:-The Umsarang Watershed Committee was constituted on 3rd Dec 2009 and the present lists of members are shown below:

The Umtymmen Rupa Watershed Committee was constituted on 3rd Dec 2009 and the present lists of members are shown below:-

Sl.No	Name of Members	Designation
1.	Shri. Morning Shadap	Chairman
2.	Shri. Scalling Basaiawmoit	Secretary
3.	Shri. B. Shadap	Member
4.	Shri. G.S. Shadap	Member
5.	Shri. J. Syngkli	Member
6.	Shri. L. Syngkli	Member
7.	Shri. I. Lapang	Member
8.	Shri. D. Makdoh	Member
9.	Shri. H. Shadap	Member
10.	Smti. B.J. Shadap	Member
11.	Smti. Stepphyrnai Lapang	Member

The Lower Umsahong Watershed Committee was constituted on 15th Dec 2009 and the Present lists of members are shown below:-

Sl.No	Name of Members	Designation
1.	Shri. Sting Shangrang	Chairman
2.	Shri. Roswell Shadap	Secretary
3.	Shri. Stephan Mynsong	Member
4.	Shri. Biar Shadap	Member
5.	Shri. Obidient Khymdeit	Member
6.	Shri. Pois Shadap	Member
7.	Smt. Lucy Mashli	Member
8.	Smt. Kwintina Mynsong	Member

The Umbyrshan Watershed Committee was constituted on 18th Dec 2009 and the present lists of members are shown below:-

Sl.No	Name of Members	Designation
1.	Shri. Robert Muktieh	Chairman
2.	Shri. Leaderson Shangrang	Secretary
3.	Shri. Thrang Dkhar	Member
4.	Shri. Miky Lyngdoh	Member
5.	Shri. Klestar Marsing	Member
6.	Shri. Bris Nongpoh	Member
7.	Shri. Bisir Mynsong	Member
8.	Shri. Wosley Pale	Member

Watershed Committee under Project – II:-

The Umsyei Watershed Committee was constituted on 1st Dec, 2009 the present list of members are as shown below:

Name	**Designation**
1. Shri. Phlan Nongtri	Chairman
2. Shri. Jelin Pohtam	Vice Chairman
3. Shri. Kranly Thangkhiew	Secretary
4. Shri. Arjen Rani	Member
5. Shri. Das Roy Dkhar	Member
6. Shri. Esles Nongrum	Member
7. Shri. Demos Lyngdoh	Member
8. Shri. Briston Lyngdoh	Member
9. Smt. Banteilang Mawiong	Member
10. Smt. Step Gayang	Member
11. Shri. Kenedy Buam	Member
12. Shri. Mastar Langshang	Member
13. Shri. M. Dhar	

The Umlathu Watershed Committee was constituted on 30th Sept. 2009 and the present list of members are as shown below:

Name	**Designation**
1. Shri. Marius Mawlong	Chairman
2. Shri. Anthony Kharthangmaw	Secretary
3. Shri. Kone Taro	Member
4. Shri. Roket Tado	Member
5. Shri. Dipin Rongpi	Member
6. Shri. Krisho Ingtih	Member
7. Shri. Okon Kathar	Member
8. Shri. Tala Taro	Member
9. Shri. Thomas Marai	Member
10. Smt. Kularbiang Iawphiaw	Member
11. Smt. Rina rongpi	

Watershed Committee Under Project - III

The Umlanglut Watershed Committee was constituted on 02nd Dec 2009 and the Watershed Secretary was Shri L.Sohlang (R.O Nongpoh). The committee was reorganized on 25 March 2011 and Smti Anjela Lyngdoh was elected as the new Secretary. The present list of members are as shown below:

SL NO	NAMES	DESIGNATION
1	Shri. T. Makri	Chairman
2	Smti Anjela Lyngdoh	Secretary
3	Shri. L. Lyngdoh	Member
4	Shri. B. Khymdeit	Member
5	Shri. K. Lyngdoh	Member
6	Smti. A. Lyngdoh	Member
7	Shri. S. Makri	Member
8	Shri. B. Manih	Member
9	Smti. S. Lyngdoh	Member

The Umsukun Watershed Committee was constituted on 23rd Dec 2009 and the newly elected Secretary was Shri J.Nongrum, dated 25 March 2011. The present list of members are as shown below:

SL NO	NAMES	DESIGNATION
1	Shri. Bilson Nongrum	Chairman
2	Shri J.Nongrum	Secretary
3	Shri. Stephan Syiem	Member
4	Shri. Rang Khngkai	Member
5	Shri. Das Khongkai	Member
6	Shri. Swon Maring	Member
7	Shri. John Nongrum	Member
8	Shri. Ambros Maring	Member
9	Smti. Lily Syngkli	Member
10	Smti. Ping Makri	Member
11	Smti. Trina maring	Member

SHG: Self Help Groups:

It is a village-based financial intermediary committee composed of 10-15 local women or men or mixed group. A self-help group may be registered or unregistered. It typically comprises a group of micro entrepreneurs having homogeneous social and economic backgrounds; all voluntarily coming together to save regular small sums of money, mutually agreeing to contribute to a common fund and to meet their emergency needs on the basis of mutual help. They pool their resources to become financially stable, taking loans from the money collected by that group and by making everybody in that group self-employed. The group members use collective wisdom and peer pressure to ensure proper end-use of credit and timely repayment. This system eliminates the need for collateral and is closely related to that of solidarity lending, widely used by micro finance institutions.

Details of SHGs

SL NO	NAME OF WATERSHED	PROJECT	NO OF SHGs formed/ promoted
1	**Umtymmen Rupa**	**I**	**2**
2	**Umsarang**	**I**	**2**
3	**Lower Umsahong**	**I**	**1**
4	**Umbryshan**	**I**	**1**
5	**Umsyei**	**II**	**2**
6	**Umlathu**	**II**	**9**
7	**Umlanglut**	**III**	**9**
8	**Umsukun**	**III**	**6**
	TOTAL		**32 nos.**

User groups (UGs):

User Groups (UGs) shall be homogenous groups of persons most affected by each work/ activity and shall include those having land holdings within the watershed areas. Each User Group shall consist of those who are likely to derive direct benefits from a particular watershed work or activity. The Watershed Committee (WC) with the help of the WDT shall facilitate resource-use agreements among the User Groups based on the principles of equity and sustainability. These agreements must be worked out before the concerned work is undertaken. It must be regarded as a pre-condition for that activity. The User Groups will be responsible for the operation and maintenance of all the assets created under the project in close collaboration with the Gram Panchayat and the Gram Sabha**.**

Details of UGs:

SL NO	NAME OF WATERSHED	PROJECT	NO OF UGs formed/ promoted
1	Umtymmen Rupa	I	21
2	Umsarang	I	19
3	Lower Umsahong	I	1
4	Umbryshan	I	1
5	Umsyei	II	3
6	Umlathu	II	4
7	Umlanglut	III	4
8	Umsukun	III	6
	TOTAL		59 nos.

CHAPTER – 4

Entry Point Activities (EPA):

In order to build a rapport and to create a friendly relationship between the community people, EPA in the form of different structures such as drinking water tank, open well as so on was constructed. These structures were again people's or the community's plan and accepted by the majority through PRA conducted. Therefore it was highly on need based approached from the Department. Shown below is information of the EPA implemented by the Department with active collaboration of the community people of different project areas.

Sl. No.	Name of watershed	Acttivities	Nos. of works (EPA)
1	Umsarang WC IWMP - I	Drinking water tank, Water Harvesting structure, Open well	5 nos.
2	Umtymmen Rupa WC IWMP - I		5 nos.
3	Umbyrshan WC IWMP - I		5 nos.
4	Lower Umsahong WC IWMP – I		5 nos.
5	Umsyei WC IWMP – II		6 nos.
6	Umlathu WC IWMP – II		4 nos.
7	Umlanglut WC IWMP – III		3 nos.
8	Umsukun WC IWMP – III		2 nos.
TOTAL			**35 nos.**

N 25˚55'82.8 E 91˚45'201"

25º57'09.17 91º52'37.87

N25° 34' 7.356" E 91° 26' 47.94

CHAPTER – 5

Watershed Development Fund:

One of the mandatory conditions for the selection of villages for watershed projects is people's contribution towards the Watershed Development Fund (WDF). The Contribution of WDF shall be a minimum 10 % of cost of NRM works executed on private land only. However, in case of SC/ST, small and marginal farmers, the minimum contribution shall be 5 % of cost of NRM works executed on their land.

A sum equivalent to the monetary value of the voluntary labour would be transferred from the watershed project account to the WDF bank account that will be distinct from the Watershed Committee (WC) bank account. User charges, sales proceeds and other contributions, disposal amounts of intermediate usufruct rights shall also be deposited in the WDF bank account. Income earned from assets created under the project on common property resources shall also be credited to WDF.

After completion of Phase II, at least 50% of the WDF funds will be reserved for maintenance of assets created on community land or for common use under the project. Works taken up on private land shall not be eligible for repair/ maintenance out of this Fund. The remaining money may be used as a revolving fund to advance loans to the villagers of the project area who have contributed to the fund. Individuals as well as charitable institutions should be encouraged to contribute generously to this Fund.

Sl. No.	District	Batch No.	Project No.	Name of Watershed	Area in Ha.	Name of The Bank
1	Ri Bhoi	I	I	Umbyrshan IWMP	500	Indian Bank
2		I	I	Lower Umsahong IWMP	500	Indian Bank
3		I	I	Umtymmen Rupa IWMP	500	Indian Bank
4		I	I	Umsarang IWMP	500	Indian Bank
5		I	II	Umsyei IWMP	500	Indian Bank
6		I	II	Umlathu IWMP	500	Indian Bank
7		I	III	Umlanglut IWMP	500	Rural Bank
8		I	III	Umsukun IWMP	500	Indian Bank
TOTAL					4000	

CHAPTER – 6

Training:

Training is one of the tools of learning new skill under the project. Many programmes were arranged and the expert from various departments viz, Agriculture, Horticulture and Fishery were involved for imparting the training on various topics. For sensitization and Orientation training on watershed management have been imparted to all concerned functionaries and elected members at district and village level before they undertake any programme. The details of training are as follows:

SL NO	NAME OF WATERSHED	PROJECT	TYPES OF TRAINING
1.	Umtymmen Rupa	I	Capacity Building training on IWMP to WCs
			Role and Responsibilities of Watershed committee, SHGs UGs on Post Project Management
			Training for W.A, W.C, Field Staff and farmers on aspect of Soil and Water Conservation Method, SHG formation, integrated approach for sustainable development in the Watershed.
	Umsarang		Exposure Trip for Watershed Committee Members & Exposure Trip for SHG Members
	Lower Umsahong		Training Programme on Livelihood Activities for SHG Members
			Training Programme on Integrated Farming System for Farmers Participants
			Training cum exposure visit
	Umbyrshan		Training on livestock and poultry
			Candle making
	Umtymmen Rupa & Lower Umsahong		Capacity Building Training Programme for WC Members, SHG Members UGs Members on Post Project Management.
2.	Umlathu	II	Capacity Building for Watershed committee members
	Umlathu		Book-Keeping for Watershed committee members
	Umsyei		Training cum exposure visit
	Umlathu		Exhibition
	Umsyei & Umlathu		Capacity Building Training Programme for WC Members, SHG Members UGs Members on Post Project Management
3.	Umlanglut	III	Farmers Training
			W.C Training
			Exposure visit (poultry) & Exposure visit(Piggery)
			SHG Training
	Umsukun		Integrated farmers system for increasing the livelihood of farmers
			Rice cultivation
			Horticulture
			Fishery Farming
			Tailoring
			Food processing
			Agriculture Implements
			Piggery Farming
			Exposure Visit (Vermi Compost Pit)
	Umlanglut & Umsukun		Post Project Management

CHAPTER – 7

WATERSHED PHYSICAL ACHIEVEMENTS
FOR BATCH – I UNDER INTEGRATED WATERSHED MANAGEMENT PROGRAMME
RI BHOI DISTRICT – MEGHALAYA

Area Ha. 4000 **Total Project Cost: 600.00 lakhs**

Item of works	Project - I		Project - II		Project - III		Total	
	Phy.		Phy.		Phy.		Phy.	
Arable Land Treatment	**ha.**	**nos.**	**ha.**	**nos.**	**ha.**	**nos.**	**ha.**	**nos.**
Impt of existing paddy field	320		90		96		506	
Half moon terrace	158						158	
Agro-horticulture	320		176				496	
Contour trenching			20				20	
Box Terrace					20		20	
Crop Demonstration					5	20	5	20
Non Arable Land Treatment								
Staggered trenching					20		20	
Afforestation	250		310		268		828	
Agro -horticulture					212		212	
Drainage Line Treatment								
Protection Wall	40.32	28			4.5	4	44.82	32
Loose Boulder check dam	63.36	44	15.2	10			78.56	54
Water harvesting & distribution works	55.45	38	26.2	17	30	10	111.65	65
CC check dam	31.68	22	27.36	18	75	20	134.04	60
Run-off disposal channel	19.11	11584	20.08	8033			39.19	19617
Dugout pond	10.08	7	12.16	8		7	22.24	22
CC channel						8		8
Earthen dam					15	10	15	10
Earthen channel					49.65		49.65	0
Livelihood Activities								
Kitchen gardening/Agri-implements	22	480	22	240	95	426	139	1146
Piggery		75		35				110
Poultry		75		35				110
Tailoring/carpentry/black smithy		30		20		31		81
Carpentry						25		25
Production system & Micro enterprise								
Mud brick making/basket making/food processing		16		10				26
Utility shop				4				4
Fishery	20.16	100	24	52		22	44.16	174
Horticulture nursery/Floriculture	5.84	26					5.84	26
Cash crop value add.(arecanut soaking tanks/Rice mill		7		6				13
Rearing of milch cow						1		1
Grocery shop						3		3
Ginger cultivation						11		11
Piggery						10		10
Poultry						6		6
Work phase 1st & 2nd yr.	684	82	257	54	109.85	18	1050.85	154
Total	**2000**	**12683**	**1000**	**8580**	**1000**	**686**	**4000**	**21949**

CHAPTER – 8
SUCCESS STORIES

Success Story under Umtymmen Rupa Watershed IWMP-I

GPS Reading:N-25^{0}43’08.0”:: E- 92^{0}01’37.4”

Irrigation check Dam at Pyngkhrep under Umtymmen Rupa IWMP-I

This irrigation check dam at Pyngkhrep village enables the farmers to supplement supply of irrigation water to the adjacent fields for cultivation of paddy and vegetables.

Funded through the Integrated Watershed Management Programme, the structure can be easily replicated in other parts of the village. Being a concrete physical edifice, the check dam requires only periodical maintenance to make it last for several years.

The check dam regulates the water flow and prevents wastage flow of precious water besides putting a check to any damaging effects to the paddy fields. It also serves to increase the water table status and filtration rate of water in its vicinity. Moreover, it makes available irrigation water almost throughout the year for the farmers to take up double cropping, thus enabling them to garner additional income.

Conservation Farm Pond at Madannonglakhiat under Umsarang IWMP-I
GPS Reading: N-25^{0}41'32.2": E- 92^{0}00'10.2"

The community water conservation pond at Madan Nonglakhiat village under Umsning Block helps in lifting minor irrigation for cultivation of vegetables such as cabbage, carrot, potato and ginger as well. It is used for pisciculture and as a breeding centre of local fish varieties.

The conservation pond was constructed under the watershed component of IWMP fund and is managed by the community of Madan Nonglakhiat village. Invariably, the pond has an impact on the micro-climatic condition of the catchment besides increasing the water table status and filtration rate of water movement.

The community at Madan Nonglakhiat village can derive optimum benefits from the conservation pond on a sustainable basis.

Agro-horticulture Development of Shri. C.Rymbai at Madannonglakhiat under Umsarang IWMP-I

Agro-horticulture development was taken up at Madan Nonglakhiat village under Umsarang watershed. This is a part of arable land treatment component of IWMP-I.

The main interventions taken up by the Office of the Nongpoh Soil & Water Conservation Division are construction of bench terraces, contour bunding and technical guidance for improving the techniques of inter-cropping of ginger, turmeric and fruit species of oranges and Assam lemon.

The beneficiary, Shri C. Rymbai had been able to upscale his farming activities and is expecting that after gestation period, the harvest of fruit crops would significantly increase, thus enthuse him not only to expand volume of crop plantation but also to sustain the works initiated under the guidance of the Department.

Community Water Harvesting Structure at Umsarang Village under Umsarang IWMP-I
GPS Reading: N-25^{0}43'08.1" ::: E- 92^{0}01'37.8"

The Construction of this Water harvesting Structure is basically very crucial to achieve the goal and objective of Watershed Development works. Funded under IWMP, this water body is used by the farming community for a variety of purposes, particularly, to irrigate the adjacent paddy fields.

Farmers in the Umsarang community had now been able to go for double cropping in which cultivation of vegetables may be taken up in their field after the harvesting of paddy is over. This would significantly enhance their yearly earnings from vegetable crops. Beside irrigation and pisciculture taken up here, this water body is impacting the micro-climatic condition of the watershed and ensure a healthy water regime in its vicinity.

Funded under IWMP-I, the construction of this water harvesting structure has greatly influenced the community sense of ownership, community organization and intra-villager cooperation to sustain the activity in terms of environmental and livelihood benefits that would be accrued from this project.

Community Spring Tapped Chamber for Drinking Water at Lumsohphoh under Umsarang IWMP-I
GPS Reading: N-25^{0}40’02.1”::: E- 92^{0}59’19.4”

The construction of the spring tapped chamber at Lumsohphoh village addresses the felt-need of the community as there prevails a chronic drinking water shortage in the village. This structure had been able to harness, store and regulate the availability of water both for domestic purposes and for livestock.

Funded under IWMP, the spring tapped chamber had greatly mitigated the plight of the villagers, particularly womenfolk who had to trudge long distance for potable water. Besides, it enables recharging of the underground aquifer in the vicinity, thus greatly increase water storage for longer periods of time that even in dry season, water is available for domestic uses.

Over 20 nos. of households are benefitting from this structure. It has given them not only the benefits of availability of water but also saved the villagers a lot of time they have hitherto spent on fetching water from far afield. This model can be replicated in other parts of the village to benefit more households. Moreover, the situation deems it for the stakeholders to maintain the structure as it provides them with easy access to drinking water.

Candle Making under Umbyrshan IWMP-I

A unique activity of candle making was taken up by a Self-Help Group under Production System and Micro-Enterprise component of IWMP-I in the Umbyrshan Watershed in Ri-Bhoi District.

Under the initiative and guidance of the technical field staff of the Nongpoh Soil & Water Conservation Division, members of the Iamkhon SHG-1 attended capacity building and training at the Rural Resource Training Centre for making of home-made candles. They are also provided with raw materials and equipments to start making candles on a home scale. Though the SHG had taken up other farming activities as their primary venture, the making of candles had enabled the members to garner fringe benefits from the selling of candles of which there is a seasonal demand in Iamkhon and other nearby villages.

Given a one-time assistance from the Watershed Committee Project Fund, the members of the SHG had found a new outlet in off-season periods to earn additional income through this activity.

Cash crop value addition at Mawshunam
Name of beneficiary : Shri. Roswell Shadap

Cash crop value addition and establishment of a nursery by a beneficiary Shri Roswell Shadap was one of the successful practices taken up under IWMP-I.

This activity is initiated taken into account the geo-climatic suitability of the area and the huge market demand for seedlings. Several tree and fruit species had been raised by the beneficiary and he had been able to upscale his activity to such an extent that he had been able to employ several workers not to mention making supply of seedlings to various market destination including Government organizations.

Shri Roswell Shadap had received training and now he is able to become as resource person in related fora to propagate the idea of value addition of crops and raising of nursery. With one time assistance provided to him through the Watershed fund, he had been able to sustain and enhance his activity to such a level that he can now be termed as a progressive farmer.

BATCH-1 –Project – II

Over all success stories of Umlathu Watershed.

PROJECT BACKGROUND: The Umlathu Watershed (RB-IWMP-II) project is located in Jirang C&RD Block, Ri Bhoi District of Meghalaya.The Project area is drained by the Umlathu Stream flowing in a south to north direction. The Project area is located at a distance of about 55 km from Nongpoh the District Head Quarter. The total treatable area is 500 Ha.

SOCIO-ECONOMIC PROFILE: Economically, the project area is still backward comparing to other part of the district. The main reason is due to the absence of road communication, primitive way of agricultural practices, excessive stone quarrying and the terrain of the area.

DEMOGRAPHIC STATUS: The total number of households in the Watershed Project is 192 with a total population of 1012, of which 513 are male and 499 are female.

PROBLEMS OF THE AREA: The primary problems of the area are Jhum Cultivation. Majority of the population depends on Jhum Cultivation for their livelihood. Vast tracks of abandoned Jhum areas are converted to Broomstick Cultivation which has further degraded the capability of the land. Mention may also be made here that the land use categorized as Tree-clad Area-open in the land used land cover map generated using Satellite Images of 2005 – 2006 are actually Broom-stick cultivation areas. In other words, unscientific method of cultivation has not only reduced the Jhum cycle, low crop yield but had adversely affected the ecological balance within the area.

Road communication is another infrastructural problem that the area is facing where large volume crops like pineapple, jackfruits etc do not find their way into the market which has resulted in poor socio-economic status of the people. However, to control or to overcome the said problems an innovative approach has been formulated and documented in the Action Plan or the Treatment Plan the Project Report. The method of identification of the problems is through the Participatory Rural Appraisal Exercises conducted in all the villages within the Watershed.

PROJECT INTERVENTIONS: Based on the outcome of the Participatory Rural Appraisal Exercises conducted in the Project Area, stress was made on promoting cultivation of low volume and high value Agro-Horticulture crops like arecanut, betel leaf, orange, lemon, litchi and mango either in existing Jhum fields or in abandoned Jhum areas.

CONVERGENCE: Besides taking up activities as prioritized in the Action Plan of the Umlathu Watershed under IWMP-II fund; cash crops development like Rubber Plantation with Backward Region Grant Fund during 2011-12 was also started in the Project area by the SHG's promoted and facilitated by the PIA. Fallow jhum lands has also been planted with nitrogen fixing and bio-diesel plant like *Pongamia pinnata* in the Project Area to improve the fertility of the soil.

ANTICIPATED OUTCOME: The immediate outcomes of the different interventions are yet to be realized due to the longer gestation period of the crop. However early fruiting in the case of grafted mango and Valencia was observed in some pockets of the newly created plantations. The immediate net incomes that sustain the farmers and the SHG's is the production of betel leaf which fetched about Rs.5, 000 to about 7,500 per stand. The average number of stands per hectare is about 300 to 350 nos. Hence the net income per hectare worked out to be 15.0 Lakh annually. The family land holding size is about 1.0 to 2.5 ha. With improved irrigation facilities the leaf production will increase which will definitely changed the socio-economic status of the people of the Project area.

Arecanut & Banana planted in current Jhum field

Betel vine at Pynker

Improvement of existing of Paddy field by constructing Bunds

BATCH-1 –Project – II

Overall success story of Umsyei Watershed.

PROJECT BACKGROUND: The Umsyei Watershed (RB-IWMP-II) project is located in Jirang C&RD Block, Ri Bhoi District of Meghalaya. The total treatable area is 500 Ha.

SOCIO-ECONOMIC PROFILE: Economically, the project area is still backward compare to other part of the district. The main reason is due to the absence of road communication, primitive way of agricultural practices, excessive stone quarrying and the terrain of the area.

DEMOGRAPHIC STATUS: The total number of households in the Watershed Project is 173 with a total population of 1038, of which 523 are male and 515 are female.

PROBLEMS OF THE AREA: The primary problems of the area are Jhum Cultivation. Majority of the population depends on Jhum Cultivation for their livelihood. Vast tracks of abandoned Jhum areas are converted to Broomstick Cultivation which has further degraded the capability of the land. Mention may also be made here that the land use categorized as Tree-clad Area-open in the land used land cover map generated using Satellite Images of 2005 – 2006 are actually Broom-stick cultivation areas. In other words, unscientific method of cultivation has not only reduced the Jhum cycle, low crop yield but had adversely affected the ecological balance within the area. Further more scientific method of cultivation has been introduced in the areas.

PROJECT INTERVENTIONS: Based on the outcome of the Participatory Rural Appraisal Exercises conducted in the Project Area, stress was made on promoting cultivation of low volume and high value Agro-Horticulture crops like arecanut, betel leaf, orange, lemon, litchi and mango either in existing Jhum fields or in abandoned Jhum areas. Processing Unit given by the project is highly used by the community people run by the SHG in old Tasku.

ANTICIPATED OUTCOME: The immediate outcomes of the different interventions are yet to be realized due to the longer gestation period of the crop. However early fruiting in the case of grafted mango, Valencia and even some crops such as arecanut, betel leaf was observed in some pockets of the newly created plantations. The immediate net incomes that sustain the farmers and the SHG's is the production of betel leaf which fetched about Rs.5, 000 to about 7,500 per stand. The average number of stands per hectare is about 300 to 350 nos. Hence the net income per hectare worked out to be 15.0 Lakh annually. The family land holding size is about 1.0 to 2.5 ha. With improved irrigation facilities the leaf production will increase which will definitely changed the socio-economic status of the people of the Project area.

Processing Unit at Old Tasku

Arecanut Plantation in Lailad Rim

Betel Leaf plantation in Lailad Jingkieng

Drinking Water Tank in Lailad Jingkieng

Fishery at Mawryngkang village under IWMP-III Batch-1

Fingerlings at Mawryngkang village under Umlanglut Watershed IWMP-III

Fishery was taken up at Mawryngkang village by a Self Help Group primarily with the aim of breeding fingerlings and also to enable farmers to identify food and feeding habits as well as to determine peak breeding seasons. Training was conducted to adopt a backyard culture species that can be easily cultured in small ponds. It also helps in achieving basic information on breeding season and the wellbeing of the fish. In this way, it brings additional income to the groups.

The total estimated cost of Rs. 25,000/- is provided under Production and Micro-enterprise component of IWMP to the Nangkiew Shaphrang SHG-II who had taken up this activity. The farmers who traditionally depend on a single activity for income generation can now reaped additional benefits from fishery. From analysis and data collected, the farmer generates an income of Rs. 15,000/- approx. from the above activity. For upscaling this activity, a move is in the offing to partner with the State Fishery Department which will subsequently provide capacity building as well as technical and scientific support. At present, the products from fishery are being sold largely at the local markets.


Banana plantation

The Division implemented the IWMP-III project at Umlanglut Watershed where banana plantation (Agro-Horti) was taken up. Estimated at a total cost of Rs. 7400/- per hectare, banana plantations are successfully raised at Mawryngkang village. Financial support is provided to the villagers through IWMP under the Livelihood Activities component. During the first year, plantation of one hectare was created and after two years multi-cropping was taken up in 1.5 hectare in which areca nut is also planted.

Banana plantation delivers a relatively quick return on effort and investment and also provides weekly income year round. Banana leaves are very useful as it is used for cooking materials, making of plates, umbrellas, fishing lines clothing and fabrics. The products from these plantations are sold largely at local market. Moreover, since the geo-climatic condition of the area is highly suitable for banana, the activity can be expanded in nearby villages.

Betel Leaf Planatation at Pahamrioh Lum

Betel leaf plantation is taken up under Livelihood Activities at Umsukun Watershed IWMP-III where fund was provided at an estimated cost of Rs. 8100/- per hectare. This activity was taken up at Pahamrioh Lum under Umling Block.

Betel leaf plantation and its consumption is a traditional and widespread practice where a great deal of medicinal value is attributed to the leaf. This leaf requires fertile soil which is suitable in this region. It is also one of the grandmother's remedies prescribed as traditional medicine. Further, the plantation of the crop also greatly help in forest conservation. Moreover, the widespread practice of betel nut and betel leaf chewing amongst the people of the region provides a huge market for this crop.

Betel leaf plantation is a primary economic activity and being highly remunerative, the farmers are doing their utmost to sustain the plantations.


Piggery farming along with the beneficiaries at Pahamrioh Lum

A successful activity taken up at Pahamrioh Lum under Umsukun Watershed through IWMP-III is piggery. Financial support for this activity is being provided under IWMP @ Rs. 30,000/- per unit. Farmers at Pahamrioh Lum had taken up this activity with fervour as it is very lucrative. This is a demand driven activity caused by the voracious meat eating habit of the tribal people. A farmer could make an additional annual income ranging from Rs. 40,000/- to Rs. 50,000/- annually.

Therefore realizing the increasing demand of the product and its positive outcome, this type of activity has been encourage and supported. There are also fringe benefits from piggery waste as it was used as manure for growing crops.

The focus of the farmers in this regard is the setting up of pig farms. The farmers are continuing with the activity as once pigs are sold, they continually bought new piglets to rear and therefore ensuring sustainability.