

**ATMA MANAGEMENT COMMITTEE (AMC)
KOHIMA; DISTRICT**

Sl. No	Name of the Officer	Designation
1	Shri. G. Ikuto Zhimomi	District Agriculture Officer & Project Director (ATMA)
2	Shri. Pawan Kumar	District Horticulture Officer
3	Shri. K. Thungdemo	District Soil Conservation Officer
4	Mrs. Asangla Alinger	Superintendent of Sericulture
5	Shri. Punanükshi	District Fishery Officer
6	Shri. Keneingulie	Project Officer, Land Resources
7	Shri. Nolesül Zhotso	District Veterinary Officer

INTRODUCTION

Agricultural Extension plays a crucial role in the context of growing population and demands of agricultural production in a sustainable manner. The existing system of Agricultural Extension and Research, working in the state by agriculture and allied developmental departments is largely top-down and centralized in nature. In such faulty system of agricultural extension and research programmes, the farmers who are actors playing a crucial role in the process are considered as receivers of benefits only rather than empowering them as responsible persons who can effectively the production process. The process not only undermines the farmers but also overlooked the farming situation that differs from one village to another. Although agricultural extension and research works by public sector has achieved significantly in spite of having deficiencies at initial stages of agricultural development in the state, the time has come for reformation towards empowerment of farmers.

The need for reforms in Agricultural Extension has been explicitly raised in the National Agricultural Policy. The report of expenditure reforms commission and in the Tenth Plan Approach paper keeping these recommendations in view- a broad policy framework for Agricultural Extension has been developed by the Ministry of Agricultural Extension, Government of India with five major guiding elements of the policy framework as: -

1. Reforming Public Sector extension.
2. Broadening Private sector to effectively complement, supplement and wherever possible to substitute public extension.
3. Augmenting Media and IT support for extension.
4. Mainstreaming gender concern in extension.
5. Capacity building, skill up gradation of farmers and Extension functionaries.

Under these guiding principles the Strategic Research and Extension Plan for Kohima District has been prepared. The objective of ATMA is to bring together framers, researchers, extensionists, private sectors, NGO's and other stake holders to develop District Action Plan on the basis of joint diagnostic studies and strategic plans in a demand driven, situation specific, multi action oriented Strategic Research and Extension Plan(SREP) to accelerate the overall agricultural development in the district. The ATMA is also a platform through which agricultural extension services to the farmers will flow as

one window. There is also a convergence of all Agri and line departments having extension activities either of the centrally sponsored schemes or of the state sponsored schemes in a compatible manner as per SREP.

On the basis of SREP guided by modified cafeteria of activities, Government of India, the Block Action Plan (BAP) prepared by BTT at Block Level is further scrutinized and District Action Plan (DAP) was accordingly prepared in consonance with SEWP

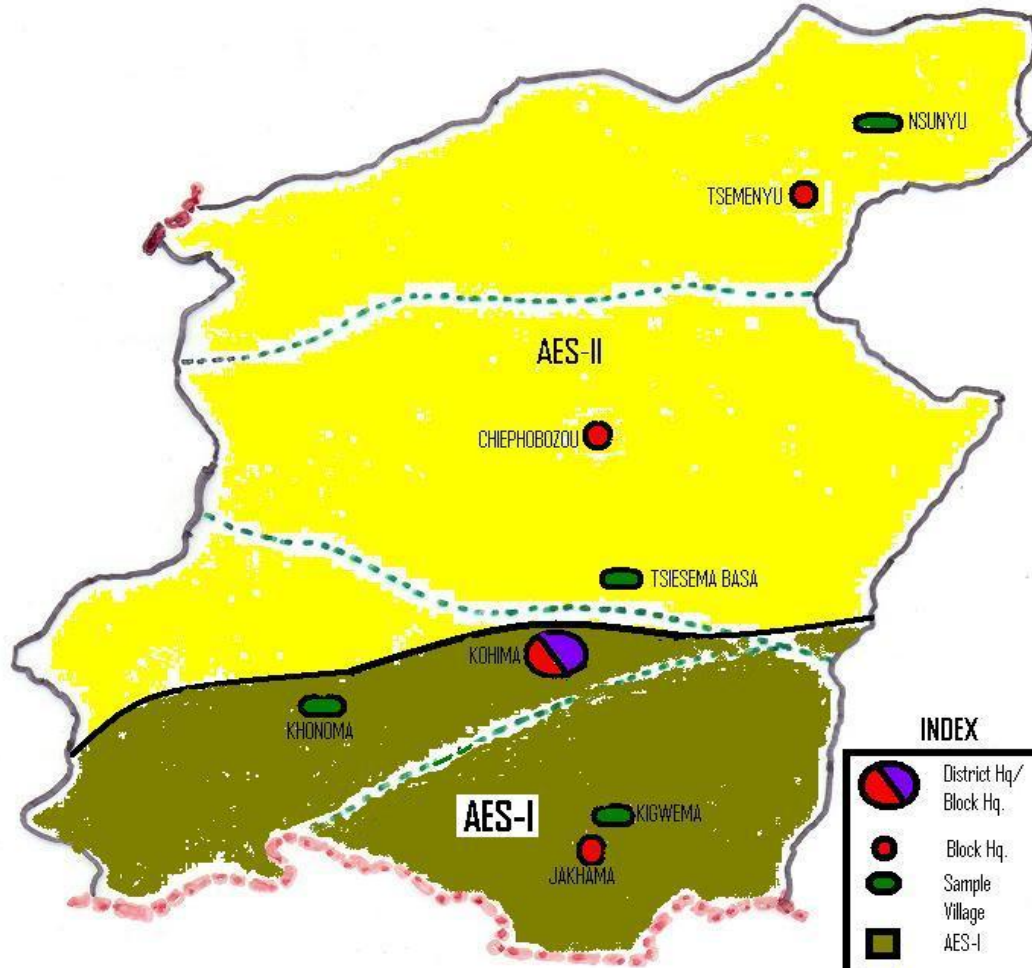
DISTRICT

Sl	Particulars	Kohima district		Total
		M	F	
1	Population	78850	69924	148774
2	Literacy (%)			74.28
3	Land holding	Marginal (%)		47
		Small (%)		29
		Medium (%)		17
		Large (%)		7
4	Total Geographical area (Excluding Peren) Sq. K.M.			1595
5	Irrigated (Ha)			7040
6	Jhum area (Ha)			9159
7	Forest Area (Ha)			49268
8	Others (Ha) Townships/Villages/Roads/ Wastelands.			94033
9	Altitude (MSL)			1444
1	Annual rainfall (mm)			

FOOD GRAIN STATUS OF THE

Sl.No.	2004-05	2005-06	2006-07
1. Total food grain production (MT)	23350	24776	26509
2. Total food grain requirement (MT)	27010	27010	27010
3. Deficit (-)/ Surplus status (+)	3660 (-)	2234 (-)	

AES-MAP: KOHIMA DISTRICT



INDEX	
	District Hq/ Block Hq.
	Block Hq.
	Sample Village
	AES-I
	AES-II

**DISTRICT ACTION PLAN (DAP)
ATMA-KOHIMA DISTRICT 2006-07.**

Sl. No	Activities to be taken up during 2006-07	Unit	Justification	Cost norms (Rate/unit)	Amount (Rs. in lakhs)	Remarks
1	2	3	4	5	6	7
A FARMERS ORIENTED ACTIVITIES						
1	Developing Strategic Research & Extension Plan (SREP)	Kohima district-1	Preparation & Development of SREP for 2006-07 as per GOI guidelines	2.50 (Max)	2.50	SREP-2006-07 District Level
2	Farmers Training:					
	a) At District level	8 times	Covering all four Blocks and two crop seasons (Kharif & Rabi)	Rs. 215/- (includes T.A by Bus)	3.00	During 2006-07 District level
	b) At village level	20 times	Farmers training at village level in four Blocks by each BTT 5 (Five) times in two crop seasons i.e. Kharif & Rabi	Rs. 113/- farmers/day		Block level
3	Organizing demonstration	60 Nos.	Demonstration to be carried out by each BTT covering 2 crop seasons. Hence cost of demonstration is increased	0.01 (Max)	3.00	Rs. 5000/- per demonstration in the Block level
4	Inter-State & Inter-District Exposure visit of farmers- maximum duration 5 days plus travel time	6 times	In case of Inter-State exposure visit all 4 Block farmers will combine and accordingly unit maybe reduced	0.5 for a group of 20 farmers for 15 days including TA/DA	3.00	District level & Block level
5	Mobilization of farmers group of different types including Farmer Interest Group, Women Groups, Farmer Organizations, Commodity Organizations & Farmer Co-operatives etc.	-	-	-	5.00 including 2.50 lakhs for seed money & Revolving Fund	Block Level
	a) Their Capacity building, Skill Development & Support Services	50 Groups/ FIG's	To cover FIG's/CIG's, & Women Groups, FO's and Farmers Co-operatives in 4 Blocks as per identification	Rs. 5000/group	-	Block Level
	b) Seed Money/ Revolving Fund	25 groups/ FIG's		Rs. 10,000/group	-	Block Level
6	Rewards & incentives:					

Best organized group representing different Enterprises (5 groups)	5 FIG's	To create peer pressure for effective extension services	Rs. 20,000/-	1.00	2006-67 District Level
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1	2	3	4	5	6	7
B	FARM INFORMATION DISSEMINATION:					
1	District Level exhibitions/Kisan Mela's, Fruits/ Vegetables shows	2 times	To organize on Independence Day & Republic day in the district level	1.00	2.00	District Level
2	Information dissemination through printed leaflets. And Local advertisements	L.S	Printing of leaflets in local dialects and advertisements	-	2.00	District Level & Block level if necessary
3	Development of Technology packages on electronic form to be shared through IT network	5 units	To prepare and produce CD's on Technology packages for further dissemination	0.20 (Cost of production of one CD)	1.00	District Level
C	AGRICULTURAL TECHNOLOGY REFINEMENT, VALIDATION AND ADOPTION:					
1	Farmers Scientist Interactions at district level 25 farmers for 2 days	2 times	For Farmers Scientist Interaction	0.10	0.20 (one for each in crop season)	District Level & Block level if necessary
2	Organization of field days and Kisan Ghostis to strengthen research-extension-Farmer linkages (1/block in each season)	8 Ghostis 8 field days	To strengthen Research-Extension-Farmers linkages in the Block Level	0.15/ Ghostis 0.10/ field days	0.20	Block Level
3	Assessment, Refinement, Validation and adoption of frontline technologies and other short term researchable issues through KVK's and other local research centres	4 frontline demonstration with KVK	Adoption of frontline technologies and demonstration with KVK's.	L.S	1.00	Block Level

1	2	3	4	5	6	7
D	ADMINISTRATIVE/ CAPITAL EXPENSES:					
1	Establishment of ATMA like Institutions-					
	RECURRING:					
	* Pay & allowances	-	To be borne by state government	-	-	-
	* TA/DA	1 AMC/GB & 4 blocks	To cover TA/DA of GB/AMC members and BTT/ FAC members at block level	1.00	1.00	District Level & Block level if necessary
	* Operational expenses for district level	1 district	To meet operational expenses including Office expenses, stationeries, equipments etc. at district level and block level	2.00	2.00	District level
	* Operational expenses exclusively for block level	4 blocks		2.00	2.00	Block level
	* Hiring of vehicles	1 district	To meet POL and hiring charges at district level & block level	1.00	1.00 (all blocks)	District level
	NON-RECURRING:					
	* Equipment	-	-	-	4.00 (per district)	District level
	* Civil works and Re-furnishing of ATMA Office	-	-	-	2.00 (per district)	District level
2	Establishment of block level Farm Information Advisory Centres (FIAC's) -Providing IT applications for effective connectivity	4 FIAC	To establish 4 FIAC as per guidelines	1.30 (per block)	(Maximum of 10 % of blocks or 2 which ever is less	Block level
E	INNOVATIVE ACTIVITIES - DISTRICT LEVEL:					

1	Support for district level Training Institutions- It may include both "Operational Expenses" and Non-recurring expenditure	1 district	Support to Training Institutions in the ATMA District as per guidelines to be approved by GB.	2.50	2.50	District level
2	Setting up CRS (Community Radio Station)	1 district	Dissemination of Agril. Information through CRS by involving KVK's	-	-	District level

FARMERS ADVISORY COMMITTEE MEMBERS

ATMA- Kohima Block:

Sl. No	Name	Village	Remarks
1	Shri. Methahetuo	Khonoma	
2	Smt. Golano	Khonoma	
3	Shri. Vithatso Nakhro	Jotsoma	
4	Shri. Letho	Dzülakiema	
5	Shri. Vilalhou	Sechü (Zubza)	
6	Shri. Neithovilie	Mezoma	
7	Smt. Neichütuo-ü	Kohima	

ATMA- Jakhama Block:

1	Shri. Pelukhwe	Jakhama Village	
2	Shri. Tepuchol	Jakhama village	
3	Shri. Vizosül	Khüzama	
4	Shri. Saselie	Kigwema	
5	Shri. Lhouzo Zhasa	Kigwema	
6	Shri. Viswedo Kor	Phesama	
7	Shri. Yase Chuse	Phesama	

ATMA- Chiephobozou Block:

1	Shri. Razouneio Kerhüo	Chairman CATC	
2	Shri. Vineizo Tsürho	Nerhe Model	
3	Shri. Tseibu Kezeio	Phezha	
4	Shri. Razousilie Rülho	Nerhema	
5	Shri. Neitho-o Sopotsu	Chiechama	
6	Shri. Ba-o Zhadi	Zhadima	
7	Shri. Neisatsü Tuophe	Touphema	

ATMA- Tseminyu Block:

1	Smt. Kedole Kent	Zisenyu	
2	Smt. Mary Semy	Chunlikha	
3	Shri. Zukeya Woch	Chunlikha	
4	Shri. Apenthong	Ziphenyu	
5	Shri. Khashe Nsu	Tseminyu	
6	Shri. Kewasin Keppen	Phensenyu	
7	Shri. Khashi Kath	Tesophenyu	

KOHIMA BTT: (Farmers' Interest

Sl.	Department	Commodity interests group	No. of
1	Agriculture	Cereals	1
2	Horticulture	Fruits& Vegetables	1
3	Veterinary &	Livestock Management	1
4	Fishery	Fishery Pond/ Paddy cum fish	1
5	Sericulture	Rearing of cocoons & Apiculture	1
6	Land Resources	Aromatic & Medicinal plant	1

Total:

FAC Members:

- Agriculture : 1
- Horticulture : 1
- Veterinary & A.H : 1
- Fishery : 1
- Sericulture : 1
- Land Resources : 1

JAKHAMA BTT: (Farmers' Interest Group):

Sl.	Department	Commodity interests	No. of
1	Agriculture	Cereals	1
2	Horticulture	Fruits & Vegetables	1
3	Veterinary & Animal	Livestock	1
4	Fishery	Fishery Pond	1
5	Sericulture/Apiculture	Rearing of cocoons	1
6	Land Resources	Aromatic & Medicinal	1

Total:

FAC Members:

- Agriculture : 1
- Horticulture : 1
- Veterinary & A.H : 1
- Fishery : 1
- Sericulture : 1
- Land Resources : 1

CHIEPHOBOZOU BTT:

Sl	Department	Commodity interests group	No. of groups
1	Agriculture	Cereals	1
2	Horticulture	Fruits & Vegetables	1
3	Veterinary & Animal	Livestock Management	1
4	Fishery	Fishery Pond	1
5	Sericulture	Rearing of cocoons	1
6	Land Resources	Aromatic & Medicinal plant	1

Total:

FAC Members:

- Agriculture : 1
- Horticulture : 1
- Veterinary & A.H : 1
- Fishery : 1
- Sericulture : 1

TSEMINYU BTT: (Farmers' Interest Group):

Sl.	Department	Commodity interests group	No. of
1	Agriculture	Cereals	1
		Pulses (Soyabean/ Ricebean etc)	1
2	Horticulture	Fruits& Vegetables	1
3	Veterinary &	Livestock management	1
4	Fishery	Fishery Pond	1
5	Sericulture	Rearing of cocoons	1
6	Land Resources	Aromatic & Medicinal plant	1
Total:			

FAC Members:

- Agriculture : 1
- Horticulture : 1
- Veterinary & A.H : 1
- Fishery : 1
- Sericulture : 1
- Land Resources : 1

**BLOCK ACTION PLAN (BAP)
ATMA-KOHIMA DISTRICT 2006-07.**

Rs. in lakhs

Sl. No.	Activities to be carried out	No. of Units	Fund availability	Name of FIAC/ Blocks								Remarks	
				Kohima		Jakhama		Chiephob-ozou		Tseminyu			
				Unit	Amount	Unit	Amount	Unit	Amount	Unit	Amount		
1	2	3	4	5	6	7	8	9	10	11	12	13	
A	FARMERS ORIENTED ACTIVITIES												
1	Developing Strategic Research & Extension Plan (SREP)	1	2.50	-	-	-	-	-	-	-	-	-	-
2	Farmers Training:												
	a) At District level	8 Trgs.	1.29	-	-	-	-	-	-	-	-	-	@16125/Trg
	b) At village level	20 Trgs	1.70	5	0.425	5	0.425	5	0.425	5	0.425	-	@ 8500/Trg
3	Organizing demonstration	60 Demos.	3.00	10	0.50	10	0.50	20	1.00	20	1.00	-	Demos to be decided by BTT for each deptts.
4	Inter-State & Inter-District Exposure visit of farmers- maximum duration 5 days plus travel time	6 times	3.00	1	0.50	1	0.50	2	1.00	2	1.00	-	AMC & BTT to decide
5	Mobilization of farmers group of different types including Farmer Interest Group, Women Groups, Farmer Organizations, Commodity Organizations & Farmer Co-operatives etc.	-	-	-	-	-	-	-	-	-	-	-	-
	a) Their Capacity building, Skill Development & Support Services	50 FIG's	2.50	11	0.55	12	0.60	12	0.60	15	0.75	-	FIG's @ 5000/group
	b) Seed Money/ Revolving Fund	25 FIG's	2.50	6	0.60	6	0.60	6	0.60	7	0.70	-	FIG's @ 10000/group
6	Rewards & incentives:												
	Best organized group representing different Enterprises (5 groups)	5 FIG's	1.00	-	-	-	-	-	-	-	-	-	GB & AMC to decide for 2006-07

1	2	3	4	5	6	7	8	9	10	11	12	13
B	FARM INFORMATION DISSEMINATION:											
1	District Level exhibitions/Kisan Mela's, Fruits/ Vegetables shows	2 times	2.00	-	-	-	-	-	-	-	-	AMC to decide
2	Information dissemination through printed leaflets and Local advertisements	L.S	2.00	-	-	-	-	-	-	-	-	AMC & BTT to decide
3	Development of Technology packages on electronic form to be shared through IT network	5 units	1.00	-	-	-	-	-	-	-	-	AMC to decide
C	AGRICULTURAL TECHNOLOGY REFINEMENT, VALIDATION AND ADOPTION:											
1	Farmers Scientist Interactions at district level 25 farmers for 2 days	2 times	0.20	-	-	-	-	-	-	-	-	AMC & BTT to decide
2	Organization of field days and Kisan Ghostis to strengthen Research-Extension-Farmer linkages (1/block in each season)	8 Ghostis	2.00	2	0.30	2	0.30	2	0.30	2	0.30	@ 15000/ Ghostis
		8 field days		2	0.20	2	0.20	2	0.20	2	0.20	@ 10000/ Field day
3	Assessment, Refinement, Validation and adoption of frontline technologies and other short term researchable issues through KVK's and other local research centres	4 frontline demonstrations & research issues with KVK	1.00	1	0.25	1	0.25	1	0.25	1	0.25	BTT to decide

1	2	3	4	5	6	7	8	9	10	11	12	13
D	ADMINISTRATIVE/ CAPITAL EXPENSES:											
1	Establishment of ATMA like Institutions-											
	RECURRING:											
	* Pay & allowances	-	-	-	-	-	-	-	-	-	-	To be borne by state govt. only
	* TA/DA	1 GB/ AMC & 4 blocks	1.00	1	0.15	1	0.15	1	0.15	1	0.15	BTT & FAC 0.60 GB/AMC 0.40
	* Operational expenses for district level	1 unit	2.00	-	-	-	-	-	-	-	-	AMC to decide
	* Operational expenses exclusively for block level	4 blocks	2.00	1	0.50	1	0.50	1	0.50	1	0.50	BTT/FAC to decide
	* Hiring of vehicles	1 GB/AMC & 4 blocks	1.00	1	0.10	1	0.10	1	0.10	1	0.10	0.40 for BTT 0.60 for AMC
	NON-RECURRING:											
	* Equipment	-	4.00	-	-	-	-	-	-	-	-	One time grant for equipments, renovation, re-furnishing of ATMA Office in the district
	* Civil works and Re-furnishing of ATMA Office	-	2.00	-	-	-	-	-	-	-	-	

2	Establishment of block level Farm Information Advisory Centres (FIAC's) -Providing IT applications for effective connectivity	4 FIAC	1.30	1	0.325	1	0.325	1	0.325	1	0.325	For FIAC & IT applications
E	INNOVATIVE ACTIVITIES - DISTRICT LEVEL:											
1	Support for district level Training Institutions- It may include both "Operational Expenses" and Non-recurring expenditure	1	2.50	-	-	-	-	-	-	-	-	GB & AMC to decide
2	Setting up CRS (Community Radio Station)	1	-	-	-	-	-	-	-	-	-	GB & AMC to decide

BLOCK WISE FUND ALLOCATION DURING 2006-07

Sl. No.	Name of block	AES	Amount (Rs. in lakhs)	% age.
1	Kohima	I	4.30	12.11 %
2	Jakhama	I	4.45	12.53 %
3	Chiephobozou	II	5.45	15.35 %
4	Tseminyu	II	5.70	16.06 %
Total:			19.90	56 %

**BLOCK WISE ACTIVITIES TO BE TAKEN UP DURING 2006-07 AS PER SREP/SEWP
ATMA-KOHIMA DISTRICT 2006-07.**

Sl. No.	Indicative activities to be taken up	No. of Units	Name of the Blocks				Remarks
			Kohima	Jakhama	Chiephob-ozou	Tseminyu	
1	2	3	4	5	6	7	8
A	FARMERS ORIENTED ACTIVITIES						
1	Farmers training at village level	20 Trainings	5	5	5	5	Type of trainings for each department to be decided by BTT & FAC
2	Organizing demonstration	60 demonstration	10	10	20	20	Demonstration to be decided by BTT/FAC on the basis of proposed action plan
3	Inter-State & Inter-District Exposure visit of farmers- maximum duration 5 days plus travel time	6 times	1	1	2	2	BTT & FAC to propose & AMC to decide

4	Mobilization of farmers group of different types including Farmer Interest Group, Women Groups, Farmer Organizations, Commodity Organizations & Farmer Co-operatives etc.	-	-	-	-	-	-
	a) Their Capacity building, Skill Development & Support Services	50 FIG's	11	12	12	15	* To mobilize FIG's/CIG's & support to FO's etc. to be decided by BTT/FAC
	b) Seed Money/ Revolving Fund	25 FIG's	6	6	6	7	This fund should be given to FIG's as revolving/ seed money

B	AGRICULTURAL TECHNOLOGY REFINEMENT, VALIDATION AND ADOPTION:						
1	Organization of field days and Kisan Ghostis to strengthen Research-Extension-Farmer linkages (1/block in each season)	8 Ghostis	2	2	2	2	* BTT/FAC to decide about Field day & Kisan Ghostis for strengthening R-E-F linkages.
		8 field days	2	2	2	2	
2	Assessment, Refinement, Validation and adoption of frontline technologies and other short term researchable issues through KVK's and other local research centres	4 frontline demonstrations & research issues with KVK	1	1	1	1	Research & Technology validation programme with KVK & other research centres.
C	ADMINISTRATIVE/ CAPITAL EXPENSES:						
1	Establishment of ATMA like Institutions-						
	RECURRING:						

	* TA/DA	4 blocks	1	1	1	1	For BTT members & honorarium for FAC
	* Operational expenses exclusively for block level	4 blocks	1	1	1	1	Operational expenses should include innovative activities, consultancies, workshops, library, Telephone & FIAC meetings
	* Hiring of vehicles	4 blocks	1	1	1	1	POL for BTT
2	Establishment of block level Farm Information Advisory Centres (FIAC's) -Providing IT applications for effective connectivity	4 FIAC	1	1	1	1	P.D (ATMA) to initiate for establishment as per guideline

* **N.B:** For all activities refer Proposed Action Plan prepared by each BTT showing department-wise strategies and thrust areas for interventions. The unit and amount will strictly comply the Ministry guidelines. Each BTT to decide what appropriate activity is to be done by each department.

Chapter IX, Table I

PROPOSED STRATEGIES AND ACTIVITY PLAN FOR EXTENSION

Name of the enterprise	Strategies proposed for extension	Extension		Relevance to the AES	
		Thrust area	Activity proposed	AES-I	AES-I I
1	2	3	4	5	6
1. <u>Agriculture:</u> 1. TRC/ WTRC Paddy (Irrigated)	To increase productive and production of paddy	<ul style="list-style-type: none"> ➤ Promotion of Paddy HYV for altitude above 1000 MSL ➤ HYV suitable for rain fed condition ➤ Introduction of disease, pest resistant variety ➤ Adoption of improved technology ➤ Adoption of IPM methods ➤ Adoption of INM measures and farm mechanization ➤ Water management 	<ul style="list-style-type: none"> ➤ Procurement of good quality HYV seeds ➤ Trials and demonstration ➤ Farmers training on package of practices ➤ Use of Power Tillers 	✓	✓

2. Paddy (Rainfed) Jhum Paddy	Productivity improvement by intensification and technology adoption under rainfed situation.	➤ Promotion of HY local varieties	➤ Farmers training ➤ Research trials & demonstration	- -	✓ ✓
3. Maize	To enhance the production and productivity of maize	➤ Weed management ➤ Promotion of HYV maize ➤ IPM concept ➤ New methods of farming ➤ Inter cropping with kholar ➤ Production of Yellow maize organically	➤ Farmers field school ➤ Application of FYM/ Compost pit ➤ Trials & demonstration ➤ Market support	✓ ✓ ✓ ✓	✓ ✓ ✓ ✓
4. Potato	1. Productivity improvement. Extension technology package 2. To reduce post harvest loses	➤ Segregation of varieties in use ➤ Curing of potatoes	➤ Research identification ➤ Training and demonstration ➤ Exposure visit	✓ ✓ ✓	✓ ✓ ✓
3. Oilseeds (Sunflower, Sesamum, Groundnut)	To increase the production	➤ Promotion of HYV sunflower, Sesamum, Groundnut suitable for altitude above 1000 MSL ➤ Adoption of IPM ➤ IPM & INM ➤ Weed control ➤ Optimum time of sowing & harvesting	➤ Vermi compost ➤ Bio-fertilizer ➤ Bio-agents ➤ Trials & demonstration ➤ Identification	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓
4. Soyabean	To increase the productivity & production	➤ Promotion of HYV ➤ Adoption of IPM ➤ Adoption of INM ➤ Weed management ➤ Timely sowing & harvesting	➤ Exposure trips ➤ Exhibition	✓ ✓	✓ ✓

Chapter IX, Table I Contd/-

1	2	3	4	5	6
Other agricultural crops: a) Pulses (Rice bean, Cowpea, Kholar, Arhar)	Improvement of pulses production in the district.	➤ To promote HYV ➤ To promote organic production ➤ To promote IPM/INM ➤ To promote inter cropping ➤ To promote Bio-fertilizers and Bio-pesticides	➤ Farmers trainings ➤ Procurement from registered seed company ➤ Adoption of Bio-agents ➤ Trials & demonstration		✓ ✓ ✓ ✓

		➤ To promote jhum intensification	➤ Exposure trips	✓	✓
5. Farm machineries	Use of improved farm mechanized tools and local tools and implements promotion	<ul style="list-style-type: none"> ➤ Promotion of use of improved far tools & machineries like Power Tiller, Tractors, Weeder, Seed driller etc. ➤ Promotion in production of indigenous tools & implements. To increase efficacy in sowing, hoeing, weeding, intercultural operation, insect pest control tools etc. 	<ul style="list-style-type: none"> ➤ Demonstration training at Block level ➤ Procurement of tools and machineries at subsidized rate. ➤ Production of indigenous tools by FIG's expert ➤ Demonstration training on use of tools and implements 	✓ ✓ ✓ ✓	✓ ✓ ✓ ✓
6. Organic farming	To promote organic farming for a selected crops	<ul style="list-style-type: none"> ➤ Undertaking organic production for sticky rice, Brown rice ➤ Organic farming for pulses ➤ Organic certification and adoption of ICS etc. 	<ul style="list-style-type: none"> ➤ Farmers trainings ➤ Identification of areas ➤ Identification of FIG's/ Farmers ➤ Demonstration and Trials, farm establishment 	✓ ✓ ✓	✓ ✓ ✓
2. Horticulture: 1) Passion fruit	Productivity improvement by overcoming technology gap	<ul style="list-style-type: none"> ➤ Promotion of HYV's ➤ Promotion of IPM/ INM ➤ Use of trailing system ➤ Use of Vermi compost ➤ Post harvest technology ➤ Value addition ➤ Market linkages ➤ Promotion of organic production ➤ Market survey 	<ul style="list-style-type: none"> ➤ Farmers training ➤ Input support ➤ Market support ➤ Trials and demonstration ➤ Processing's ➤ Market linkages 	✓ ✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓ ✓

Chapter IX, Table I Horticulture Contd/-

1	2	3	4	5	6
2. Banana	1. To increase the productivity	<ul style="list-style-type: none"> ➤ More plant density and correct planting methods ➤ De-suckering ➤ Harvesting at correct stage 	<ul style="list-style-type: none"> ➤ Demonstration ➤ Training ➤ Exposure visit 	✓ ✓ ✓	✓ ✓ ✓

	2. To reduce post harvest loses	➤ Proper loading and transporting			
3) Vegetables (Cabbage, Tomato, Pea, Radish, Carrot, Turnip, Brinjal, Chilly etc)	To increase production by adopting modern technology	<ul style="list-style-type: none"> ➤ Promotion of HYV's ➤ Promotion of IPM/INM ➤ Promotion of Vermi compost ➤ Promotion of organic vegetable production ➤ Use of Bio-fertilizers ➤ Use of Micro-nutrients ➤ Promotion of post harvest technology ➤ Cold storage 	<ul style="list-style-type: none"> ➤ Farmers' trainings ➤ Input support ➤ Trials and demonstration ➤ Market linkages support ➤ Release of Bio-agents ➤ Exposure trips 	✓	✓
4. Ginger	<ul style="list-style-type: none"> 1. To increase the productivity 2. To reduce post harvest loses 	<ul style="list-style-type: none"> ➤ Seed treatment ➤ Timely and proper harvesting 	<ul style="list-style-type: none"> ➤ Training ➤ Demonstration 	✓	✓
Others Horticultural crops: i) Large cardamom	Organic production of large Cardamom capsule	<ul style="list-style-type: none"> ➤ Promotion of organic farming ➤ Promotion of IPM ➤ Use of Bio-pesticides ➤ Improvement of drying processes ➤ Undertaking organic certification ➤ Promoting a Kisan nursery ➤ Research need of Cardamom decline ➤ Market survey 	<ul style="list-style-type: none"> ➤ Farmers training ➤ Input support ➤ Procurement of drying machine ➤ Establishment of more Kisan nursery ➤ Research works for Cardamom decline ➤ Exposure trips ➤ Market linkages 	✓	✓
ii) Orchards (Peach, Plum, Pear)	To increase production of fruits in the district by overcoming technology gaps	<ul style="list-style-type: none"> ➤ Promotion of organic farming ➤ Promotion of IPM/INM ➤ Promotion of hybrid varieties ➤ Promotion of processing units ➤ Production and marketing ➤ Research need for quality of seeds 	<ul style="list-style-type: none"> ➤ Farmers training ➤ Input/ planting material support ➤ Establishment of processing unit ➤ Market support ➤ Research works 	✓	✓
iii) Floriculture					

Chapter IX, Table I Contd/-

1	2	3	4	5	6
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<p>3. <u>Soil & Water Conservation</u> a) Natural resource development</p>	<p>1. Management of Soil Erosion in shifting cultivation 2. Conservation activities viewed as an additional burden 3. Increasing the knowledge of technical know-how 4. Water resource not harnessed, thereby drought like situation is a common occurrence during dry spell 5. Traditional farming system i.e. jhuming plays a major role in jeopardizing the ecological balance 6. In-situ top soil conservation</p>	<p>➤ Awareness in soil conservation method ➤ Improved soil conservation measures ➤ Promotion of cover crops for soil conservation ➤ Promotion of composting of soil fertility replenishment ➤ Promotion of hedge crops ➤ Fallow land management ➤ Knowledge of technical know-how ➤ Alder based jhuming- a sustainable agricultural farming approach ➤ Harnessing the water resources ➤ Discourage jhuming ➤ Promote INM/ GM ➤ Poor soil fertility</p>	<p>➤ Education campaign by way of interaction, distribution of printed literatures, exposure trips ➤ Motivation through Ghostis ➤ Extensive workshop and field demonstration ➤ Farmers training at project level ➤ Contour bunding ➤ Trench terracing ➤ Trials & demonstration of cover crops/ GM/ Hedges. ➤ Discourage jhuming ➤ Water harvesting ponds ➤ Bank stabilization ➤ Awareness/ Trainings/ Exposure trips</p>	<p>✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓</p>	<p>✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓</p>
<p>b) Soil test</p>	<p>Testing of NPK & micro nutrients</p>	<p>➤ Soil fertility status in Orchard, Cash crops, present TRC paddy ➤ Soil map of villages for farmers guide ➤ Fertilizer recommendation</p>	<p>➤ Soil sample collection & analysis ➤ Mapping ➤ Documentation</p>	<p>✓ ✓ ✓</p>	<p>✓ ✓ ✓</p>
<p>4. <u>Sericulture</u> Mulberry/Eri silk worm</p>	<p>1. Increase in quantity & quality of leaves 2. Production of quality mulberry silkworm eggs suited to local condition 3. Production of quality and quantity of cocoons 4. Control of diseases & pest on plant & silkworms</p>	<p>➤ Introduction of correct method of plantation ➤ Expansion of areas of host plant cultivation ➤ Expansion of women household production of Eri worm ➤ Development of good seed (Egg) production centres ➤ To activate handloom activities in the district. ➤ Proper rearing & spinning ➤ Introduction of motorized spinning machine ➤ Promotion of shuttle handloom ➤ Promotion of IPM/INM in host plant cultivation.</p>	<p>➤ Farmers training ➤ Demonstration ➤ Awareness programme ➤ Exposure trips to advanced areas (Assam/ West Bengal) ➤ Input support</p>	<p>✓ ✓ ✓ ✓</p>	<p>✓ ✓ ✓ ✓</p>

Chapter IX, Table I Contd/-

1	2	3	4	5	6
5. Land Resources					
1. Patchouli & Geranium & Lemon grass	To increase production and productivity of Patchouli, Geranium & Lemon grass	<ul style="list-style-type: none"> ➤ Promotion of Patchouli, Geranium, Lemon grass ➤ Introduction of disease free high yielding varieties ➤ Promotion of IPM methods ➤ Promotion of organic farming ➤ Irrigation, Weed & post harvest management 	<ul style="list-style-type: none"> ➤ Procurement of HYV and disease free seedlings ➤ Farmers training on package of practices ➤ Trials and demonstration ➤ Marketing linkages ➤ Exposure trips 	✓	✓
2. Indigenous medicinal plants	Preservation and promotion of local medicinal plants	<ul style="list-style-type: none"> ➤ Identification & documentation ➤ Establishing forums for practitioners of local medicinal plants ➤ Encourage cultivation of local medicinal plants like Centella asiatica, lemon balm, wild passion fruit etc. 	<ul style="list-style-type: none"> ➤ Training on identification, propagation and documentation of indigenous medicinal plants ➤ Training on proper use, experience sharing by local practitioners 	✓	✓
3. Agro-forestry	Identification & diversification of MAP and species crop	<ul style="list-style-type: none"> ➤ Encourage FIG's & SHG's. 	<ul style="list-style-type: none"> ➤ Training on mixed cropping 	✓	✓
6. Fishery					
a) Intensification of fish production	<ol style="list-style-type: none"> 1. To increase productivity of fish 2. Expansion of composite pesiculture in the available water bodies 3. Oxygen depletion in pond water 4. Disease free finger ling production 5. Paddy cum fish culture- a popular fish production of the district 	<ul style="list-style-type: none"> ➤ Renovation of available tanks in the village ➤ Renovation of ponds in the fields ➤ Brooder fish production in irrigated fields. ➤ Technology for fish seed production ➤ Brooder fish management in TRC/WTRC fields ➤ Water management ➤ Selection of fish (not grass carp which will eat up paddy plants) ➤ Timely supply of fish fingerlings ➤ Brooder fish pond management 	<ul style="list-style-type: none"> ➤ Farmers training at village & Block level & demonstration ➤ Pond renovation ➤ Fingerling support ➤ Identification of FIG/Rural youth groups for fish seed production ➤ Awareness & Exposure trips ➤ Brooder fish supply ➤ Brooder fish pond improvement/renovation 	✓	✓

1	2	3	4	5	6	
7. Veterinary & Animal Husbandry	a) Cow	To increase milk production of Cow	<ul style="list-style-type: none"> ➤ Breed up gradation through A.I ➤ Improving feed and fodder management ➤ Improving health care <ul style="list-style-type: none"> ➤ Feeding of minerals & Vitamins as supplements. ➤ Improve knowledge about animal health and hygiene ➤ Improving general management practices 	<ul style="list-style-type: none"> ➤ Training of farmers at village level ➤ Organic demonstration ➤ Procure vaccines of demand ➤ Health care camps & introduce A.I. ➤ Exposure trips 	✓	✓
	b) Pig	To increase productivity	<ul style="list-style-type: none"> ➤ Breed up gradation by cross breed ➤ Improving fodder & feed management ➤ Improving health care ➤ Improving general management practices 	<ul style="list-style-type: none"> ➤ Trainings & Demonstrations ➤ Awareness ➤ Health care camps ➤ Exposure visits 	✓	✓
	a) Poultry	For increased production of chicken	<ul style="list-style-type: none"> ➤ Encouraging commercial poultry farming ➤ Improved feed management ➤ Improving general management practices 	<ul style="list-style-type: none"> ➤ Farmers trainings & demonstration ➤ Awareness ➤ Exposure visits 	✓	✓
8. Private- Private partnership	1. Promotion of private- private partnership in increasing production of livestock & poultry	<ul style="list-style-type: none"> a) Increase the production of livestock & poultry b) Establishing buy back system 	<ul style="list-style-type: none"> ➤ Linkage between farmers & reputed hatcheries/ Livestock ➤ Inviting private companies ➤ Formation of CIG/ FIG ➤ Motivation through exposure ➤ Awareness through media 	✓	✓	
	2. To promote private- private for marketing of organically grown produce like fruits, Ginger, Mustard Patchouli higher prices	To fetch higher prices	<ul style="list-style-type: none"> ➤ Invite private companies and buyers ➤ Publicity through media like T.V, internet (Website) ➤ Exhibition at metropolitan cities ➤ Trade fairs 	✓	✓	

	3. Strengthening APMC	Regular monitoring and supervision from Govt. encouraging farmers' involvement, financial support from Govt. etc.	<ul style="list-style-type: none"> ➤ Timely meeting of APMC ➤ Motivating farmers for involvement ➤ Awareness ➤ Constant contact with Govt. agencies ➤ Creation of corpus fund 	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓
	4. Promotion of private-private partnership in increasing production of cocoon, Yarn, silk fabric	<ul style="list-style-type: none"> a) Introduction of high yielding variety b) Encourage SHG's 	<ul style="list-style-type: none"> ➤ Exhibitions ➤ Linkage between yarn producers and weavers 		
9. Public private partnership	Strengthening the existing dairy federation by formation of more milk unions and increasing their activities	Increasing the membership of milk unions	<ul style="list-style-type: none"> ➤ Motivation ➤ Exposure trips 	✓ ✓	✓ ✓

Chapter IX, Table I Contd/-

1	2	3	4	5	6
10 . Mechanization	<ul style="list-style-type: none"> 1. To reduce the cost of labour in paddy and other TRC cropping 2. To encourage double cropping in the TRC to commercialize the agricultural goods to increase the production 	<ul style="list-style-type: none"> ➤ Introduction of Power Tillers/ Tractors ➤ Paddy, Vegetable, Maize, possibility of double cropping 	<ul style="list-style-type: none"> ➤ Motivation to form CIG's/ FIG's ➤ Demonstration ➤ Training ➤ Demonstration ➤ Training ➤ Exposure trips 	✓ ✓ ✓ ✓ ✓ ✓	

11. Marketing	1. Setting up the regulated market through the APMC	➤ To eliminate middlemen and provide competitive price to the farmers produce	➤ Awareness ➤ Formation of CIG's/ FIG's ➤ Formation of VMC/ APMC	✓ ✓	✓ ✓
	2. Setting up of information centres	➤ Information about prices	➤ Awareness about information kiosks/ centres among farmers. ➤ Promotion of village youth to start information kiosks.	✓ ✓	✓ ✓
	3. Encourage the APMC for transport facility				
	4. Introduction of zero energy cold chambers	➤ Demand in different markets	➤ Formation of APMC/ VMC ➤ Formation of CIGs	✓ ✓	✓ ✓
	5. Increasing the profitability by decreasing the percentage of post harvest losses	➤ To reduce post harvest losses and increase shelf life	➤ Awareness campaign ➤ Demonstration in method & result ➤ Exposure visits	✓ ✓ ✓	
		➤ Harvesting/ handling/ grading and packaging skills	➤ Training ➤ Demonstration ➤ Exposure trips to sabji mandi & regulated markets	✓ ✓ ✓	✓ ✓ ✓
12. Promotion of FO's and CIG's	Procurement of inputs, sale of produce, elimination of middlemen, fetch higher prices, and to increase production and income of farmers	➤ Formation of FIG's to assemble and dispose the crops/ commodities	➤ Awareness campaign ➤ Motivation ➤ Exposure visits ➤ Training for maintaining records and to form federations	✓ ✓ ✓	✓ ✓ ✓

Chapter IX, Table II

PROPOSED STRATEGIES AND ACTIVITY PLAN FOR RESEARCH EXTENSION

Name of the Enterprise	Strategies Proposed for Extension	Research		Relevance to AES	
		Thrust area	Activity proposed	AES-I	AES-II
Agriculture					
Crops:					
1. TRC/WTRC paddy (Irrigated)	To increase production level by availing technological gap for achieving self sufficiency	➤ HYV varieties for altitude above 1000 MSL ➤ HYV suitable for rainfed condition	➤ Identification of HYV ➤ Research trials & demonstration ➤ Research trials and demonstration		

b) Jhum paddy (Rainfed)	Productivity improvement by intensification in rainfed condition	<ul style="list-style-type: none"> ➤ HYV suitable for Jhum/ short or medium duration variety for rainfed condition. 	<ul style="list-style-type: none"> ➤ Identification of HYV ➤ Research trials and demonstration 		
c) Potato	Productivity improvement with technological package	<ul style="list-style-type: none"> ➤ Segregation of varieties in use ➤ Purity seeds selection ➤ Diseases on potato tubers 	<ul style="list-style-type: none"> ➤ Research identification ➤ Research trials by adopting positive and negative selection method ➤ Need of research findings 		
d) Oilseeds (Sunflower, Sesamum, Groundnut)	To increase production of oilseeds	<ul style="list-style-type: none"> ➤ HYV sunflower, Sesamum, groundnut suitable for altitude above 100MSL 	<ul style="list-style-type: none"> ➤ Trials & Demonstration ➤ Identification 		
Horticulture a) Large cardamom	Organic production of large cardamom capsule	<ul style="list-style-type: none"> ➤ Declining of cardamom suckers in the district (a research finding shows mother fungi named baehunia) 	<ul style="list-style-type: none"> ➤ Need research finding for causal organism ➤ Need appropriate chemical recommendation 		✓
b) Ginger	Organic production of Ginger	<ul style="list-style-type: none"> ➤ Rhizome rotting of- un noticed creating havoc in the farmers fields 	<ul style="list-style-type: none"> ➤ Need research findings for causal organism and control measures 		✓
Fishery a) Disease in fish	<ol style="list-style-type: none"> 1. Promotion of pesiculture in the available water bodies 2. Oxygen depletion in pond water 3. Disease 	<ul style="list-style-type: none"> ➤ Sometimes dead fish occurs in the fish pond showing rotting ➤ Proper management of pond 	<ul style="list-style-type: none"> ➤ Need research findings for causal organism and control measure 		✓
Veterinary & Animal Husbandry a) Epidemic in Pig (Common)	To increase production	<ul style="list-style-type: none"> ➤ Epidemic in pigs often occurs and not able to control 	<ul style="list-style-type: none"> ➤ Need research findings for causal organism and control measure 		