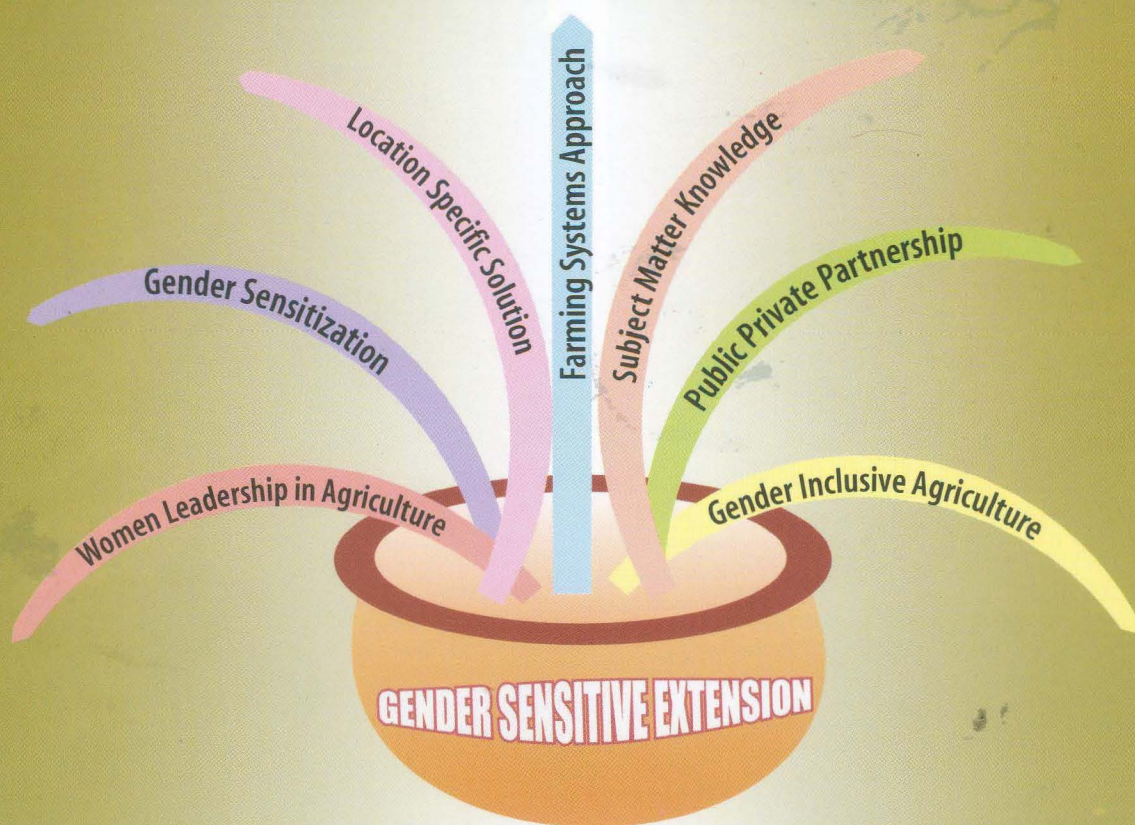


DRWA

GENDER SENSITIVE EXTENSION MODEL



Directorate of Research on Women in Agriculture
(Indian Council of Agricultural Research)
Bhubaneswar 751003, Odisha

GENDER SENSITIVE EXTENSION MODEL

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Gender Sensitive Extension Model

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Preface



The quest for an alternate extension system is on due to increase demand for transfer of knowledge to various categories of clientele in agriculture. Farm women form a special category of the end users whose needs often vary from that of male farmers owing to their triple responsibilities of production, reproduction and community management. DRWA has successfully experimented a new extension approach that is gender sensitive and is capable of addressing the technological needs of farm women ultimately leading to gender mainstreaming. The approach followed by the DRWA has been documented in this bulletin which can help the field level extension and development functionaries to reach out to the farming community more effectively.


Krishna Srinath
Director

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1. Concern for gender inequalities

High degree of inequalities between men and women in India is a matter of serious concern. This has been reflected in the Human Development Report, 2005 of United Nations Development Programme (UNDP). The report says that India occupies 98th position among 140 countries of world having a gender related development index (GDI) of 0.586 out of 1.000. It further states that in India the death rate of children in the age group of 1-5 is 50% larger for girls than boys. The UNESCO brought out that women perform 75% of the work, earn 10% of the income and own 1% of all property. A striking news in the New Indian Express, (30th August, 2010) stated that the female foeticide in India has assumed alarming proportion which is ten lakhs cases per year. The above key statistics on gender very clearly demand policies and programmes to bring the women into the mainstay of development. The UNDP Human Development Report (1995) on the status of women indicated that 70% of 1.3 billion people living in poverty are women, more women than men are malnourished, wages of women are 30-40% lower than men for comparable work, women constitute less than 1/7th of administrators and managers in developing countries, 10% seats in world's parliaments and 6% in national cabinets are held by women, women own less than one hundredth of the world's property and women earn one tenth of world's income. According to FAO, contribution of women in food production is 80% but they receive only 2 to 10% of extension support.

1.1. Efforts to address the gender inequalities

a. International

The 3rd Millennium Development Goal (MDG), i.e. promote gender equality and empower women, has called upon the countries to initiate steps to bridge the inequalities. The Beijing Platform for Action (1995) has identified twelve areas of action, prominent among these related to extension are: women and poverty, education and training of women, women and health, violence against women, women and the economy, women in power and decision making, institutional mechanisms for the advancement of women, human right of women, women and media and women and environment. Prior to the above declaration, there were first, second and third World Conference on Women at Mexico (1975), Copenhagen (1980) and Nairobi (1985) respectively. The said global endeavours were also reviewed and

appraised at 5 yearly intervals to overcome the limitations and shortfalls in addressing gender inequalities..

b. National

(Given below in the tabular form the efforts made in India for cause of women in different periods and also Five-Year Plans)

Sl. No.	Year/Plan	Title	Emphasis
1	1939-40	Sub-committee to advise the National Planning Committee	Welfare of women
2	1976-77	Working group on employment of women for the planning commission	Improvement in the productivity of women in traditional occupations
3	6 th Five year plan	Planning Commission	Opportunities for independent employment and income for women
4	7 th Five year plan	Planning Commission	Training and education in general and science and technology for women farmers
5	8 th Five year plan	Planning Commission	Promoting women as special target groups for employment promotion
6	9 th Five year plan	Planning Commission	Empowerment of women
7	10 th Five year plan	Planning Commission	Gender equality and gender budgeting
8	11 th Five year plan	Plan Planning Commission	Engendering the indigenous women

2. Gender work force participation

Given below are the tables on the work force participation of men and women (Census, 2001) to indicate their contribution and scope for development.

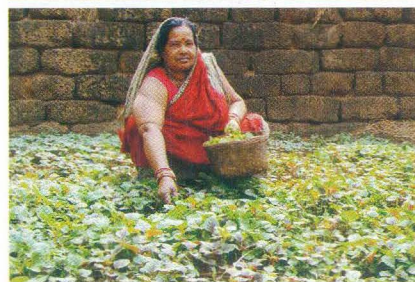
Sl.no.	Parameters	%
1	Overall work participation in India	39.1
2	Work participation rate amongst women	25.6
3	Work participation rate amongst men	51.7
4	Cultivators to total workers	31.7
5	Agricultural Labourers to total workers	26.7
6	Women cultivators amongst total cultivators	32.35
7	Women Agricultural Labourers amongst total Agricultural Labourers	46.62
8	Men cultivators amongst men workers	31.34
9	Women cultivators amongst women workers	32.51
10	Men Agricultural Labourers amongst total men workers	20.82
11	Women Agricultural Labourers amongst women workers	39.43

Highlights of workforce participation (Census 2001)

Sl. No.	Parameters	State/UT	%
1	State/UT with highest overall work participation rate	Mizoram	52.7
2	State/UT with highest male work participation rate	Danam & Dew	65.5
3	State/UT with highest female work participation rate	Mizoram	47.6
4	State/UT having highest % of cultivators amongst workers	Himachal Pradesh	65.5
5	State/UT having highest % of Agricultural Labourers amongst workers	Bihar	48.0
6	State/UT having highest % of male cultivators amongst male workers	Nagaland	55.68
7	State/UT having highest % of female cultivators amongst female workers	Himachal Pradesh	86.2
8	State/UT having highest % of Ag. Labourers amongst workers	Bihar	48.2

Sl. No.	Parameters	State/UT	%
9	State/UT having highest % of female Agricultural Labourers amongst female workers	Bihar	63.2
10	State/UT having highest % of male Ag. Labourers amongst male workers	Bihar	42.7
11	Highest % of (Cultivators + Agricultural Labourers) amongst workers	Bihar	77.4
12	Highest % of (Cultivators + Agricultural Labourers) amongst male workers	Bihar	74.3
13	Highest % of (Cultivators + Agricultural Labourers) amongst female workers	Himachal Pradesh	89.0

Work participation rate, defined as the proportion of workers to total population, is an important indicator of the level of economic activity. As per Census 2001, the overall work participation rate in India was 39.26%. While the work participation rate among men was about 52%, work participation rate among women was 25.6%. It is noteworthy that while WPR among men has remained more or less constant around 52%, WPR among women has registered improvement during successive Censuses. Among the states, there is considerable variation in the work participation rates - both overall and gender wise. As per Census 2001,



Mizoram had the highest overall work participation rate (i.e. 52.7%) and female work participation rate (47.6%). Himachal Pradesh had the highest percentage (89%) of women workers as agricultural hworkers. Another important observation is that the share of women in total agricultural workers has been increasing as evident from past censuses. Therefore given the trend, our approach and policy relating to agricultural extension services have to change to recognize women and effectively reach out to them with need based solutions. This calls for an urgent need to make our existing agricultural extension gender sensitive.

2.1. Participation of farm women in agriculture

Women perform different roles like as agricultural labourers, farmers, co-farmers, family labourers and managers (with male out-migration, widowhood, divorce, etc.) of farms and farm entrepreneurs.

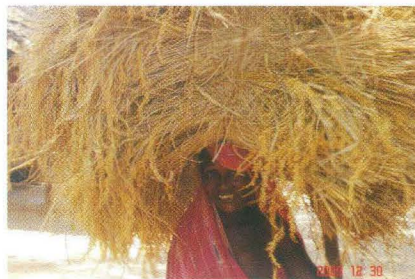
Women work extensively in

- Production of major grains and millets
- Seed selection and seedling production
- Sowing and applying manure and fertilizer
- Fish processing
- Collection of non-timber forest produce (NTFP)
- Animal husbandry
- Keeping milch animals
- Fodder collection and cleaning of animal sheds
- Processing of milk and livestock products
- Small ruminants and backyard poultry



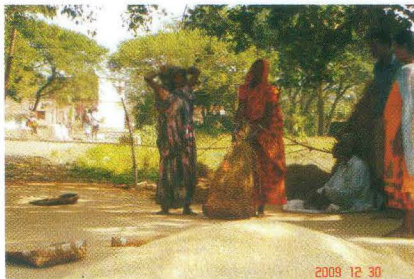
Participation of farm women in rice cultivation

- Transplanting (89-93%)
- Harvesting of the crop (70-89%)
- Storage of grains (70-83%)
- Threshing (37-42%)
- Transplantation of harvested crop (29-38%)



- Nursery preparation (10-20%)
- Irrigation of crops (10-15%)
- Land preparation (10-15%)
- Seed selection for sowing operations (5-15%)
- Fertilizer management (2-10%)

Source: Bargali et.al. (2009) Participation of rural women in rice-based agro-ecosystems. International Rice Research Notes.



2.2. Women in agriculture, Why?

- A high percentage of rural women are not in work force. (Nearly $\frac{3}{4}$ th of female are non- workers)
- Among those who are in workforce, majority are marginal workers.
- Agriculture and allied sectors are the most potential avenues of employment, immediately available for women.
- Women are more caring towards agriculture because of historical, cultural and biological factors.
- Growing female headship (An estimated 20 percent of rural households are de facto female headed, due to widowhood, desertion and male out-migration).
- Women can produce and generate income in farming along with their reproductive roles.
- As evidenced from the trends, women's participation in agriculture will rise in future and without agricultural growth rural development is impossible.

3. Need for gender sensitive extension model

Extension is being considered as *sine qua none* for development of agriculture. This has been tried through number of extension models launched in India namely: Conventional Extension Model, Mass Media Model, Target Group/Area Model, Training and Visit Model, Frontline Extension Model, Integrated Extension Model, Training and Extension for Farm Women Model, Broad-Based Extension Model (ATMA) and Public-Private Extension Model. A careful analysis of the strength of the above models in targeting gender brings out that except training and extension for women in agriculture model, front line extension model and ATMA model, all other models did not address much of gender sensitivity leading to poor access of farm women to extension. Farm women in rural areas who constitute almost 70% of the total women workforce are socio-economically vulnerable. Agriculture is an important avenue of earning for strengthening their socio-economic condition. The socio-cultural barriers which have their root from a patriarchal society have given the women a secondary status in the society. It is aimed at helping the women to liberate from the clutches of male dominance and take part in development programmes. As the prospect of empowerment of women in agriculture and allied sectors is considered very bright, dissemination of farm information and upgrading the skills of women in agriculture is felt very necessary. It is also established from the studies conducted at Directorate of Research for Women in Agriculture (DRWA) that women's extension needs and preferences are different than that of men. During last two decades extension professionals have widely used different extension methods in relation to men which are now recommended at all levels. But the methodology of using extension methods for rural women has not yet being studied. Refinements are needed in the extension methodologies to make them women friendly. The extension approaches presently followed in different states as well as under special projects require more manpower and cost. In most of the cases, the state governments are unable to bear the burden of the huge manpower and the hierarchy. The high cost of agriculture extension is presently adding to the fiscal deficit. It is felt widely that an alternate model should be worked out to minimize the cost and provide sustainable extension services. A new phenomenon that is micro level extension is in the offing which demands that extension should have location specific character. General recommendation, approaches and strategies very often do not meet the grass root needs of

the farming community. The recent concept of cost recovery of the extension system has been emphasized in the extension policy of government of India. The plan and policy makers sincerely desire a model which besides being sustainable should possess the cost recovery character. This can be achieved if the service providers of extension at the village level can get money from the farm men and women for their advisory services and skill transfer.

The need for gender sensitive extension in agriculture and allied fields has gained considerable importance at the national level to streamline extension services for farm women. Alternative approaches/models and methods are discussed in different institutions, fora and task forces to address the information and extension needs of the rural women who constitute almost half the total population. Policy shift together with new instruments in the planning process have given clear direction to design and implement extension programmes in gender perspective with a hope to achieve equity in extension services.

Broad analysis of the aforesaid extension models has identified shortcomings and reforms in the area of gender sensitivity, regular availability of change agents at grass root level, provision of extension services at grass root level in all fields of agricultural development, cost effectiveness, research support and participatory approaches.

3.1. Areas of extension reform

Sustainable agriculture development in India is being more knowledge based for which extension systems have a great role to play. Given below some important areas emerged clearly wherein reforms are urgently required.

- High cost of public extension service
- Non-availability of village level extension functionaries in the Departments of Horticulture, Veterinary & Animal Husbandry and Fisheries
- Non-availability of grass-root extension workers in their area of jurisdiction
- Inadequate provision for the regional extension needs
- Lack of proper coordination for extension work
- Inadequate emphasis on educating the clientele

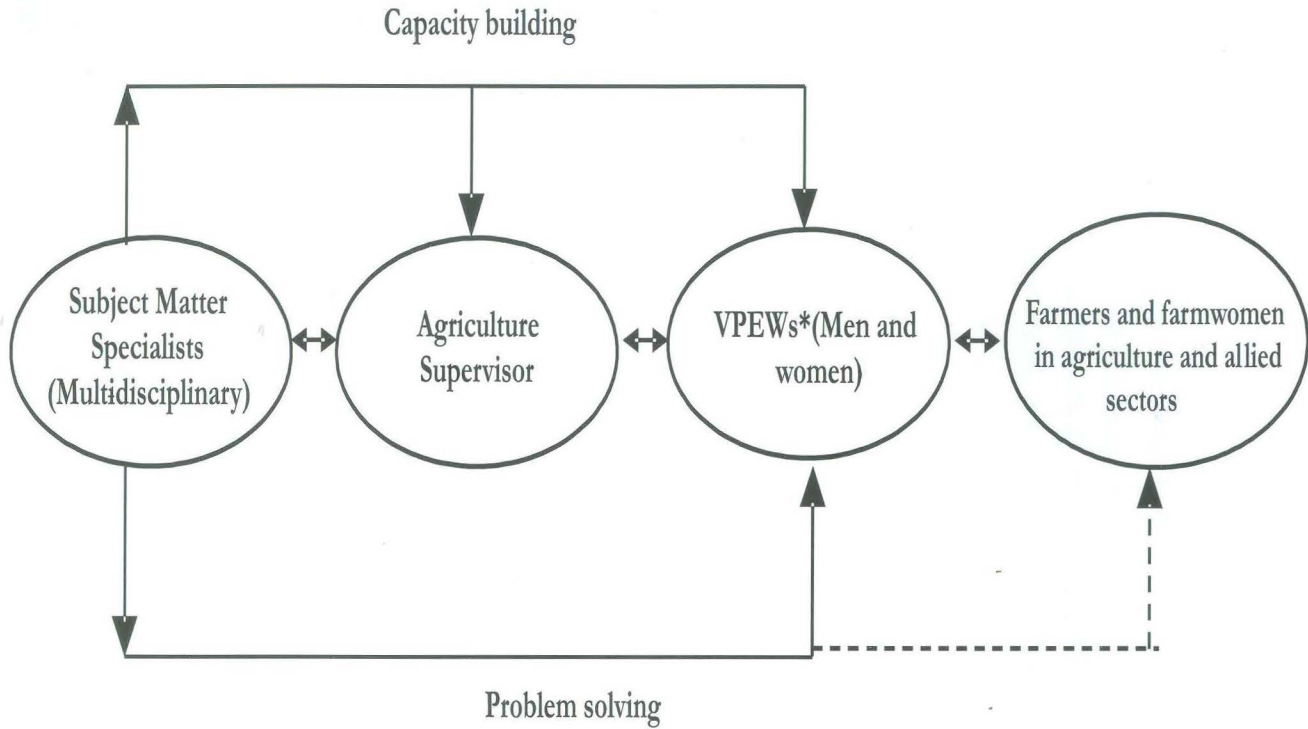
- Improper training
- Lack of suitable mechanism for monitoring and evaluation of programmes

The growing demand for agricultural extension services specially in gender perspectives at the local level coupled with resource crunch with the state governments have created a need for an alternate extension model which must incorporate the essential dimensions of extension. The report of working group on Gender issues, Panchayat Raj Institutions, Public Private Partnership, Innovative Finance and Micro-finance in Agriculture, Planning Commission, January 2007 for the Eleventh Plan (2007-2012) suggested “to appoint village youths as para-workers for agricultural extension. They will be accountable to villagers through PRIs and to provide a legal framework for input supply through institutions like PRIs, SHG federations, private traders and farmer’s organizations.” The report also laid emphasis to explore the scope of public-private partnership (PPP) for development of agriculture in the country.

4. Action Research at DRWA

The Directorate of Research on Women in Agriculture has begun efforts to understand the extension scenario around the farm women and develop logistic extension model to encompass the reforms. The said attempt has given rise to test a gender sensitive extension model with a focus on involvement of a group of Village level Para Extension Workers (VPEWs) in extension. An attempt was made in such a way that the model can be accommodated in the existing institutional frame of the State and Central Government. Although the concept of para worker has been found effective in the domain of public health services and rural development programmes, it is new to agriculture development, especially for gender mainstreaming in agriculture. To describe briefly, it is a model aimed at involving public institutions like extension agencies of the State Government, research institutions and private actors namely Village level Para Extension Workers to manage agriculture extension services at the village level. The Village level Para Extension Worker (VPEW) is considered as the most important pillar to support the model. In this backdrop, it was felt necessary to examine the performance of Village level Para Extension Worker and evaluate the changes taking place in agriculture specially to address the gender issues. Keeping the above fact in view, an extension model in public-private partnership mode was

Extension Model



* Village level Para Extension Workers

Extension domain

- Gender sensitive
- Location specific
- Problem solving
- Broad based

developed to address gender sensitivity, cost effectiveness, leadership development among farmwomen, technological location specificity and subject matter support from specialists.

5. Philosophy and schematic model

Developing young leaders (men and women) in farming at village level and enabling them to provide gender sensitive, location specific and broad based extension services which will contribute for sustainable development in agriculture and allied fields.

5.1 Broad objective of the model

The model has a broad objective of providing extension services to gender by ensuring equity and equality, cost effectiveness, sustainability, cost recovery and location-specific needs. Besides this, the model would promote gender mainstreaming in agriculture and provide wider scope to extension agencies for adoption.

6. Key Positions in the Model

In order to make the model functional and achieve the aforesaid philosophy and objective, one has to understand clearly the key positions as mentioned in the schematic diagram and the kind of relationships between the key positions. Given below a detailed description of the structural and functional aspects of the model for the use of practitioners.

6.1. Village-level Para-Extension Worker (VPEW)

Village level Para Extension Workers (VPEWs) comprising of one man and one woman would be selected for a standard village consisting of about 200 farm households. Selection of workers would be based on parameters viz., academic qualification, farming background, social participation and outside contact. The village community is also contacted to verify the motives and antecedents of the individuals. The VPEWs get monthly honourarium from the implementing agency.

The Role of Village level Para Extension Worker (VPEW)

- Collecting data on crops, livestock, horticulture, fish and home science.
- Providing agricultural information and technology to the farmers and farm women.

- Conducting demonstrations for increasing the skills in agriculture production.
- Bringing changes in the prevailing men-centered agriculture through women empowerment
- Organizing Self Help Groups (SHGs) and promoting agricultural activities through group.
- Developing agricultural plan and programme suitable for farm women to enhance their socio-economic well-being and including WSHG in the empowerment process.
- Participating in the pre-seasonal training programmes .
- Assisting Subject Matter Specialist (SMS) in participatory agricultural research and extension programme.
- Carrying the problems of the farmers to SMS and solutions of the problems from SMS to farmers in a two way process.



- Coordinating with different local institutions, projects and NGO's for all around development of agriculture.
- Recording weekly agriculture activities in the diary.
- Distributing critical inputs for the programme among the participants and supervising the utilization.
- Maintaining a healthy working relationship among themselves and with other villagers.
- Assisting in collection of scientific data for validation and refinement.
- Educating the villagers on the prevailing gender related superstitions.
- Sustaining the agriculture development of the village by mainstreaming gender in agriculture.

6.2. Agriculture Supervisor

A group of VPEWs would work under a qualified agriculture graduate/post graduate who is stationed at block/panchayat headquarters in the department of agriculture. It is estimated that a Supervisor can effectively supervise 25 to 30 VPEWs covering 12 to 15 standard villages. This position already exists in the present public extension systems. The Supervisor is primarily responsible for effective capacity building of the VPEWs. He is entrusted to conduct trainings and undertake following activities.

- Pre-seasonal trainings (Kharif, Rabi and Summer) of 4-5 days durations are conducted for VPEWs. Training should cover all areas of agriculture and allied fields and must address location specific needs and problems of men and women.
- Gender sensitization of VPEWs and farm families.
- Method and result demonstration for VPEWs.
- Training on how to conduct farm and home visits, discussions, meetings and other related extension activities.
- Supply of farm literatures on regular basis to VPEWs for wider circulation among farm families.

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- Recording observations, data, cases and success stories etc.
- Helping the VPEWs to develop village farm plan.
- Identification of gender-sensitive farm technology.

The Agriculture Supervisor is required to visit the villages at fortnightly intervals and provide solutions to the problems faced by the VPEWs, farmers and farm women. Telephonic conversations with VPEWs are also followed by him for taking immediate action. The Supervisors are also responsible to arrange Subject Matter Specialists/resource persons from Department of Agriculture and other line departments and the logistics for holding the trainings.



The extension management took a back seat in earlier occasions because its parameters were ill defined and poorly amenable to quantification. Necessary checks and controls need to be instituted at different stages of implementation to get reliable data/information on the status of the project, gaps and parameters to be monitored.

The activities entrusted to the Supervisors for management of the model are –

- (i) **Bench mark survey:** It is to be taken up before launching of the model to know the status of agriculture and technology dissemination. A brief interview schedule may be developed to record the responses of men and women on identified parameters. The SMS (Social science) may develop the interview schedule, prepare the sampling plan and analyze the data. The data collection may be taken up jointly by the supervisor and VPEWs.
- (ii) **Monitoring the activities of VPEWs:** Each VPEW has a set of role to play in the field. Keeping in view the observable and moniterable aspects of their activities, a set of parameter is employed for the purpose. These are
- Writing of weekly diary
 - Avg. number of farmers contacted per week in the preceding month
 - Avg. number of farm women contacted per week in the preceding month
 - Avg. No. of field visits per week in the preceding month
 - Avg. No. of problem identified in the preceding month
 - Avg. No. of demonstration conducted in the preceding month
 - Average No. of other related agencies contacted in the preceding month
 - Average No. of consultation made with scientists and technical for capacity building in the preceding month
 - Average number of exposure to agriculture information - leaflet, newspaper, TV, Radio programme etc. in the preceding month

The values on the parameters for each VPEW can be monitored during field visits and trainings to keep a track on the progress.

(iii) **Diagnostic visit :** Diagnostic visits by SMSs and supervisor are conducted to provide solutions to the unsolved/perennial farm problems. SMS-farmers interactions may be arranged during the visits. The Subject Matter Specialist also conducts field studies to assess the impact of the technologies on men and women and the constraints in technology dissemination particularly among farmwomen. Suggestions made by the team are forwarded to the supervisor and VPEWs for implementation.

(iv) **Programme review meeting :** Programme review meetings need to be held at six monthly intervals wherein the VPEWs working under a supervisor can attend the meeting

to assess the achievements of the last six months and develop a plan for the coming six months. Care is taken to develop the village farm plan in a gender perspective. The overall agricultural development of each village is assessed as per the perception of the VPEWs of that village, neighbouring VPEWs and the supervisor. Impact of technologies on women and men, women empowerment, shortfalls, reasons of shortfalls, coordination with other line departments, marketing of products, availability of farm inputs, functioning of women self help groups, facilitation in terms of bank loans, micro finance and insurance, new opportunities etc., are taken up for discussion and implementation. Basing on the progress made in the villages, villages are ranked and VPEWs are encouraged to compete with each other. Small prizes are given to VPEWs of the village who secures first rank. The supervisor conducts the meeting under the expert supervision of Subject Matter Specialist (Social Science).

(v) Monitoring and evaluation of pre-seasonal trainings : The supervisor develops a pre-seasonal training programme based on the location specific needs of farmers and farmwomen. The VPEWs in his cluster are contacted before finalization of the training programme. All the sessions are taken by the Subject Matter Specialists. Each session / topic should address the needs and problems of the village. The supervisor must learn the expertise of monitoring and evaluating the training programme from the SMS (social Science). It is needed that at the end of the session/ class, the VPEWs must be able to acquire the knowledge and skill. Even the supervisors should attend the training not only to know the recommendations but also examine the extent of learning by the VPEWs. At the end of each day doubts solving and recapitulation are taken up. The pre seasonal training ends with a post test session to quantify the gain in knowledge.

(vi) Monitoring gender sensitivity of the programme : Besides strengthening the equality and equity aspects in organizing the extension programmes, care is taken to select and disseminate the gender sensitive technology. For bringing improvement in gender sensitivity, comparisons between men and women in different aspects such as participation, employment, monetary and non-monetary benefits and other behavioural changes are made. Even the men VPEWs and women VPEWs are studied separately and special attention is paid to make up the deficiencies of women VPEWs. The supervisor is supposed to learn the above skills from SMS (Social Science) and practise those in the

programme. The supervisor also undertakes case studies / success stories to examine gender sensitivity and draw implications for future programme.

(vii) Performance evaluation and counseling of VPEWs : After two years of implementation of the model an exercise to measure the change in capacity of VPEWs is taken up. The changes in the capacity are assessed by three categories of judges like self assessment (VPEWs), audience (farmers and farmwomen) and the supervisor of the project. Their judgments are made in a five point rating scale which is analyzed by the test statistics “w” (Kendal Coefficient of Concordance). The following thirteen areas of capacity are taken up for evaluation :

- Capacity to listen and analyze
- Interacting with men
- Interacting with women
- Identifying farm problems and needs of men and women
- Knowledge in farming
- Skills in technology application
- Organizing group discussion and village meetings
- Solving the problems of farmers and farm women in agriculture and allied sectors
- Organizing demonstrations
- Sharing knowledge and information with clientele
- Facilitating marketing, input supply, credit and other line department activities
- Strengthening women self-help groups and their activities
- Motivating the farmers and farm women in adopting farm technology

Non-performing VPEWs are kept under constant watch but are not ordinarily reprimanded and discouraged. Instead, their mistakes/deficiencies and opportunities are identified and they are given reasonable time to come up. However, a VPEW can be rejected by not conforming to the prescribed methodology and performance level.

Given below an example adopted in the project to improve the performance of the VPEWs.

Measures taken to improve the skills of VPEWs in identified areas of deficiency

Sl. No	Area of deficiency	Steps taken
1.	i. Capacity to listen ii. Meeting and talking to men iii. Meeting and talking to women	● Giving each para worker opportunity to speak and analyze in pre-seasonal trainings and review meetings, ● Arranging brainstorming sessions on important problems and issues
2.	Identifying problems and needs of men and women	● Verifying their ability to identify the field problems during diagnostic and other field visits ● Encouraging them to bring live samples and monitoring the problem identification process.
3.	Organizing demonstrations	● Encouraging VPEWs to conduct demonstrations independently ● Monitoring the activities of demonstration ● Skill appraisal of VPEWs through random checking
4.	Sharing knowledge and information with clientele	● Improving feed back on the information given by VPEWs on content, methodology and correctness ● Sharing the findings with VPEWs
5.	Facilitating marketing, input supply, credit and other line department activities	● More information provided to VPEWs in identified areas and activities needed to be facilitated
6.	Strengthening women self help group and their activities	● Literature published by NABARD on formulation of WSHG were supplied to VPEWs ● Helping VPEWs to understand the opportunities for WSHG.
7.	Motivating the farmers and farm women in adopting farm technology	● Ensuring success in all demonstrations and sharing the result with clientele ● Monitoring the activities of the VPEWs relating to critical support for different interventions

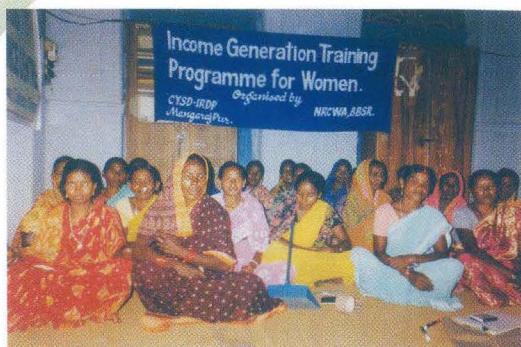
(viii) Helping the VPEWs to coordinate: The supervisor prepares a list of stakeholders in the locality for agriculture development and their interest and efforts for different villages. Accordingly a plan is drawn up by the VPEW by specifying the activities to be taken up by him to channelize their services for the villagers. The VPEWs are not only required to implement the programmes under the model but also help different agencies/line departments to implement their agricultural programmes so that, synergy can be created in the model. Resources can be created through MGNREGA and agricultural programmes may be boosted through RKVY, NHM etc. The supervisor must encourage and motivate the VPEWs by providing information about different agencies and the programmes.

(ix) Concurrent evaluation/Short term impact : A concurrent evaluation is taken up after completion of two and half years of the project. The supervisor, SMS and VPEW must jointly evaluate the outcome of the model. Sixteen areas of changes (effectiveness) as identified from field visits are taken up to measure the direction of change by applying McNemar Change Test. An adequate sample size consisting of equal number of men and women farmers are to be interviewed to give their responses on 16 parameters in terms of no change, negative to positive and positive to negative. The frequencies on response categories are found out with respect to each parameter. Significant changes are indicated by a value i.e., test statistics 'X'. The changes for men and women are brought out separately for effective monitoring of the model. The outcomes of the action research / model are presented separately under the heading evaluation of the model.

Capacity building of the supervisors : As the Agriculture Supervisors are responsible for management of extension in the village they need fundamentals on gender analysis, survey, village farm plan development, monitoring, evaluation, case study writing, conflict management, team building, coordination and marketing. The SMS in agriculture and allied fields provide the technological back up to the supervisors and the SMS (Social Science) trains the VPEWs on different management concepts as listed above and their applications.

6.3. Subject Matter Specialist

This position is available almost in all the sectors at sub-divisional and district level who are professionals in their field of specialization. Specialist not only from crop science but also



from horticulture, fisheries and animal husbandry would be involved in the model to impart pre-seasonal trainings for VPEWs as well as for the capacity building of agriculture supervisors. These specialists also visit the village to provide expert advices to farmers and farm women as and when required under diagnostic visits. The assistance of the specialists is also utilized to undertake the evaluation of technologies.

In this model, the role of **Subject Matter Specialists** (social science/gender experts) has been observed to be very effective and they play an important role in reorienting the functionaries of the model as well as the general public/civil society. These specialists can strengthen the model very well in the way of incorporating benchmark survey, gender analysis, technological need analysis, organizing village communities, self-help groups and farm schools, participatory extension, monitoring, coordination, concurrent evaluation, case studies and success stories. Since the availability of these experts in the extension system is poor, more experts are required for effective functioning of the model. At least



one specialist in each sub-division is badly needed. In the present extension set-up, there are personnel having specialization in agriculture extension, agriculture economic and home science occupying the position of training officer, rural sociologists, economist, instructors etc. who can very well work as social scientist/ gender expert after orientation on the model. However personnel having specialization in agriculture extension/social work are very suitable.

d. Hierarchy : The rest administrative hierarchy to manage the extension system from the district up to the state level would remain the same.

7. Performance of gender sensitive technologies

Farm technologies screened on their gender sensitive characters were put in the message delivery system of the model. A close watch on the performance of some technologies and the synergy created by the model to the performance was undertaken. Given below briefly the observations gathered from the field on the above dimensions.

A. Backyard Poultry Farming

Observations

- Backyard poultry was found to be a good livelihood option for SC and resource poor farm families.
- A backyard unit of 8 birds (RIR) could generate on an average net profit Rs.1905/- in rainfed condition and Rs.1210/- in irrigated condition in 9 months.
- Successful women in poultry started poultry farm in business mode for utilization of their unused resources.
- Location specific advisory, visits of SMS and supply of desired variety were very crucial for success of backyard poultry.



Support given by the model

- Proper identification of intended clientele (SC & resource poor women) based on need and aspiration.
- Capacity building of the VPEWs on backyard poultry farming through pre-seasonal trainings.
- Provision of advisory services, supervision, development of rapport with the women and community for the programme and management of stress of the women through regular visits by VPEWs.
- Sustainable poultry production by critical clinical help from SMS.
- Large scale acceptance by the women due to excellent performance and benefits shown at their door steps.

B. Carp fry production

Observations

- Productive utilization of small unused pond
- Women found it as a good opportunity for income generation.
- Men supported them in marketing of the fingerlings.
- Easy availability of fingerlings for neighbourhood fishery production programmes.
- Women group could earn a profit of Rs.21430/- from a small pond measuring 4 cent in two months.



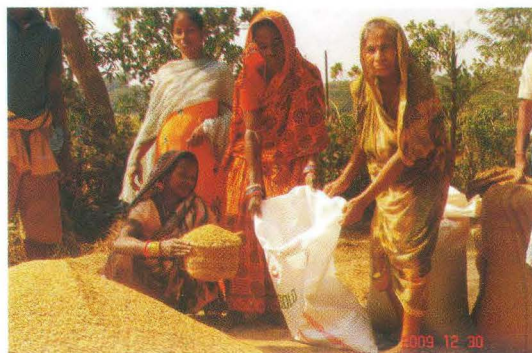
Support given by the model

- Identification of local recourses (pond).
- Effective local co-ordination (between owner and WSHG).
- Developing local understanding for benefit sharing and monitoring.
- Giving wide publicity in the locality.
- Providing specialized know-how by SMS.
- Facilitating marketing of the fingerlings.

C. Rice cultivation by WSHGs

Observations

- Rice farming by WSHGs may contribute to gender mainstreaming.
- Women were benefitted in various ways like
 - Selling the rice and getting the hard cash.



- o Meeting the family demand for rice leading to their visibility.
- o Selling the straw and husk.
- o Women groups in rainfed and irrigated situation got 65.6% and 18.7% higher yield respectively than the local yield.

Support given by the model

- Identification of the farm women and WSHGs by VPEWs who can introduce rice farming among women.
- Sensitization of the community by VPEWs to arrange land for the women and WSHGs.
- Identification of the appropriate variety and gender sensitive production technologies by SMS.
- Building up opinions for the new variety (Naveen) by VPEWs in their day-to-day extension activities.

D. Enhancing production of arhar through bond planting(rainfed situation)

Observations

- Plants came up very well in the rice bond (Kharif season).
- Avg. plant height 8 ft.
- Number of branch per plant 25
- Average numbers of pods per plant 1500.
- Average number of seed per pod 5.



Support given by the model

- Identification of the low yield of the arhar in the rice bond by VPEWs and reporting of the problem.
- Identification of suitable variety(UPAS) by SMS and supply of seed kits to cover the entire community.

- Encouraging farm women to dibble the seed on the bonds by maintaining correct spacing and fertilization through demonstrations by VPEWs.

E. Mushroom cultivation by WSHGs

Observations

- Productive use of leisure time of farm women and supplementation of family nutrition and income.
- Sale of mushroom by women directly to the consumers and getting the hard cash which promoted economic activities and visibility.
- Mushroom cultivation got social appreciation and support from the men.



Support given by the model

- Identification of potential women groups and local resources by VPEWs.
- Organization of participatory training programmes for women groups.
- Helping women groups in procuring quality spawn and marketing of the produces.
- Solving of problems by SMS.

F. Eco-friendly pest management in brinjal by pheromone trap

Observations

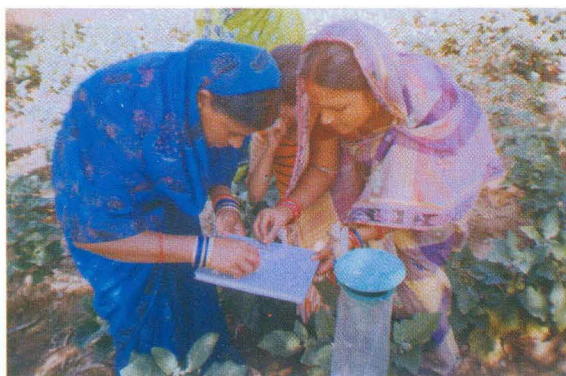
Area of impact	Perceived gender impact	
	Women	Men
Nutrition	***	****
Employment generation	**	*
Self-esteem	**	*
Drudgery reduction	****	**
Health hazard reduction	****	*
Strengthening livelihood	****	**
Skill development	****	**
Gain in knowledge	****	****

Area of impact	Perceived gender impact	
	Women	Men
Change in attitude & perception	****	*
Social acceptance (multiplier effects)	****	**
Eco-friendliness	****	****
Increase in yield	***	**
Sustainability	***	*
Increase in income	****	**

No impact: 0, Low impact- *, Medium impact: **, High impact: ***

Support given by the model

- Correct identification of the pest and symptoms of damage by farmers and farm women through assured assistance of VPEWs.
- Effective comparison on the efficiency of different control measures at suitable locations and participatory evaluation in a congenial environment created by VPEWs.
- Correct installation of the pheromone traps by meeting all the queries of the women.
- Provision of information by VPEWs on how to procure pheromone trap from the market and its costs.



8. Evaluation of the model

The data on changes taken place due to implementation of the model indicate that farmers and farmwomen perceived significant improvement in their micro environment related to participation in extension activities and transfer of technology. The sixteen areas on which evaluation is made are given below. The details on the methodology and scoring are provided under the point i.e., role of supervisor.

- Providing a general awareness on agriculture and allied fields to the farming community
- Sensitizing the men and women for gender mainstreaming
- Contact with change agents/VPEWs and agriculture supervisors
- Access to farm information and advisory services
- Learning of farming skills
- Organization of group activities
- Getting assistance in problems identification
- Solutions received by men and women
- Adoption of new farm technologies
- Organization of extension programme to facilitate learning
- Assistance received by men and women in allied areas
- Cooperation among the stakeholders
- Conflict management among the stakeholders
- Demand for farm information by the clientele
- Extent of success of farm technologies given under the project
- Meeting current needs of the community in farming

In all the sixteen parameters, there are significant positive impact of the model on the men and women of the project area.

9. Comparison between the proposed model and existing extension model in Odisha

Training and Visit (T&V) extension model implemented in India during early 1970s was a major extension programme which continued for about 25 years and presently it is found in different modified forms. Considering that model as a typical one, an attempt is made here to compare it with the proposed one i.e., gender sensitive extension model to bring out precisely how the proposed model is better and capable of accommodating the reforms and extension policies of government.

Sl. No	Parameters	Gender sensitive extension model (Proposed)	Typical extension* model of Odisha (T & V)
1.	Source of change agent	Para workers from the village	Outsiders recruited and trained as VAW/VLW
2.	Gender composition	Balanced	Mostly by men
3.	Leadership development for the situation/location	Assured for both men and women	Not assured
4.	Gender sensitivity		
	a. Gender sensitization of the clientele	Achieved	Doubtful
	b. Equality in participation	Achieved	Doubtful
	c. Benefit sharing	Improved	Doubtful
	d. Organization and empowerment of WSHG	Regular and systematic	Sporadic
5.	Approach	Farming systems and location specific	Commodity and some times top down
6.	Extension activities	Vigorous (agriculturally changed climate)	Dull
7.	Supply of critical inputs for extension / demonstration	Approximately Rs12,000/- per year per village i.e. leading to more direct benefit to farmers.	Approximately Rs. 3,200/- per year per village
8.	Coverage of farm households	1000 farm households by eight para workers	Approximately 1000 households by one Village Level Workers (VAW)
9.	Meeting the need and interest of the clientele	High	Moderate

Sl. No	Parameters	Gender sensitive extension model (Proposed)	Typical extension model of Odisha
10.	Cost of change agent i.e., honorarium/salary/pension etc.	Approximately Rs 77,000/- per year per 1000 households	Approximately Rs 2,50,000/- per year per 1000 households Avg. salary, pension, HRA etc.)
11.	Training contingency	Rs 2800/- per para worker per year	Approximately Rs.8,000 per year/Village Agriculture Worker
12.	Cost recovery	Scope exists	No scope
Overall technical competence			
13	Co-ordination between programmes/ agencies	Achieved in many cases	No scope
14	SMS support	Yes	Yes
15	Method of control	Mutual understanding, transparency, reciprocal commitment, strong bonds, continuous supervision	Code of conduct, target and achievement
16	Risk	(a) Para workers may very easily quit their responsibility, (b) May demand for higher honorarium or other benefits by threatening. (c) No job security	(a) High job security and good salary package (b) Disrupting the system is difficult.
17	Employment of educated unemployed youth in the locality	High	Very low

* Many districts of Odisha are presently under ATMA programme and Krishak Sathi are also appointed sporadically which are not included in the comparison.

10. Conclusion

The impact of any extension model in terms of increase in productivity is no doubt an important outcome. The model as experienced in adopted villages would provide enough information and evidence to engage educated young men and women of the locality for location specific agricultural development. The concurrent results are clear indicatives that after a relatively longer period the model would deliver a higher production and productivity and bring farmwomen into the main stay of agricultural development.

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