

E-BOOK

INNOVATIVE EXTENSION APPROACHES IN SUSTAINABLE DEVELOPMENT OF EXTENSION ORGANIZATIONS

2023



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This e-book is a compilation of resource text obtained from various subject experts of W.B. University of Animal & Fishery Sciences, Kolkata & MANAGE, Hyderabad, on “Innovative Extension Approaches in Sustainable Development of Extension Organization”. This e-book is designed to educate extension workers, students, research scholars, academicians related to Veterinary & Animal Sciences, fishery science and other allied science about the Sustainable Development of Extension Organization. Neither the publisher nor the contributors, authors and editors assume any liability for any damage or injury to persons or property from any use of methods, instructions, or ideas contained in the e-book. No part of this publication may be reproduced or transmitted without prior permission of the publisher/editors/authors. Publisher and editors do not give warranty for any error or omissions regarding the materials in this e-book.

Published for Dr. P. Chandra Shekara, Director General, National Institute of Agricultural Extension Management (MANAGE), Hyderabad, India by Dr. Srinivasacharyulu Attaluri, Program Officer, MANAGE and printed at MANAGE, Hyderabad as e-publication.



MESSAGE

National Institute of Agricultural Extension Management (MANAGE),

Hyderabad is an autonomous organization under the Ministry of Agriculture & Farmers Welfare, Govt. of India. MANAGE is the response to this imperative need. Agricultural extension to be effective, demands sound technological knowledge to the extension functionaries and therefore MANAGE has focused on training program on technological aspect in collaboration with ICAR institutions and state agriculture/veterinary universities, having expertise and facilities to organize technical training program for extension functionaries of state department.

India is an agrarian country. Agriculture and animal Husbandry remains key sector of the Indian economy accounting for around 25 percent share in the gross domestic product. Increased number of people and unemployed graduates living in rural areas are migrating to urban areas in search of jobs. But the country is unable to create ample job opportunities along with economic development. Very poor infrastructure and facilities in rural areas aggravated the population pressure on the urban infrastructure. In this situation this e-book tries to examine the aspects of taking Innovative Extension approaches to develop Extension organization through Animal Husbandry, Fishery and allied farming as a medium and the solution of the problem. In this new millennium the need is combined, and a composite model is based on the basic principal rural employment provider shaping the profile of local entrepreneurs.

It is a pleasure to note that, West Bengal University of Animal & Fishery Sciences (WBUAFS), and MANAGE, Hyderabad, Telangana are jointly publishing e-book on “*Innovative Extension Approaches in Sustainable Development of Extension Organization*” as an immediate outcome of the training program.

I wish the program be very purposeful and meaningful to the participants and also the e-book will be useful for stakeholders across the country. I extend my best wishes for success of the program and also I wish West Bengal University of Animal & Fishery Sciences (WBUAFS) many more glorious years in service of Indian Animal Husbandry and allied sector ultimately benefitting the rural stakeholders. I would like to compliment the efforts of Dr. Shahaji Phand, Center Head-EAAS, MANAGE, Dr. Sushirekha Das, MAANAGE Fellow, MANAGE Hyderabad, Prof. A. Goswami and Dr. Sukanta Biswas, WBUAFS, Kolkata, for this valuable publication.

Dr. P. Chandra Shekhara
Director General, MANAGE



FOREWARD

Extension Education Plays a pivotal role in sustainable livelihood of rural stakeholders, which significantly contribute in the economy of rural India. It is considered a sustainable mechanism for all-round development of organization and stakeholders in general. However, in recent times, several challenges like- Innovative technological development, economic liberalization and globalization acting as prime bottleneck in the facets of development. Considering this challenges, adoption of various innovative extension and management strategies helps in effective development of several Extension and other formal organization. These approaches also mediate economic progress for creation of rural skill based employment through holistic entrepreneurial ventures. Hence, developing Extension and other formal organization for upliftment of the younger generation is of paramount importance.

In view of this, promotion of Animal Husbandry and allied farming based extension organization assumes significance for boosting rural self-employment and livelihood opportunities for better role performance in socio-economic development. Ultimately, this will reduce unemployment, increase efficiency in resource utilization and finally, enhance the empowerment and income of the rural employees and stakeholders of the Country.

In this context, I am gratified that the West Bengal University of Animal & Fishery Sciences (WBUAFS) Kolkata, and National Institute of Agricultural Extension Management (MANAGE), Hyderabad jointly publishing E-book on “*Innovative Extension Approaches in Sustainable Development of Extension Organization*”. The e- book is designed to enable participants from different states to conceptualize various innovative Extension and management strategies as well as avenues for better role performance in their organization and society in general.

I compliment the authors and editorial team of WBUAFS, Kolkata and MANAGE, Hyderabad for publication of an E-book as visionary document for better sustainable application and adoption of the technological practices in holistic development of the state as well as Country

Prof. Arunasis Goswami
Professor & Former
Director, WBUAFS, 4

PREFACE

Innovation and Extension has emerged as a powerful force in driving economic growth, creating employment opportunities, and addressing societal needs. In India, a Country rich in natural heritage, Extension and management strategies holds tremendous potential for fostering organization development, promoting sustainability, and empowering individuals.

This E-book explores the fascinating realm of Innovative Extension and management avenues in India. It delves into the convergence of traditional extension tools with innovative and modern technological principles in relation to sustainable animal husbandry practices. The journey of journey of this innovative strategical approach is not only about enhancing formal and non-formal organisation productivity, but also about transforming mind-sets and fostering a culture of innovation. This book aims to provide aspiring Extension Professional, entrepreneurs, policymakers, and researchers with valuable insights and practical guidelines to navigate the intricacies of several innovative extension methodologies. By harnessing the potential of Extension professional, researchers and workers, India can unlock new avenues for rural development, sustainable livelihoods, and environmental stewardship. This e-book, we will explore the various dimensions of extension and management thoughts and procedures through innovative practices in India. This e-book aims to inspire and empower individuals to embark on the journey of rural development through various extension-management practices in India. By harnessing the power of extension and entrepreneurship and adopting management practices, we can foster a more inclusive, sustainable, and prosperous future for India and beyond.

This e-book is an outcome of collaborative online training program on *Innovative Extension Approaches in Sustainable Development of Extension Organization* conducted from 26-28th July, 2023. This book will be highly useful to veterinary & allied science extension professional and functionaries as well as extension workers who are working at the ground level. A myriad of topics from participatory Extension methodology, Market led Extension, Programme-Planning and development, conflict & stress management, ICT & its application in Extension Organization, Organizational management etc. has been covered for the benefit of the readers. The Editors' express sincere thanks to Dr. P. Chandra Sekhar, Director General; MANAGE for encouragement in publishing this e-book. The financial aid provided by MANAGE, Hyderabad for this training program is duly acknowledged. We hope and believe that the suggestions made in this e-book will help to improve the ability of all the stakeholders to enhance performance of Extension professional & organization in support of sustainable empowerment among stakeholders in the Country.

Prof. A. Goswami
Dr. Shahaji Phand
Dr. Sukanta Biswas
Dr. Susrirekha Das

Dated. 30th October, 2023

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*Chapter-1***PARTICIPATORY EXTENSION METHODOLOGY FOR DEVELOPMENT OF
EXTENSION ORGANIZATION****Prof M. M. Adhikary**Former Vice-Chancellor, Bidhan Chandra Krishi Viswavidyalaya
West Bengal, E-mail: dradhikary@gmail.com**INTRODUCTION:****What's PEA (Participatory Extension Approach)?**

Is a participatory learning process where farmers and villagers are involved in identifying, prioritizing and analysing problems? Make action plans to address these problems. Implement and monitor activities in the action plans

Participatory Extension

Participatory extension is a way of improving effectiveness of the rural extension efforts by government agencies, NGOs, and other organization engaged in rural development. If they are institutionalized in extension organization, they can help to improve the organizational performance at the interface between the service providers (extensionist) and the clients (farmers).

Objectives of PEA

Mobilize and empower farmers by involving them in planning and implementation of activities. Facilitate the farmers in identification of problems, their potentials and opportunities and prioritizing them. Empower farmers to analyse their problems, causes and propose solutions. Involve farmers in the formulation of action plans to solve their problems. Help farmers mobilize resources within and outside the community to implement their action plans. Encourage farmers to monitor and evaluate the implementation of their action plans

Key features of PEA

Community involvement; Community ability to identify their problems, find solutions and make own decisions; Community ability to implement action plans; Empowers community to demand for timely and quality services

The PEA Cycle and Key Stages

The PEA Cycle follows a logical sequence of stages are Preparation; Diagnosis; Needs; Assessment; Training and Exposure; Action Planning; Resource Mobilization; Implementation and Monitoring and Evaluation

Preparation

PEA involves with the help of Training of facilitators; Creating awareness among key stakeholders; Identification of target communities/farmers and Entering the community/meeting farmers for purpose of building trust.

Diagnosis

This examines community in terms of practices, opportunities, problems they encounter and their causes. Critical information is obtained by use of various tools such as -secondary data, - community resource mapping, -transact walk and - focused group discussions. The community is able to analyse the socio-economic and environmental conditions of their village for problem identification and finding solutions.

Needs Assessment

These are interventions which need to be tackled for the community or farmers to move forward or progress. The aim is to identify needs which when addressed will help individuals and interest groups to implement a chosen economic activity. Action plans are then formulated to address the members' felt needs.

Training and Exposure

The farmers' inadequate technical abilities in poultry production can be addressed by training in broiler production. Different types of training can be conducted depending on the type of needs identified.

Action Planning

This involves in a participatory manner the identification of Activities to be done; Resources required; When activities needed to be done (including time frame) and By who (responsibility)

Resource Mobilization

This means looking for resources required to implement the enterprise. These may include Cash; Land; Equipment and Materials to be used

Implementation

This is simply the implementation of the work plan to realize the set objective. For instances, raising day-old broiler chicks using the FFS Model in order to reduce incidence of Ant-Microbial Resistance (AMR).

Participatory Monitoring and Evaluation

With the community involvement this can be done at all stages of the cycle and at the end of the enterprise. Assesses progress made so that necessary adjustments can be made. Indicators can be decided with community

PEA TOOLS are Transect walk; Community Resource Mapping; Venn diagrams (Institutional Analysis); Seasonal analysis; Historical analysis; Pair wise Ranking; Wealth ranking; Problem tree and Objective tree

Benefits of PEA

When PEA is successfully implemented it will result over time the following benefits: These are: Community or farmers' self-confidence, self-reliance and belief in their capacity to improve their standard of living largely on their own; Increase Farmers' demand for quality services; Improve cooperation spirit among farmers leading to viable farmer associations and groups; Ability to identify, prioritize problems, analyse and find solutions with little external interventions and Increased/improved collaboration among stakeholders in target areas.

Examples of Participatory Programmes

These are Farmer Field Schools; Study Circles; Participatory Village Development in Isolated Areas (Pa VIDIA) and FPO (Farmer Producer Organisations).

Transfer of Technology Approach

The best known approach to agricultural extension is the transfer-of-technology approach, which is essentially a top-down approach. In this approach, scientists attempt to find solutions to what they perceive to be the farmers' major technological problems. Research is then carried out, usually at research stations. For example, in agriculture, it has often been assumed that low production levels have led to discouragement and subsequently abandonment in farming. Consequently, agricultural research has focused on increased fish production. The Training and Visit (T&V) system typifies this approach and has become the most significant agriculture extension system used in many countries. The system aims at changing production technologies used by the majority of farmers through provision of advice from well-trained extension workers to individual farmers. The farmers are selected on the basis of the livelihood of adopting new technologies. The system relies on these contact farmers who spread the information to other farmers.

Target Group Approach

The extension approach that takes cognizance of the fact that rural communities comprise a diverse audience of farmers is known as the target group approach. It has taken its name from the fact that in the execution of its extension work, it specifically aims at one or several categories of farmers, rather than at the farming population as a whole. Working with different categories of farmers means that

the extension workers have detailed knowledge about the actual situations of categories of people. Parallels can be drawn with the commercial practice of product development.

A typology of participation: how people participate on development programmes and projects

Typology	Characteristics of each type
1. Passive participation	People participate by being told what is going to happen or has already happened.
2. Participation in information giving	People participate by answering questions posed by extractive researchers using questionnaire surveys or similar approaches.
3. Participation by consultation	People participate by being consulted and external agents listen to views.
4. Participation for material incentives	People participate by providing resources, for example labour, in return for food, cash or other material incentives.
5. Functional participation	People participate by forming groups to meet predetermined objectives related to the project, which can involve the development or promotion of externally initiators and facilitators, but may become self-dependent.
6. Interactive participation	People participate in joint analysis, which leads to action plans and the formation of new local institutions or the strengthening of existing ones.
7. Self-mobilization	People participate by taking initiatives independent of external institutions to change systems.

Participatory Approaches in Extension Activities

During the late 1980s and early 1990s, field-based experiences emerged creating more space for methodological and institutional innovations for agricultural research and extension. Within these participatory approaches - as they became commonly known - a special emphasis was placed upon participation of local people and their communities, especially working with and through groups; and building upon the traditional or indigenous knowledge that they held (Chambers *et al.*, 1989; Waters-Bayer, 1989; Haverkort *et al.*, 1991). The term "participatory approaches" is used to describe a wide range of development and research approaches, methods and tools that can improve the practice of development. The terms for participatory approaches and methodologies are as numerous as the locations where they have been put into practice. What is important is that the approach and methodology have been planned systematically, bearing in mind the guiding principles of

participatory approaches. Participatory methods are utilized in various stages in extension. It may be for evaluating a situation, identification of a problem, action oriented work, evaluation of success or failure of a project and the like. Farmer participation is possible in agricultural research and agricultural extension. The following are a few of the methods in vogue among the field extension workers are Rapid Rural Appraisal; Participatory Rural Appraisal, Participatory Learning action and Participatory Action Research.

Selection of Participatory Methods & their Uses

Participatory	Brief description	Examples of particular use method
Timelines	Historical profiles of longer-term events or trends	Fish catch over time, productivity changes, policy changes
Seasonal calendars	Graphical representation of seasonal events or trends	Labor availability, hydrographic changes
Transect walks and through particular areas	Land- and water-use maps based on walking capital, local knowledge of microhabitat, current use of aquatic resources	Quality and quantity of natural resource maps
Social maps	Maps locating key social features	Access to services and infrastructure
Wealth ranking	Socio-economic categorization of households	Assets, income
Preference ranking	Ordinal ranking, e.g. based on pairwise comparisons, based on defined criteria with scoring	Livelihood strategies, assets and matrix ranking access to services (e.g., fish for conservation)

Horizontal scaling (people to people)

This process’ major focus is the transfer of information from people to people. For effective up-scaling, good institutional structure and people with clear vision are essential.

Human Resource Development

Importance is attached to human resources since the extension system revolves around the staff’s capacity to enhance the knowledge of farmers and their interest in learning from each other. To bring

the fundamental change in the attitude of staff from "I know everything" to "I learn with you" requires considerable amount of time and energy.

Working with farmers

Working with farmers generally consists of the group approach following a farmer field school strategy, wherein farmers meet at regularly to learn together, through action-oriented educational approaches. CARE projects treat aquaculture as a component of the farming system. In a village where groups of 25-30 farmers are formed, there could be only four to five farmers who might be interested in aquaculture. In such occasions, small sub-groups are formed. The general principles in farmer field school approaches are as follow:

Principles in farmer field school approaches

Learning contract. Each group is encouraged to establish a learning contract in which the commitment of all parties is included.

Field is the classroom. Farmers identify the problems and areas where issues have to be addressed. Plans are developed by the farmers to meet their own needs.

Curriculum focuses on science, not just technology. Based on the identified needs of the farmers, curriculum is developed to increase their knowledge. Sometimes, progressive farmers are used to develop a curriculum appropriate to the village. Learning sessions could vary in number depending on the importance farmers attach to the issue.

Meet on set days and set time. Generally, each group meets at least once in a fortnight and undertakes observations collectively. In addition to these fixed meetings, extension staff also provides follow-up support.

Make time for analysis and synthesis. At the end of the session, results are analysed by the farmers and shared with others. Farmers' science congress is also becoming popular. In these meetings, farmers share and analyse results with other farmers.

Working duration. The cycle of direct interaction with the farmers generally covers 12-24 months. This provides opportunity to cover 2-3 cycles of rice-fish and at least one full cycle of annual crops like pond fish.

Extension agents

Consider these processes in scaling up aquaculture

1. **Farmer field school extension strategy** – group learning opportunity for adults organized in fields.
2. **Family approach** – involve both male and female from each community.
3. **Community approach** – help bring more areas under aquaculture like in community fish culture.

Also, it is a tool to create community harmony.

4. **Farmer leaders** – choose farmer leaders acceptable to community and help them establish access to information on a sustainable basis.
5. **Aquaculture education to children** – incorporates lessons in aquaculture in schools and help children to learn about aquaculture through practice. Children are powerful vehicles for information dissemination.
6. **Farmer participatory research** – encourage farmers to conduct research using their own resources to develop technologies appropriate to each area. Help farmers to analyse and disseminate the information.
7. **Participatory monitoring, evaluation and planning** – use tools and development indicators acceptable to farmers to measure progress.
8. **Opportunities for discussion where farmers learn from each other.**
9. **Mass communication approaches** – newsletters, posters, radio, TV programs, billboards in local languages are good ways to create awareness. But to ensure action, support is required and this should be planned.
10. **Cross visits** – a most effective strategy: farmers can communicate in their own language.
11. **Farmer's science meet** – apart from field days (which give an opportunity for the farmers to see): organize village flora to discuss the results obtained.

Vertical scaling up

Partnership with NGOs To reach larger areas and more people, partnerships with other NGOs and CBOs, youth organizations, etc., are useful. While fostering partnership, remember these things are Partners should have shared vision and values; Adequate time is necessary in the selection of partner NGOs; Capacity building of NGOs/CBOs should be a priority. Long term strategies and building collegiate types of relationship should receive priority; All transactions should be transparent. Adequate support should be provided to improve program and financial management of the organizations; Inclusion of local farmers in various trainings would be useful and Partnership should focus on long-term institutional linkages.

Partnership with government agencies

Working with the Department of Agricultural Extension/Department of Fisheries achieves wider coverage. As there are many differences in the working environment and approaches used, strengthening of these partnerships require an understanding of each other. Some of the challenges encountered are: bureaucratic systems, hierarchical attitudes, non-acceptance of NGOs as equal partners, poor pay structure in the public sector and lack of pro-poor policies.

Partnership with research and development

Partnership with the universities and research organizations has helped in addressing many issues and in stimulating research for farmers. Many of the findings of these research institutes are transferred to farmers for further testing and adaptation. On the other hand, practical problems encountered by the farmers are fed back to researchers.

Farmer Producer Organizations (FPOs)

FPO is a generic name, which means and includes farmer- producers' organization incorporated/ registered either under Part IXA of Companies Act or under Co-operative Societies Act of the concerned States and formed for the purpose of leveraging collectives through economies of scale in production and marketing of agricultural and allied sector. However, FPOs registered under Co-operative Societies Act of the State (including Mutually Aided or Self-reliant Cooperative Societies Act by whatever name it is called) for the purpose of this Scheme, is to be insulated from all kinds of interference including in election process and day today management through suitable provisioning in their Memorandum of Association and Bye-laws with a view to encourage healthy growth and development of FPO

Broad Services and Activities to be undertaken by FPOs

Supply quality production inputs like seed, fertilizer, pesticides and such other inputs at reasonably lower wholesale rates. Make available need based production and post-production machinery and equipment like cultivator, tiller, sprinkler set, combine harvester and such other machinery and equipment on custom hiring basis for members to reduce the per 2 unit production cost. Make available value addition like cleaning, assaying, sorting, grading, packing and also farm level processing facilities at user charge basis on reasonably cheaper rate. Storage and transportation facilities may also be made available. Undertake higher income generating activities like seed production, bee keeping, mushroom cultivation etc. Undertake aggregation of smaller lots of farmer-members' produce; add value to make them more marketable. Facilitate market information about the produce for judicious decision in production and marketing. Facilitate logistics services such as storage, transportation, loading/un-loading etc. on shared cost basis. (Market the aggregated produce with better negotiation strength to the buyers and in the marketing channels offering better and remunerative prices.

National Project Management Agency (NPMA)

At national level, a National Project Management Agency (NPMA) will be set up by (Small Farmers' Agri-Business Consortium) SFAC through transparent manner for providing overall project guidance, data maintenance through integrated portal and information management and monitoring. The NPMA will be equipped with the technical team with five categories of specialization in

Agriculture / Horticulture, Marketing and Processing, Incubation Service Provider, IT/MIS and Law & Accounting to provide overall guidance at all India level.

Duties and Responsibilities of NPMA

Drawing contours of the program including structuring of clusters:-

NPMA would start the assignment by chalking out program with detailed SOPs for each stakeholder in the value chain. Identification of target value chains required would be steppingstone for development of the road map. Once the 6 value chains are established, it defines clusters to be chosen for FPO formation. Value chain analysis would also identify both forward/backward linkage mechanisms. NPMA would provide Transaction Advisory services to Implementing Agencies (those who seek their support) for selection of CBBOs. After preparation of action plan for project execution, NPMA may assist Implementation. Agencies in carrying out transaction for engagement of CBBOs for said clusters. Alternately, Implementing Agencies may carry out the selection process on their own.

Post transaction support for effective project/programme implementation:-

After selecting CBBOs as per the requirements, NPMA will be responsible to support SFAC, NCDC & NABARD and other Implementing Agencies including State nominated Implementing Agencies in effective implementation and monitoring of the project execution. Key Performance Indicators (KPIs) based monitoring of CBBOs would be conducted regularly by NPMA. NPMA in turn will appraise N-PMAFSC regarding the performance of CBBOs, formation of FPOs, handholding support provided by CBBOs etc. through detailed MIS submitted on monthly basis for which ICT based MIS Integrated Portal will also be developed.

Assist in structured interface with stakeholders like Ministries, Financial Institutions, Training and Research & Development Institutions

NPMA is desired to bring in specific capabilities into the system. NPMA may also act as extended arm with specific output to N-PMAFSC while interacting with various stakeholders like Central/State Departments, Financial Institutions, 7 Training, Research & Development Institutions or such forum at large. NPMA would help N-PMAFSC to structure the approach, create outreach materials, organize and structure discussions & partnerships etc. To function as National level data repository and will maintain the integrated portal, serving as national platform for FPOs, which will not only cater to meet the data needs (MIS), but will also a function as digital platform for maintaining membership, activities, business growth and annual accounts of FPOs. It will provide requisite data and analysis to DAC&FW, N-PMAFSC and DMI as may be required from time to time

Implementing Agencies

In order to form and promote FPOs in uniform and effective manner so as to achieve the target of formation of 10,000 new FPOs in 5 years and to make the FPOs economically sustainable, initially three Implementing Agencies, namely, SFAC, NCDC and NABARD, shall be responsible to form and promote FPOs. SFAC will form and promote those FPOs to be incorporated under Part IX A of Companies Act. NCDC will form and promote those FPOs to be registered under any Co-operative Societies Act of the States. NABARD will form and promote those FPOs which are registered either under Part IX A of Companies Act or registered under any Co-operative Societies Act of States. In addition to afore-stated three implementing agencies, if any State/Union Territory is desirous to have its own implementing agency, State/UT may approach DAC & FW with details about the State/UT, its agency, activities and experience of the agency etc., and DAC & FW will consider the proposal on experiences and existing manpower required for formation and promotion of FPOs in the region. DAC&FW may, in due course, identify and assign other additional Implementing Agencies to cover various sectors and geographical locations to form 10,000 FPOs as per the need of the programme. The Initial Implementing Agencies as well as the State level or any other Implementing Agencies approved by DAC&FW shall also be supported. Year-wise indicative target for Implementing Agencies- Considering the Implementing Agencies' existence in the States/Regions/Districts/Produce Clusters, their human resource and also their area of specialization, targets are to be tentatively allocated by Project Management Advisory and Fund Sanctioning Committee (N-PMAFSC) in consultation with the Implementing Agencies. In such case, the targets may be interchangeable on requirement basis.

Duties and Responsibilities of Implementing Agencies

Implementing Agencies will closely and cohesively work with CBBOs to ensure that CBBOs perform their activities to make FPOs economically sustainable. Implementing Agencies will also monitor CBBOs to ensure regular data entry on integrated portal with respect to details of respective FPOs. (Implementing Agencies can operate through their MIS portal till Integrated Portal is put in place to ensure uniformity of database on FPO. Once national level Integrated Portal managed through National Project Management Agency (NPMA) is put in place, Implementing Agencies will have to ensure interoperability with Integrated Portal to ensure smooth data transfer and operate in coordination with Integrated Portal design and requirement. NABARD and NCDC will maintain and manage Credit Guarantee Fund (CGF) as per the established procedure. (v) Implementing Agencies in consultation with DAC&FW will formulate rating 9 tools for FPOs to assess them in terms of level of activity, economic viability and sustainability, etc. The rating of the FPOs can be used as an instrument to promote FPOs. (vi) Implementing Agencies will prepare Annual Action Plan and

submit to DAC&FW in advance for consideration of Project Management Advisory and Fund Sanctioning Committee (N-PMAFSC) along with prescribed Utilization Certificate. As assigned by DAC&FW/N-PMAFSC, Implementing Agency will coordinate with concerned Value-Chain Organization(s) regarding stages of formation and promotion of FPOs by those organizations along with FPO management cost & utilization of previous amount along with documentary proof from time to time as well as requirement of Equity Grant for channelizing their claim to N-PMAFSC for payment. (Other Implementing agencies may create with prior approval of DAC&FW, if and when required, their monitoring and data management units for FPOs to manage the growing volume of FPOs and their activities but will coordinate with NPMA to provide all requisite input, as national level data repository.

Cluster- Based Business Organizations (CBBOs)

Implementing Agencies will set up Cluster- Based Business Organizations (CBBOs) at the State/Cluster level to form and promote FPOs as per their requirements; however, targets for produce clusters, full or part of the State or region will be allocated by Project Management Advisory and Fund Sanctioning Committee (N-PMAFSC). The Implementing Agencies will apply due diligence to ensure that professionally competent CBBOs are transparently engaged & have experience in promotion and professional supports to FPOs. In a State, based on geography, produce clusters, cropping pattern, etc., there may be one or more than one CBBO. Even one CBBO may serve more than one State as per requirement. However, CBBOs should be given work according to available human resources with them, their past turnover and work experience etc. The CBBOs should be going concern with professional experience and exposure in formation of FPOs in agriculture and allied sector and providing handholding support to them. The CBBOs should be supported with five categories of specialists from the 10 domain of (i) Crop husbandry; (ii) Agri. marketing / Value addition and processing; (iii) Social mobilization; (iv) Law & Accounts; and (v) IT/MIS in agriculture & agriculture marketing. The CBBOs with requisite number of other technical and supporting staff to be housed/operated from their own offices in respective States or from offices of respective Implementing Agencies, which have selected them.

Duties and Responsibilities of CBBOs

Assist in the implementation of the programme as suggested by the NPMA and as per Scheme guidelines to assist Implementing Agency in cluster identification. Assist in community mobilization - baseline survey, cluster finalization, value chain study, formation of groups and FPO and assist in their periodic meetings. They may seek the assistance of Local Bodies, wherever feasible in identification of proper produce cluster and mobilization of members, registration of FPOs and Training of BODs on roles, responsibilities, management and also capital/ equity mobilization.

Training and capacity buildings of FPOs/farmer groups- Training needs identification, develop training modules, conduct basic training workshops and exposure visits. Encourage and promote social cohesiveness amongst members of FPOs. Preparation and execution of Business Plans for long-term sustainability of FPO- Business plan preparation (for different incubation services), acquiring land, mobilizing equity capital and implementation of Business Plan while assisting in input management, adoption of proper and good agricultural practices through knowledge sharing, aggregation of produce, quality management, assaying, processing, packaging, supply chain development and marketing and market linkages with buyers/processors/exporters, trading, export etc. as may be necessary to ensure long-term sustainability of FPOs. Assist in regular interface with stakeholders like various Government Departments, Financial Institutions, Training, Research and Development Institutions at the cluster level. Assist FPO in availing Equity Grant and Credit Guarantee Facility as per need and growth. Incubation/handholding services for sustainability - Provide support and monitoring in terms of incubation activities; capacity building of BODs and FPO management for sustainability. The incubation/handholding services include ensuring input, market linkages, preparing and implementing related business plans. Facilitate establishment of necessary common pool production, marketing and processing infrastructure facility by the FPO, as may be necessary, to develop the business for long-term viability. Facilitate traceability, compliance and global market connectivity. Review and monitoring of the field team during implementation as per desired outcomes. Assist in communication and dissemination of information to farmers by way of market and crop advisory. The progress reports on all specified target activities are to be submitted periodically to the NPMA. Ensuring programme/project targets are met. Assist in compliance issues of FPO including their capacity building in the subject. Assist NPMA and Implementing Agency in data collection and generating MIS reports/information in the required data sheets. Assist Implementing Agency and NPMA in rating of FPOs as may be necessary. Assist in federating FPOs when necessary for business growth and expansion. Assist FPO in proper financial management and utilization of fund and accounting and timely submission of returns and certificates and any other activities related to implementation, management and monitoring of the project. An advisory body consisting of various stakeholders including state government representative, NGOs, RIs, KVKs or any other support institutions will provide active guidance over project implementation.

CONCLUSION

Clearly there can be no definitive "conclusion" regarding the appropriateness of using participatory approaches in aquaculture but the points listed below can be taken as issues and, in some cases, indicators that can help people decide how to incorporate participatory approaches into their work.

The use of participatory approaches in aquaculture development activities can add value to those activities. During the research phase, they can ensure a better understanding of a wider range of issues and the context in which aquaculture is being considered or applied. They can also help ensure that aquaculture development addresses real issues and needs of potential users. During the implementation phase, they can ensure better implementation and better monitoring of impacts. Participatory approaches cannot be applied across the board to all types of research at all stages. They can make an important contribution to the identification of the research subject by helping researchers understand what the problems and priorities of potential users are. However, some forms of "basic" research are better carried out in a "non-participatory" way as participation by people in the field, particularly the poor, may expose them to increased risk. In the implementation of aquaculture development activities, participatory approaches are important in ensuring that activities are implemented in an appropriate way and can increase the sustainability of activities by giving users the leading role in developing and adapting new activities. The adoption of participatory approaches, and the specific approaches used; need to take into account the capacity of the institutions and practitioners involved. The adoption of participatory approaches is not a panacea. It does not make other approaches unnecessary nor is it always the best approach in all situations. The costs and benefits compared to alternatives need to be carefully assessed. Participatory approaches in aquaculture have been used primarily to contribute to research. Their use as a means of improving understanding of conditions, problems and issues is important but, by concentrating on participatory research, some of the wider potential of approaches may be missed.

ABBREVIATIONS

- CBBO: Cluster Based Business Organizations
- CGF: Credit Guarantee Fund
- DAC&FW: Department of Agriculture Cooperation & Farmers welfare
- FPO: Farmer Producer Organizations
- KPI: Key Performance Indicators
- MIS: Management Information system
- NABARD: National bank for Agriculture and Rural Development.
- NCDC: National Cooperative Development Corporation
- NPMA: National Project Management Agency
- N-PMAFSC: Project Management Advisory and Fund Sanctioning Committee
- SFAC: Small Farmers' Agri-Business Consortium

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Chapter-2

EXTENSION MANAGEMENT TOOLS FOR BETTER EFFECTIVE EXTENSION ORGANIZATION

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Management is concerned with the optimum attainment of organizational goals and objectives with and through other people. Extension management organizations are characterized by many strategies, wide spans of control, democracy, and autonomy. Their management practices cannot be reduced to one standard set of operating guidelines that will work for all organizations continually. However, all managers of professional organizations face the same challenge: to manage one's time, objectives, and resources in order to accomplish tasks and implement ideas (Waldron, 1994).

More formally defined, management is the process by which people, technology, job tasks, and other resources are combined and coordinated so as to effectively achieve organizational objectives. A process or function is a group of related activities contributing to a larger action. Management functions are based on a common philosophy and approach. They centre around the following:

1. Developing and clarifying mission, policies, and objectives of the agency or organization
2. Establishing formal and informal organizational structures as a means of delegating authority and sharing responsibilities
3. Setting priorities and reviewing and revising objectives in terms of changing demands
4. Maintaining effective communications within the working group, with other groups, and with the larger community
5. Selecting, motivating, training, and appraising staff
6. Securing funds and managing budgets; evaluating accomplishments and
7. Being accountable to staff, the larger enterprise, and to the community at large (Waldron, 1994b).

The management functions listed above can be categorized by using the acronym POSDCORB (Bonoma & Slevin, 1978, from Gulick & Urwick, 1959):

- **Planning:** outlining philosophy, policy, objectives, and resultant things to be accomplished, and the techniques for accomplishment
- **Organizing:** establishing structures and systems through which activities are arranged, defined, and coordinated in terms of some specific objectives.
- **Staffing:** fulfilling the personnel function, this includes selecting and training staff and maintaining favourable work conditions.
- **Directing:** making decisions, embodying decisions in instructions, and serving as the leader of the enterprise.
- **Coordinating:** Interrelating the various parts of the work.
- **Reporting:** keeping those to whom you are responsible, including both staff and public, informed.
- **Budgeting:** making financial plans, maintaining accounting and management control of revenue, and keeping costs in line with objectives

A. PLANNING

Planning is the key management function of any extension worker. It is the process of determining in advance what should be accomplished, when, by whom, how, and at what cost. Planning is the process of determining the organization's goals and objectives and making the provisions for their achievement. It involves choosing a course of action from available alternatives.

Planning is the process of determining organizational aims, developing premises about the current environment, selecting the course of action, initiating activities required to transform plans into action, and evaluating the outcome. Generally, there are four major types of planning exercises:

- Strategic,
- Tactical,
- Contingency, and
- Managerial.

(a) **Strategic Planning** involves determining organizational goals and how to achieve them. This usually occurs at the top management level. Strategic planning has been defined as that which has to do with determining the basic objectives of an organization and allocating resources to their accomplishment. A strategy determines the direction in which an organization needs to move to fulfil its mission. A strategic plan acts as a road map for carrying out the strategy and achieving long-term results. Occasionally a large gap exists between the strategic plan and real results. The elements of strategic plans include:

- Organization mission statement – What
- Strategic analysis – Why
- Strategic formulation – Where
- Long-term objectives implementation - When and How
- Operational plans - When and How

In the 1990s, facilitating farmer participation is a major extension activity (Chambers, 1993). Reorganization provides a framework for longer-term commitment to rural development. Organizations and sub units are being encouraged to put work teams in place to ensure that each sector integrates staff and services into a cohesive, focused business unit. Consultation and participation are believed to be essential for the successful development and implementation of organizational goals and objectives. Work-team objectives include:

1. Involving all levels of staff in consultation
2. Designing and implementing a process to develop-goals and objectives for the organization and unit; a strategic process for the next five to ten years
3. Defining and clarifying organizational structures and identifying functions, customers, and service delivery models
4. Identifying changes and staged approaches needed to move from the current situation to what will be required over the next three to five years
5. Identifying and recommending priorities for policy and programme development
6. Incorporating goals for expenditure reduction, service quality improvement, workforce management, accountability, technology, and business process improvement
7. Stating the start date and first report date.

(b) **Tactical Planning** is concerned with implementing the strategic plans and involves middle and lower management.

(c) **Contingency Planning** anticipates possible problems or changes that may occur in the future and prepares to deal with them effectively as they arise (Marshall, 1992).

(d) **Managerial Planning** is usually considered as micro level planning. It helps in combining resources to fulfil the overall objectives of the extension organization. If long-range planning can be linked to "macro," then managerial planning can be linked to "micro." Managerial planning is the implementing of the strategic plan; it is the combining of resources to fulfil the overall objectives and missions of the organization. Managerial planning focuses on the activity of a specific unit and involves what needs to be done, by whom, when, and at what cost. The strategic planning process serves as an umbrella over the management planning process which deals with the following:

1. Establishing individual goals and objectives
2. Forecasting results and potential problems
3. Developing alternatives, selecting alternatives, and setting priorities
4. Developing associated budgets
5. Establishing personnel inputs
6. Establishing specific policies related to the unit
7. Allocating physical resources
8. Appraising how the management unit has succeeded in meeting its goals and objectives

(e) **Long-Range Planning** is vitally important in that it focuses attention on crucial future issues which are vitally important to the organization. It involves studying societal trends and issues, surveying current and anticipated learners' needs, and being aware of long-term research directions and changes in technology.

A.1. Decision making

Closely related to both strategic and managerial planning is the process of decision making. Decisions are concerned with the future and may be made under conditions of certainty, conditions of risk, or conditions of uncertainty. Under conditions of certainty, managers have sufficient or complete information and know exactly what the outcome of their decision will be. Most managerial decisions involve varying degrees of uncertainty. This is a key part of a manager's activities. They must decide what goals or opportunities will be pursued, what resources are available, and who will perform designated tasks. Decision making, in this context, is more than making up your mind. It consists of several steps:

Step 1: Identifying and defining the problem

Step 2: Developing various alternatives

Step 3: Evaluating alternatives

Step 4: Selecting an alternative

Step 5: Implementing the alternative

Step 6: Evaluating both the actual decision and the decision-making process

One of the most difficult steps in the decision-making process is to develop the various alternatives. Often decision trees can help a manager make a series of decisions involving uncertain events. A decision tree is a device that displays graphically the various actions that a manager can take and shows how those actions will relate to the attainment of future events. Each branch represents an alternative course of action. To make a decision tree it is necessary to:

- (1) Identify the points of decision and alternatives available at each point,
- (2) identify the points of uncertainty and the type or range of alternative outcomes at each point,

(3) Estimate the probabilities of different events or results of action and the costs and gains associated with these actions, and

(4) Analyse the alternative values to choose the next course of action.

In extension, the decision-making process is often a group process. The effective manager thus perceives himself or herself as the controller of the decision-making process rather than as the maker of the organization's or agency's decision (Drucker, 1966).

B. ORGANIZING

Once strategic planning and management planning are implemented, organizing to get the job done is next. Organizing is the process of establishing formal relationships among people and resources in order to reach specific goals and objectives. The process, according to Marshall (1992), is based on five organizing principles: unity of command, span of control, delegation of authority, homogeneous assignment, and flexibility. The organizing process involves five steps: determining the tasks to be accomplished, subdividing major tasks into individual activities, assigning specific activities to individuals, providing necessary resources, and designing the organizational relationships needed. Organizational structure is represented primarily by an organizational chart. It specifies who is to do what and how it will be accomplished. There are several aspects to organizing - time, structures, chain of command, degree of centralization, and role specification.

B.1. TIME MANAGEMENT

Time management is the process of monitoring, analysing, and revising your plan until it works. Effective time management involves philosophy and common sense. To function effectively, managers have to be able to prioritize and replace less important tasks with more important ones. Effective and efficient time management encourages us to achieve and be productive while developing good employee relations.

Goals should be specific, measurable, attainable, realistic, and timely (SMART). Effective time managers facilitate planning by listing tasks that require their attention, estimating the amount of time each task will take to complete, and prioritizing them - deciding what tasks are most important to do first and numbering them in rank order. Managers should analyse their daily activities to see which are directed toward results and which simply activities are.

One of the methods that helps allocate time according to priorities is Pareto's Law or the 80/20 rule: if all items are arranged in order of value, 80 per cent of the value will come from 20 per cent of the items.

B.2. Structures: Centralized versus Decentralized, Line versus Staff

Structure, then, can be defined as a system of interrelated jobs, groups of jobs, and authority. There is no standard organizational structure, but most organizations and agencies follow the "Christmas Tree" system with the star (e.g., president, minister) at the top, smaller branches at management levels, and bigger branches at the production levels. As in the tree, the branches are supported by a single trunk, which can be thought of as the organizational mission and objectives. Each part of the tree has its specific function. When all parts work together, the system survives functions productively, has balance, and is a pleasure to see! There are four primary elements in designing an organizational structure:

1. Job specifications - what each division/office/unit is responsible for
2. Departmentalization - the grouping of jobs and responsibilities in common sectors with the objective of achieving coordination
3. Span of control - a definition of how many job roles should be in each unit and which roles require coordination by a unit manager
4. Delegation of authority - assigning the right to make decisions without having to obtain approval from a supervisor

An organization with decentralized authority and very heterogeneous departments will appear very different from one with centralized authority and a very homogeneous product.

B.3. Chain of Command

Once an organization starts delegating authority, then there is automatically a chain of command, "the formal channel which specifies the authority, responsibility and communication relationships from top to bottom in an organization" (Ivancevich, Donnelly, & Gibson, 1980). In complex organizations, there may be bridges from one level to another and there will be complex procedures for maintaining the chain of command.

Centralized organizations are those in which the key authority and decision-making role is focused on one or a very few individuals. Where authority is distributed among many managers, then one can see a decentralized structure. Centralization refers to authority, whereas centrality refers to the proximity to the organization's stated mandate and objectives.

Another important point in terms of structure is the concept of line and staff functions. Line functions are those involved in creating, developing, and delivering a programme. Staff functions are those that are of an advisory and consultative order. Line functions contribute directly to the attainment of the organization's objectives, and staff functions contribute indirectly.

C. Staffing

A key aspect of managing an adult and extension enterprise is to find the right people for the right jobs. The staffing function consists of several elements:

1. Human resource planning - how many staff resources, with what backgrounds, and at what cost can be considered for objectives implementation?
2. Recruitment - how does one proceed to find the person with the appropriate mix of education, experience, human relations skills, communications skills, and motivation? An important component of the recruitment process is writing the job description. Indications of preferred educational background as well as salary range must also be included.

C.1. Staff Selection

The process of staff selection involves evaluating candidates through application forms, curriculum vitae, and interviews and choosing the best candidate for the specific job responsibility.

As a means of giving some structure and design to the staffing process, the following guidelines are useful (Dark, 1973). Each job interview should be characterized by:

1. A clear definition of the purpose of the interview
2. The presence of a structure or general plan
3. The use of the interaction as a learning experience in a pleasant and stimulating atmosphere
4. The creation and maintenance of rapport between the interviewer and interviewee
5. The establishment of mutual confidence
6. Respect for the interviewee's interest and individuality by the interviewer

7. An effort to put the interviewee at ease
8. The establishment and maintenance of good communication
9. The willingness to treat what is being said in proper perspective
10. The just treatment of each interviewee

C.2. Staff Orientation

This is the process of formally introducing the selected individual to the particular unit, to colleagues, and to the organization. The selected person should be aware of the mission and objectives of the unit, the nature of responsibilities and level of authority, the degree of accountability, and the systems and procedures followed to accomplish the tasks associated with the job.

D. Directing

Directing is more related to leading and leadership styles. Leadership in this context means the process whereby a work environment is created in which people can do their best work and feel a proprietary interest in producing a quality product or service.

McGregor (1960) proposed that managers might assume that employees are motivated in one of two ways. His dichotomy was labelled theory X and theory Y. Theory X relates to traditional management whereby managers assume that they must control, coerce, and threaten in order to motivate employees. Theory Y, the opposite of theory X, suggests that employees want to do challenging work, that they are interested in accepting responsibility, and that they are basically creative and want to be involved in policy development and objective setting.

E. Coordinating

This important stage consists of inter-relating the various parts of the work. It involves coordinating the various job roles and responsibilities of yourself and other staff, of your unit and other units within the same organization, and of your unit with the broader community.

There are two forms of coordination:

- (1) Vertical reporting to your supervisor(s) and to your staff, and
- (2) Horizontal reporting to your colleagues and your management team.

How, then, can effective coordination be accomplished?

- Coordination needs professional, competent leadership, a democratic style that leads to trust, open communication, and ease of information flow.
- Coordination needs a constant definition and communication of mission and objectives that are understood by all managers.
- Coordination, to be effective, must have open, two-way channels of communication.
- Coordination involves a sharing atmosphere as well as commonly agreed on direction. Because effective coordination requires cooperation and communication, the meeting technique is still the most effective format for assuring the interrelationships among the various job responsibilities.

F. Reporting

This function, closely related to the coordinating function, consists of keeping those to whom you are responsible informed as to what is going on. It is essential that competent managers keep the information flowing, especially in this age when there is so much information being transmitted in so many forms. The reporting function is almost an evaluation function since it compares how you are doing with what you set out to do. It reviews your objectives and determines to what extent you are

meeting your objectives. It also uses the vertical and horizontal flows of information as presented previously.

One of the key elements of the reporting function is the annual report. Such a report gives you the opportunity to summarize programmes, projects, and activities and to provide statistics as well.

G. Budgeting

This management function includes fiscal planning, accounting and revenue, and expense controls.

In many cases, an organization specifies the budget system being used. It could be based on

- (1) Historical data (what you had last year with variations for the coming year);
- (2) 0-based data where the budget is created and justified on a line-item basis according to programmes and priorities;
- (3) An MBO system - management by objectives whereby specific objectives are funded; and
- (4) A PERT system - programme review and evaluation technique - where each programme is reviewed and assessed according to its contribution to specific goals. The key elements of any budget system consist of:

- (1) Determining what line items are necessary in terms of objectives;
- (2) In line with policies, determining the financial amounts for each line;
- (3) Determining overhead, surplus, and/or profit margins;
- (4) Determining anticipated revenue from fees, grants, gifts, contracts, etc.;
- (5) Drafting a budget with specific amounts and justifications; and
- (6) Discussing and making adjustments to produce a working budget.

The budget process is not in a vertical something that one does only once a year; it is a continual process of regular review and possible revision. Budget management, then, consists of three parts:

- (1) Budget determination - allocating revenue according to priorities and by line items;
- (2) Budget accountability - how well the anticipated budget matches reality; and
- (3) Using a +, 0 - notation in answering the questions and by placing the notations in the boxes on the chart.

Paradigm Based Management

A more organic management method is based on paradigms. A paradigm refers to a method of approaching a problem or situation and the kinds of assumptions, values, and attitudes associated with thinking about the situation (Ottaway & Terjeson, 1986). It connotes a pattern or structure that is dynamic, changeable, and responsive to the environment (Waldron, 1994).

The use of models is common practice in management thinking. Models are useful because various aspects of the structures can be viewed from different positions that can then lead to new perspectives. The goal of modelling is to achieve an accurate yet relatively simple representation of a system, complex entity, or reality usually on a smaller scale. An important aspect of model building is collecting and preparing data. Information gained from the data is the foundation of the model.

The model should reflect the major aspects of the problem as simply as possible. The constants, if any, within the model should be known with a high degree of precision. To accomplish this broad perspective, the extension manager should adopt a systems approach to model building and should focus not only on the immediate problem, but also on interrelationships that exist within and outside the organization and how these relationships will be affected (Stevenson, 1989). To examine which model fits the needs of a particular extension manager's programme and his or her criteria, one can create a matrix similar to Table 1. By answering questions similar to those presented below Table 1,

one can develop a good understanding of the specific model which would apply to extension programmes.

TABLE 1. MODEL CLASSIFICATION COMPARISON MATRIX.

(Source: Waldron, 1994a, p. 93)

Model	Scholarly-Research	Professional	Entrepreneurial	Missionary	Innovation	Competent Practitioner
1.Perceived Academic Status						
2.Mission, Mandate, and Objectives						
3.Reward System						
4.Decision Making Authority						
5.Market Orientation						
6. Accountability						

CRITERIA FOR MODEL CLASSIFICATION

Perceived status

1. Is the unit headed by a dean?
2. Does the chief manager have tenure?
3. Is the boss a professor?
4. Does the unit have representation on senate, governing council, or the key academic decision-making body?
5. Are the employees expected to do research and publish in journals? Is the dean or director expected to have a doctoral degree?

Mission, mandate, objectives

1. What model would best apply to your mission, mandate, and objectives?
2. Is your unit perceived as a money maker?
3. Do your objectives give priority to research, innovation, product development, or product delivery?

Reward system

Ways of rewarding you for your effort:

1. Increments negotiated by a union or association
2. Salary negotiated with a senior administrator
3. Bonuses based on meeting targets
4. Ratings by colleagues

Decision-making authority

1. Does your unit decide on what courses and programmes need to be delivered?
2. Does your unit determine course content?
3. Can your unit allocate and reallocate budgets?
4. Does your unit have a unit-controlled development fund?
5. How independent do you think the unit is in terms of decision making?

Market orientation

1. Is your unit market driven?
2. Do you publish a market-oriented course calendar?
3. Do you use charge cards for tuition fee payment?
4. Do you publish regular press releases and media information?
5. Do you do market research and needs assessments?

Accountability

1. Do you report to a president or vice president-academic?
2. Do you present proposed policy to a senate or governing council?
3. Do you make use of a community advisory council?
4. To whom would you send an annual report?

Systems theory of Management

Modern management is characterized by two approaches, the systems and the contingency approach. The systems approach views the organization as a total system comprised of interacting subsystems, all of which are in complex interaction with the relevant external environment (Lerman & Turner, 1992). Organizations are pictured as "input-transformation-output systems" that compete for resources.

Survival and prosperity of an organisation depends on the efficiency of the transformation process used by the organization to produce its goods and services, on worker motivation, and on cooperation. Efficiency of the transformation process is increased by finding more rational ways to organize and perform the work and by deciding how to make the best use of available technology, resources, and personnel. Top management has primary responsibility for designing an appropriate organizational structure, determining authority relationships, and coordinating operations across specialized subunits of the organization (Yuki, 1994). An extension service is expected to produce some beneficial output.

Contingency theory of management

Theories that explain management effectiveness in terms of situational moderator variables are called contingency theories. The contingency or situational approach recognizes that neither the democratic nor the autocratic extreme is effective in all extension management situations. Different traits are required in different situations. Table 2 describes the major features of five contingency theories and the Vroom and Yetton (1973) normative decision model. The table makes it easier to compare the theories with respect to content and validation. A synopsis of each is presented below the table.

TABLE-2. COMPARISON OF SIX CONTINGENCY THEORIES

(Sources: Yuki, 1994, p. 311).

Contingency Theory	Leader Traits	Leader Behaviour	Situational Variables	Intervening Variables	Validation Results
Path-Goal Theory	None	Instrumental, Supportive, Participative, Achievement	Many aspects	Expectancies, Valences, Role Ambiguity	Many Studies, some support
Leadership substitutes Theory	None	Instrumental, Supportive	Many aspects	None	Few Studies, inconclusive
Multiple linkage model	None	Many aspects	Many aspects	Effort, ability organization, teamwork, resources, external coordination	Few Studies, inconclusive
LPC Contingency Model	LPC	None	Task Structure, L-M Relations	None	Many studies, some support
Cognitive Resource Theory	Intelligence, Experience	Directive	Stress Group Support	None	Few studies, some support
Normative Decision Theory	None	Decision Procedures	Many aspects	Decision Quality and acceptance	Many studies, moderate support

- The path-goal theory examines how four aspects of behaviour influence subordinate satisfaction and motivation.
- Leadership substitute theory identifies aspects of the situation that make leadership behaviour redundant or irrelevant.
- The multiple linkage models use a model of group performance with six intervening variables to explain leadership effectiveness.
- Fiddler's LPC (Least Preferred Co-worker Scale) model deals with the moderating influence of three situational variables on the leadership between a leader trait (LPC) and subordinate performance.
- Cognitive resources theory examines the conditions under which cognitive resources such as intelligence, experience, and technical expertise are related to group performance.

CONCLUSION

Organizations constantly encounter forces driving them to change. Because change means doing something new and unknown, the natural reaction is to resist it. Extension programme managers must overcome this resistance and adopt innovative and efficient management techniques to remain high performers. Overwhelmingly, current management wisdom touts the goal of getting decisions made as low down in the organization as possible.

The basic idea is that since people closest to the work are likely to know the most about solving problems in their areas, they should be involved in the decisions concerning those areas.

There is still considerable discussion as to whether management is an art or a science, a philosophy or a skill. No one sustainable model can holistically encompass all management situations and environments. Management can be defined as the rational assessment of a situation and the systematic selection of goals and purposes; the systematic development of strategies to achieve these goals; the marshalling of the required resources, the rational design, organization, direction, and control of the activities required to attain the selected procedures (McNeil & Clemmer, 1988).

Factors that affect managers include level of management, size of the organizational unit, and function of the unit, lateral interdependence, crisis conditions, and stage in the organizational life cycle.

Despite all these demands and constraints, managers do have some alternatives. They have a choice in what aspects of the job to emphasize and how to allocate their time. Generally managers are engaged in four types of activities: 1) building and maintaining relationships, (2) getting and giving information, (3) influencing people, and (4) decision making.

RELATED DEFINITION

A. Path Goal Theory

Effective leadership strategies can improve employee satisfaction, boost productivity and promote better business alignment. One theory many organizations and leaders consider when deciding how to best manage their teams is the path-goal theory. Understanding how this theory works and how to employ it in your own practices can help you motivate employees and improve team performance.

What is path-goal theory?

The path-goal theory of leadership says that a leader's style, traits and behaviours influence team productivity, motivation and satisfaction. This theory comes from expectancy theory, which is the assertion that individuals act in a certain way based on the expectation of a desirable outcome.

Path-goal theory assumes that a leader complements their employees and can compensate for their shortcomings. Effective leaders, according to this theory, give their employees a clear path to follow to achieve goals, removing challenges and obstacles. The theory provides guidance for ways leaders can encourage and support employees in reaching their goals.

4 TYPES OF PATH-GOAL THEORY

Path-goal theory identifies four key types of leadership behaviour:

1. Achievement-oriented

With this type of leadership style, the leader focuses on encouraging excellence by setting challenging goals. Leaders encourage employees to pursue their highest level of performance and the leader trusts their ability to handle this.

The leader encourages employees to display excellent work achievements and be continually improving. Employees who are comfortable working fully independently and have strong problem-solving skills are suitable for this type of management.

2. Directive path-goal clarifying

In directive leadership, the leader provides employees with clear guidelines for the processes and expectations for them, as well as how they should best carry out tasks. This style of leadership aims to reduce ambiguity in job functions and clarify work processes.

This can give employees a higher level of certainty regarding procedures, policies and rules. Leaders define the relationship between performance goals and rewards, including pay increases and promotions, explicitly to promote clarity and transparency. With this style of leadership, leaders supervise employees closely, which makes it most appropriate for inexperienced employees who need guidance and to be checked on regularly.

3. Supportive

With supportive leadership, the leader pays attention to the needs and well-being of employees and makes work pleasant for them by being friendly and empathetic. Leaders who operate under this style treat employees with respect and offer support when needed. This management style is useful when employees have personal problems or need a boost in motivation or confidence.

4. Participative

This type of leadership behaviour involves consulting with employees on important decisions related to work, task goals and paths to reach goals, enabling the employee to be directly involved in the decision-making process. This typically results in the employee exerting greater effort to achieve the goals they selected.

Leaders often use this style of leadership when employees are highly involved or have specialist knowledge. In these situations, their insight can be invaluable to the leader.

A.1. Strategies for using path-goal theory

Here are some strategies you can use the different path-goal leadership styles to inform your own leadership strategies:

A.1.1. Achievement strategies

For this approach to be successful, leaders must display complete confidence in their team's ability to overcome obstacles. Set high expectations for employee goals. Create a list of objectives that you want your team members to complete and a time frame in which they're required to have them completed.

Express your confidence that the goal is achievable, even if there is a tight deadline attached to it. Tie the completion of the objectives to a higher goal or specific project or priority. This style of leadership often works best with employees who have a low need for affiliation or who are comfortable working independently.

It also works well for employees who prefer less structure and who have a high belief in their own abilities. This style is most effective in professional work environments, such as scientific or technical, or achievement environments like sales.

A.1.2. Directive strategies

Because this style of leadership is task-oriented, where the leader provides strict guidelines, goals and performance standards, the best way to apply this style is through extensive training or one-on-one coaching.

Break down bigger goals into smaller steps with milestones. When using this leadership style, try to leverage rewards for achievement, particularly when employees reach important milestones.

This style works well for employees who prefer structure or who require more clarity to understand how external factors influence their role or responsibilities. It also works well for employees who lack confidence in their own abilities.

A.1.3. Supportive strategies

With this leadership style, leaders show genuine concern about the needs of their employees and want to do all they can to help the employees reach their goals. It is most effective in situations where relationships and tasks are physically or psychologically challenging.

Supportive leaders can focus on creating a warm and friendly environment and showing employees they're friendly and approachable in the event of a problem or concern. By being empathetic and motivating, managers can develop more cohesive cultures and safe work environments.

A.1.4. Participative strategies

Using this theory, employees can take part in goal setting. Meet regularly with employees to discuss goals and come up with a strategy together for how you plan to achieve those goals. Encourage employees to provide feedback regarding progress. This can help you work together to reach objectives, improve processes and elevate business strategies.

A.1.5. Key takeaways:

Path-goal theory is the belief that managers can affect their team's performance by adapting their leadership style to fit the specific needs of their teams.

Path-goal theory identifies four primary types of leader behaviours: achievement-oriented leadership, directive path-goal clarifying leadership, supportive leadership and participative leadership.

According to the path-goal theory, employee motivation depends on leadership support and a manager's ability to compensate for team challenges effectively.

B. Leadership Substitute Theory

Leadership substitute theory focuses on aspects of the organisation, followers and tasks that act as substitutes for leadership or negate the effect of leadership. The notion is that contingencies influence the leader's choices to achieve optimal effectiveness in task and relational guidance.

Leadership substitute theory focuses on aspects of the organisation, followers and tasks that act as substitutes for leadership or negate the effect of leadership. The notion is that contingencies influence the leader's choices to achieve optimal effectiveness in task and relational guidance. A practical example makes a situation of leadership substitutes clear. When Gordon (1994) observed the arrival of an ambulance at the emergency ward to deliver a patient, he noted that the crew of hospital personnel did their tasks without any supervision. Each crew member appeared to have a specific task that they accomplished without any apparent supervisory intervention. Characteristics of the employees and characteristics of the task render direct leadership unnecessary—it could even frustrate the work.

Leadership substitute theory was introduced by Kerr and Jermier (1978). Leadership substitutes have their origin in (combinations of) three possible sources: characteristics of followers/members, of tasks and of the organization (Kerr & Jermier, 1978). Later, Jermier & Kerr (1997) explained that the core of the leadership substitute framework was not just the interpersonal interactions between managerial leaders and subordinate followers, but the idea that managerial leadership works through technological, structural and other impersonal processes in the organisation to achieve its effects. They intended to offer a broader perspective of leadership substitute theory, but research focused on

the substitute factors (Dionne et al., 2005). Leadership substitute research has generally kept a rather narrow focus on the leader-situation fit, i.e., on the desired leadership behaviour in different situations. Leadership substitute theory was developed almost half a century ago, when organisations and thinking about organisations were different, when the internet and globalisation were in earlier phases of development and when employees' values and the nature of work were different.

Leadership substitute theory is considered as a contingency theory. Contingency leadership theories attempt to identify the appropriate style of leadership behaviour in different situations. There are various contingency theories (Ayman & Lauritsen, 2018; Gardner et al., 2017). Path-goal theory (House, 1971) is an example, and describes how a leader helps to create a path for subordinates to reach their goals and the goals of the organization by engaging in different types of leadership like directive, achievement-oriented, supportive, and participative leadership behaviours, as the path-goal theory's independent variables. Well known, and frequently applied till the present day, it is the model of situational leadership (Hersey et al., 1979) that specifies which kind of actions a leader can employ for four different maturity situations of the employee. The key to situational leadership is to accurately assess the maturity level of the follower and to model leadership behaviour appropriately.

Leadership substitute theory was presented half a century ago. Significant developments in society and organisations have taken place during the last decades. Leadership substitutes are very common in modern-day organisations. The question arises whether leadership substitute theory is still relevant for present-day organisations. The objective of this paper is to investigate leadership substitute theory, its appeal and the critiques on conceptual and methodological issues, and to examine the relevance of leadership substitute theory for present-day organisations where digital structures and more shared leadership are prominent. Such examinations of leadership substitute theory in a broader sense in current organisational conditions have not been conducted, and this paper wants to contribute to filling this gap. It follows the line of thought that managerial leadership works through technological, structural and other impersonal processes in the organization to achieve its effects, away from the direct leader-employee fit in traditional organizational situations.

Research for this paper was done in two quite distinct business contexts, namely the Netherlands and Albania (Nientied & Martin, 2021; Nientied, Toska, & Gjiknuri, 2023). Research methods applied for this paper include a review of theory, empirical qualitative studies of leadership practices and interviews. This paper presents two cases of leadership situations in the Netherlands and Albania, which are illustrations from organisational practices. They are not representative and cannot be because situations in organisational forms and leadership practices differ widely.

B.1. Fundamentals of Leadership Substitute Theory

For leadership effectiveness, it is important to identify situational variables that may substitute for the leader's behaviour, enabling the leader to adapt his or her behaviour accordingly. Substitutes for leadership are factors that replace leadership behaviours and diminish or attenuate the ability of leaders to influence subordinate criterion variables (Lisak et al., 2022). Kerr and Jermier (1978) researched various aspects of a situation that make task-oriented behaviour ("instrumental leadership") or relations-oriented behaviour ("supportive leadership") by the designated leader redundant or ineffective. They identified 14 characteristics believed to neutralize and/or substitute for relationship- and/or task-oriented leadership. Schriesheim (1997) describes substitutes as factors directly related to employee outcomes replacing the need for leadership (e.g., experienced employees need less leadership), and neutralizers are factors that inhibit the leader's behavioural influence on

the outcome (e.g., HRM systems and not the person of the leader determining bonuses). Kerr and Jermier’s research suggested that “... when certain substitutes for leadership existed, the leader’s supportive behaviour failed to significantly predict the criterion” (Dionne et al., 2005: p. 170). Situations in organisations vary in their leadership substitutes. The 14 characteristics that count as substitutes for leadership are presented in Table 1.

A short explanation of some terms: “professional orientation” means that employees typically cultivate horizontal rather than vertical relationships and give greater confidence to peer review processes than to hierarchical evaluations. “Methodologically invariant” means that tasks may result from serial interdependence, from machine-paced operations, or highly standardized work methods. Tasks with clear and direct knowledge of the results of performance (e.g., sales figures) render performance feedback from the formal leader more insignificant (Kerr & Jermier, 1978: p. 379). Later versions of the leadership substitute model included some other characteristics or defined them in another manner, summarised in the overview of Podsakoff et al. (1996).

TABLE-1. SUBSTITUTES FOR LEADERSHIP

(Source: Kerr & Jermier, 1978: p. 378).

Sl.	Characteristic	Will tend to neutralize	
		Relationship-oriented, supportive, people-centred leadership: coordination, support and interaction facilitation	Task-oriented, instrumental, job-centred leadership; initiating structure, goal emphasis, and work facilitation
	Of the subordinate		
1	Ability, experience, training, knowledge		X
2	Need for independence	X	X
3	“Professional” orientation	X	X
4	Indifference to organizational reward	X	X
	Of the task		
5	Unambiguous and routine		X
6	Methodologically invariant		X
7	Provides its own feedback concerning accomplishment		X
8	Intrinsically satisfying	X	
	Of the organization		
9	Formalization (explicit plans, goals, and area of responsibility)		X
10	Inflexibility (rigid, unbending rules and procedures)		X
11	Highly-specified and active		X

	advisory and staff functions		
12	Closely-knit, cohesive groups	X	X
13	Organizational rewards not within the leader's control	X	X
14	Spatial distance between superior and subordinates	X	X

Kerr and Jermier (1978: p. 400) describe effective leadership as the ability to supply subordinates with needed guidance and good feelings which are not being supplied by other sources. The characteristics of tasks, the organisation and subordinates can reduce the effect of (or need for) leader behaviour on team member motivation. For example, a leader does not have to give directions when team members have much experience and know what to do and how to do it. The case of the hospital emergency ward speaks for itself. Experienced team members with intrinsic motivation need less task-related leadership—it can be demotivating for team members when team leader tells them what they already know and what they should do. Some situational variables (called neutralisers) prevent a leader from influencing member performance or satisfaction. Systems and procedures may structure the work and satisfaction of the team member (e.g. digital work flows, standard operational procedures, various HRM systems) and cannot be changed by a leader. Howell et al. (1986) refined the leadership substitute concept into a typology of moderator (contingencies) variables based on the mechanisms by which moderators operate. Moderators are classified as neutralisers/enhancers, substitutes/supplements, or mediators depending on how they affect leader behaviour-criterion relationships. For the purpose of this paper, the typology is less relevant—and its relevance was also questioned in empirical research (Muchiri & Cooksey, 2011). A question Jermier and Kerr (1997) asked themselves in a later reflection on leadership substitute theory was how combinations of substitutes work in practice—the effects of a single substitute may be weak but in combination they could be more significant.

C. Multiple Linkage Model

Multiple-linkage model includes four variables: managerial, intervening, criterion, and situational (Yuki, 2006). This model describes “the interacting effects of managerial behaviour and situational variables on the intervening variables that determine the performance of a work unit” (Yuki, 2006, p. 228).

Yukl's Multiple-Linkage Model Yukl's linkage model of management is based on the notion of shared direction (Winston and Patterson, 2005), between organization process and managerial influence on those processes through leadership to achieve a common goal. In plain terms at the interpersonal levels, the manager influences and persuades followers to work towards' the organizational mission and objectives (Winston and Patterson, 2005). Types of variables in the Yukl management model include subordinate effort, subordinate ability, organization of work (task structure), teamwork & cooperation, availability of resources, and external coordination of work unit operations with other parts.

These interaction variables are designed to raise performance. The strength of Yukl's model is that it unifies managerial behaviour, and has given rise to a modern model of managerial science that is

applicable to all organizations, in the new world of diversified corporation composition that exists today in the globalized environment. Research says it has systemized seven earlier taxonomies of "managerial behaviour to devise the model that is fit of the global era, devising fourteen areas of universal agreement across all organizations (Leithwood, Day, Sammons, Harris and Hopkins, 2005) Concerns over weaknesses have arisen from the model's lack of universal criteria for evaluation of the efficiency of the manager. According to the model, the manager has the tools for influencing and leading employees, but measure of performance for how well the manger applies these specific interventions are vague and undeveloped, and are the task left to the individual organizations to develop. They are normally related to goal achievement and speed and relative rate of the achievement of a given set of organizational projections (The Problem, 2000). There is also the challenge of leader identification and leader definition. What is leadership? Research reveals many definitions (Winston and Patterson, 2005) of what

D. LPC Contingency Theory

To help you determine your leadership style, Fiedler developed the Least Preferred Co-worker (LPC) scale. The scale asks you to describe the co-worker you least prefer to work with. The more positively you rate your least preferred co-worker on a variety of different criteria, the more relationship-oriented you are.

D.1. Fiedler's Contingency Model starts with the aforementioned LPC scale.

The way the LPC scale works is a leader is asked to think of their least preferred co-worker and rate them on numerous bipolar adjectives. For an example of one adjective, you could select a value between one for "unkind" and eight for "kind" on an eight-point scale of "kindness."

After the full scale has been completed, the values are totalled to give an LPC score, which is then compared to different ranges to tell the individual their leadership style. The three different leadership styles are:

1. Relationship-oriented;
2. Task-oriented; or
3. Somewhere in-between.

Fiedler's LPC scale is designed to help match leaders and groups for maximum effectiveness. A leader who is effective in one context may be poorly matched to another.

- Are more concerned with establishing good interpersonal relations;
- Are somewhat more considerate;
- Tend to be lower in anxiety;
- Get along better with one another;
- Are more satisfied to be in a group;

Derive satisfaction from successful interpersonal relationships and enjoy groups regardless of task success; and Gain self-esteem through recognition by others.

If a relationship-oriented leader's needs are threatened, these leaders "will increase [their] interpersonal interaction in order to cement [their] relations with other group members." Therefore, a relationship-oriented leader will increase focus on the task "in order to have successful interpersonal rations."

Individuals, who have a low LPC score, task-oriented leaders, link a co-worker's personality characteristics to their poor work performance; that is, they believe someone who performs poorly has negative underlying personality traits. They:

- Are more concerned with the task;
- Are more punitive toward poor co-workers;
- Are more efficient and goal-oriented;
- Derive satisfaction from task performance and enjoy groups to a greater degree when they are successful; and
- Gain self-esteem through successful performance of the task.

If a task-oriented leader's needs are threatened, these leaders will interact in a way that will ensure task success. Thus, a task-oriented leader will increase focus on interpersonal relations "in order to achieve task success."

D.2. Assessing the Situation

In order to assess the situation, Fiedler states that there are three variables that should be considered. The three variables can be described as follows:

1. The leader's position power: "The potential power which the organization provides for the leader's use";
2. The structure of the task, including:
 - "The degree to which the correctness of the solution or decision can be demonstrated" (i.e. decision verifiability),
 - "The degree to which the requirements of the task are clearly stated or known" (i.e. goal clarity),
 - "The degree to which the task can be solved by a variety of procedures (i.e. goal path multiplicity), and
 - "The degree to which there is more than one correct solution (i.e. solution specificity); and
3. The interpersonal relationship between the leader and group members, including the leader's:
 - Affective relations with group members,
 - Ability to obtain acceptance, and
 - Ability to engender loyalty.

Based on these variables, five types of group situations come into existence. They include:

1. Informal groups with structured tasks (i.e., structured, weak position power);
2. Groups with structured tasks and powerful leader positions; specificity); and
3. Groups within organizations in which leadership is distributed over at least two levels of management (varying conditions);
4. Creative groups with unstructured tasks and weak leader position power; and
5. Groups with unstructured tasks and powerful leaders.

D.3. Matching the Group Situation with the Leadership Style

Fiedler found that "the appropriateness of the leadership style for maximizing group performance is contingent upon the favourableness of the group-task situation." More specifically, he found that the aforementioned group situations are best matched to the following leadership styles.

Group Situation	Leader-Member Relations	Leadership Style
Informal groups with structured tasks	Good	Task-oriented
	Moderately poor	Relationship-oriented
Groups with structured tasks and powerful leader positions	Good	Task-oriented
	Moderately poor	Relationship-oriented
Creative groups with unstructured tasks and weak leader position power	Good	Relationship-oriented
	Moderately poor	Task-oriented
Groups with unstructured tasks and powerful leaders	Good	Task-oriented
	Moderately poor	Relationship-oriented

Regarding groups within organizations in which leadership is distributed over at least two levels of management, results were somewhat different. In these cases, when groups had high position power and structured tasks or low position power and unstructured tasks:

- Task-oriented leadership was effective when leader-member relations were either good or poor; while
- Relationship-oriented leadership was effective with moderate leader-member relations.
- Altogether, the results of Fiedler’s studies can be best summarized by the following:

When leader-member relations are moderate, a relationship-oriented leader is best-suited. This is because member relations are in flux and can therefore be positively influenced by the more considerate and personable relationship-oriented leader.

When leader-member relations are either poor or strong, a task-oriented leader is best-suited. This is due to the task-oriented leader’s objectivity, organization, and decisiveness.

E. Cognitive Resource Theory

Cognitive resource theory (CRT) is a leadership theory of industrial and organisational psychology developed by Fred Fiedler and Joe Garcia in 1987 as a re-conceptualisation of the Fiedler contingency model. The theory focuses on the influence of the leader's intelligence and experience on their reaction to stress.

Cognitive resource theory (CRT) is a leadership theory of industrial and organisational psychology developed by Fred Fiedler and Joe Garcia in 1987 as a reconceptualization of the Fiedler contingency model. The theory focuses on the influence of the leader's intelligence and experience on their reaction to stress.

The essence of the theory is that stress is the enemy of rationality, damaging leaders' ability to think logically and analytically. However, the leader's experience and intelligence can lessen the influence of stress on his or her actions: intelligence is the main factor in low-stress situations, while experience counts for more during high-stress moments.

Originating from studies into military leadership style, CRT can also be applied to other contexts such as the relationship between stress and ability in sport. The theory proposes the style of leadership required in certain situations, depending on the degree of stress, situational control and task structure. Training should focus on stress management so that a leader's intellect can be most

effectively utilised and also to train leaders to take a directive approach when their knowledge will benefit the group but a less directive approach when group member abilities will contribute to performance.

The cognitive resources of a leader refer to their experience, intelligence, competence, and task-relevant knowledge.

Blades undertook studies in army mess halls, investigating the effect of group member and leader intelligence on overall organisational performance. The effect of intelligence on performance was influenced by how directive the leader was and both the leader's and members' motivation. He concluded that a leader's knowledge can only contribute to performance if it is efficiently communicated, hence requiring a directive leader and also a compliant group that is willing to undertake the commands of the leader. A further study on military cadets measuring levels of interpersonal stress and intelligence showed intelligence to be impaired under conditions of stress.

E.1. Predictions

1. A leader's cognitive ability contributes to the performance of the team only when the leader's approach is directive. When leaders are better at planning and decision-making, in order for their plans and decisions to be implemented, they need to tell people what to do, rather than hope they agree with them. When they are not better than people on the team, then a non-directive approach is more appropriate, for example where they facilitate an open discussion where the ideas of team can be aired and the best approach identified and implemented.

2. Stress affects the relationship between intelligence and decision quality. When there is low stress, then intelligence is fully functional and makes an optimal contribution. However, during high stress, a natural intelligence not only makes no difference, but it may also have a negative effect. One reason for this may be that an intelligent person seeks rational solutions, which may not be available (and may be one of the causes of stress). In such situations, a leader who is inexperienced in 'gut feel' decisions is forced to rely on this unfamiliar approach. Another possibility is that the leader retreats within him/her, to think hard about the problem, leaving the group to their own devices. In situations of stress cognitive abilities are not task-orientated but focus on task irrelevant features caused by stress of the situation or of their superior.

3. Leader's abilities contribute to group performance only under conditions where the group favours the leader and is supportive of the leader and their goals. In situations where the group members are supportive, the leader's commands can therefore be implemented

4. Leader's intelligence correlates with performance to the degree that the task is intellectually demanding. Intellectual abilities can only be utilised efficiently in difficult, cognitively demanding tasks.

Therefore, the leader's abilities and intelligence only aid organisational success when they are directive, in a stress-free situation, the organisations' members are supportive and the task requires high intellect.

E.2. Role of experience

In high stress conditions, experience is a more influencing factor on performance than intelligence as experience leads to perceiving the situation as more structured and less complex. A high level of intellect leads to cognitive complexity thereby perception of greater task complexity and the leader views many alternative solutions, resulting in greater stress. The extent to which a leader has situational control judged by their perception of task structure and their position of power defines

how certain they think the task will be accomplished. Situational control is a key concept in both the contingency model and in CRT. The contingency model predicts that task-motivated leaders (low LPC score) perform most efficiently in situations of high control whereas relationship orientated leaders (high LPC score) perform best in moderately or low structured tasks.

F. Normative Decision Theory

The normative decision model is a theory that helps leaders makes decisions by analysing the extent of team involvement. This decision model was developed by Vroom, Jago, and Yetton in 1973 hence why the normative decision model is also known as the Vroom-Yetton-Jago model.

F.1. Normative Decision Model

Leadership is often characterized by making tough decisions. At times, leaders may be torn between options. One strategy that makes decision-making easier for leaders is the normative decision model. It is a model designed to help leaders know the extent to which they can involve other team members in making decisions. The normative decision-making model was developed in 1973 by renowned professors Victor Vroom, Arthur Jago, and Phillip Yetton. From its developers, the normative decision-making model is also called the Vroom-Yetton-Jago model.

This decision-making model was developed from the normative decision theory that focuses mainly on the prerequisites of choice in a decision-making process. Therefore, this model guides managers through processes involving normative questions. These are questions related to specific issues that will help the manager make the most suitable decision. Normative questions use a subjective condition that mainly focuses on what is good. Therefore, utilizing different decision-making processes that fit a scenario is one of the significant characteristics of this model. For example, managers may require an autocratic process for a situation that warrants quick decisions. The model also offers a simple methodology that can be effectively implemented by any leader regardless of leadership level.

F.2. Influencing Factors of the Normative Model of Decision-Making

The normative decision-making model is mainly centred on the contexts of leaders and employees to guide the decision-making process. Managers should consider factors such as employees' interest levels, the sufficiency of experience and knowledge, problem structure, conflict probability, and consent of employees in the process. Teamwork is required for the effectiveness of the model. However, some factors may limit team participation. They include:

Poor communication: A manager should ensure adequate communication to engage, inform and update employees on the decision-making process. Failure to do this limits participation and encourages employees to form silos that reduce productivity.

Lack of motivation: Leaders who fail to frequently motivate their employees often reduce their productivity leading to limited team participation.

Poor company culture: A company culture that does not focus on employee needs or does not have an open communication system reduces employee productivity. Therefore, a poor culture can also limit team participation.

Companies can articulate various strategies that may boost team participation. Some of the factors that may increase team participation include:

Role clarity: Managers must clearly define each employee's role in the decision-making process. When employees know what they ought to do, they can effectively work together with other members to provide a solution. Thus, it will increase team participation.

A collaborative spirit: Managers should foster collaboration among employees by encouraging input from every employee in decision-making. Employees will then be encouraged to critically come up with different perspectives and ideas, increasing team participation.

Team sizes: Teams with a significant representation of employees do not perform well compared to small teams. Managers should therefore encourage the formation of small teams to increase the participation of employees in the decision-making process.

It is important to note that the participation levels of employees majorly depend on productive leadership. Intrinsic motivation factors, such as recognition, also influence the participation of employees in teamwork. Intrinsic motivational factors are inborn psychological needs.

F.3. What is Vroom and Yetton's normative decision model?

The normative decision model created by Yetton and Vroom is a methodology that factors various strategies and employee involvement levels to make decisions. It uses five main strategies: decision, consult (individual), consult (group), facilitate and delegate. Each strategy considers various levels of employee involvement with some no or full involvement in making decisions.

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*Chapter-3***ADVANCES IN MARKET LED-EXTENSION SYSTEM FOR EMPOWERMENT OF FARM STAKEHOLDER****Debabrata Basu¹ & Saptaparna Karmakar²**¹Professor and ²Research Scholar, Agricultural Extension,

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INTRODUCTION:

In today's rapidly evolving agricultural landscape, the concept of Market-Led Extension Systems has emerged as a transformative force that holds the potential to empower farm stakeholders in multifaceted ways. These systems represent a dynamic approach to agricultural development, one that goes beyond traditional extension services by placing market dynamics and farmer participation at the forefront. In this context, empowerment takes on a profound significance, as it encompasses not only increased income and livelihoods but also the ability of farmers to make informed decisions, mitigate risks, access resources, and actively engage in the agricultural value chain. This introductory exploration delves into the pivotal role that advances in Market-Led Extension Systems play in the empowerment of farm stakeholders, illuminating the myriad ways in which these systems drive positive change in agricultural communities and contribute to sustainable rural development.

Growing populations, improved communications and infrastructure, and urbanization are creating opportunities within the Indian agriculture sector. But majority of India's agriculture system is unorganized. The existing agriculture supply value chain in India is inadequate to meet the demands of the multifaceted Indian agricultural market. As a result, the Indian agriculture sector is experiencing a changeover imbibing smart farming practices and marketing models. The introduction of agricultural market linkages has been reforming the Indian agriculture market and advancing the stage of commercialization of the agricultural sector enormously.

Linking minor primary producers with markets has been acknowledged as one of the foremost issues in both policy and practice for improving livelihoods of millions of poor in the developing countries like India. Recently, there have been many corporate attempts in our country at linking farmers with markets, including those by fresh food retail chains. Retailing presently contributes about 10 per cent to India's gross domestic product and 6-7 per cent of employment (Kalhan, 2007). Food retail chains such as 'Reliance Fresh' of Reliance Retail, 'More' of Aditya Birla and 'Namdhari Fresh' of Namdhari Seed have carried out many changes in the supply chain management and logistics through the usage of quasi-formal and formal contracts to confirm timely distribution of products with

anticipated quality characteristics, immediate demand and supply, more marketable nature of production and marketing at the farmer's level.

In India, numerous exploratory studies have discovered that though cost of production is higher across farmers supplying to retail chains such as Mother Dairy Fruit and Vegetable Ltd. (MDFVL) (Joseph et al., 2008; Alam and Verma, 2007), transaction costs are lesser in retail chains such as Spencer's and Namdhari Fresh in Karnataka, resulting into higher profits for farmers supplying to retail chain compared to those supplying to the traditional markets. The prices paid to the producers are also higher in retail chain channels compared to those in mandi channels (Mangala and Chengappa, 2008). It has been found that farmers supplying spinach to MDFVL in Haryana and cauliflower to a supermarket in Bangalore could realize 8 per cent and 12 per cent higher prices, respectively compared to the mandi-supplying farmers (Birthal et al., 2005; Joseph et al., 2008).

❖ **PRODUCTION-LED EXTENSION:**

Production-led extension primarily focuses on increasing agricultural production through the dissemination of information and knowledge related to improve farming practices, technologies, and inputs. It often emphasizes aspects such as crop varieties, soil fertility, pest management, and irrigation techniques. The main goal of production-led extension is to enhance yields and farm productivity.

❖ **PROBLEMS FACED BY FARMERS IN PRODUCTION-LED EXTENSION:**

1. **Poor Organizational Management of Supply Chain:** Farmers may struggle with the coordination and management of their supply chains. This includes coordinating activities from planting and harvesting to transportation and delivery to the market. Lack of proper planning and organization can lead to inefficiencies, delays, and increased costs along the supply chain.
2. **Domination of Middlemen:** Middlemen, also known as intermediaries, often play a significant role in connecting farmers to markets. However, their dominance can lead to farmers receiving lower prices for their produce. Farmers may have limited bargaining power, leading to exploitation by middlemen who purchase produce at low prices and sell it at higher rates in urban markets.
3. **Use of Poor Logistics and Storage Infrastructure:** Inadequate transportation facilities and storage infrastructure can result in post-harvest losses for farmers. Poor storage facilities can lead to spoilage or deterioration of produce, reducing its market value and profitability.
4. **Lack of Supply or Market Data:** Farmers may lack access to essential market data, such as information on current market prices, demand trends, and consumer preferences. Without this data, farmers find it challenging to make informed decisions about what to produce, when to sell, and where to sell their products.

5. **Absence of Scale Economies:** Small-scale farmers often face challenges in achieving economies of scale in production, packaging, and marketing. Larger agricultural enterprises can negotiate better terms with buyers, access financing more easily, and invest in more efficient marketing strategies.
6. **Low-Value Addition:** Many farmers sell their products in their raw or unprocessed form, missing out on opportunities for value addition. Adding value to agricultural products through processing and packaging can significantly increase their market value and profitability.
7. **Fragmentation of Supply Chains:** Supply chains in agriculture are often fragmented, with multiple actors involved in various stages from production to consumption. Fragmentation can lead to inefficiencies, higher transaction costs, and difficulties in tracking and ensuring the quality of produce.
8. **Poor Demand-Supply Predictions:** Farmers may struggle to predict market demand accurately, leading to either overproduction or underproduction. Overproduction can result in surplus produce with no buyers, while underproduction can lead to missed market opportunities and reduced income. Addressing these issues requires comprehensive strategies that focus on improving market linkages, building farmers' capacity in marketing and logistics, promoting value addition, reducing the influence of middlemen, and enhancing access to market information. Such efforts can contribute to the empowerment of farmers and the overall development of agricultural communities. Market-led extension is a long-term strategy that can resolve these issues.

❖ **MARKET-LED EXTENSION:**

Market-led extension is an approach to agricultural extension services that places a strong emphasis on connecting farmers to markets and market-driven information. Unlike traditional production-led extension, which primarily focuses on improving farming techniques and increasing agricultural productivity, market-led extension is geared toward helping farmers understand and respond to market dynamics, consumer preferences, and business opportunities.

❖ **HOW MARKET-LED EXTENSION EMPOWER FARMERS:**

Market-led extension is adopted as an alternative approach to traditional agricultural extension systems due to several compelling reasons and benefits it offers to farmers, rural communities, and the agricultural sector as a whole. Here are some key reasons why market-led extension is increasingly gaining attention and importance:

1. **Income Generation:** Access to well-established markets enables farmers to sell their produce at competitive prices, thus increasing their income. When farmers are directly connected to buyers or market intermediaries, they can negotiate better prices for their products, which is essential for improving their financial well-being.

2. **Profitability:** Market linkage provides farmers with valuable information about market trends, consumer preferences, and demand fluctuations. Armed with this knowledge, farmers can make informed decisions regarding crop selection, timing of harvest, and pricing strategies, ultimately leading to improved profitability.
3. **Risk Mitigation:** Diversification of markets helps farmers mitigate risks associated with price volatility. When farmers have multiple market options, they are less vulnerable to sudden price fluctuations in a single market. This diversification enhances their resilience to economic uncertainties.
4. **Access to Resources:** Access to markets often comes with access to resources such as credit, inputs, and modern technology. Proper market linkage can connect farmers with financial institutions and suppliers, ensuring they have the necessary resources to invest in their farms and enhance productivity.
5. **Quality Improvement:** Meeting market standards and consumer expectations is essential for sustained market access. Farmers connected to markets are more likely to adopt better farming practices and quality control measures, which not only benefit their businesses but also contribute to overall food safety and quality.
6. **Reduction of Post-Harvest Losses:** Efficient market linkage can lead to improved post-harvest management and reduced losses. When farmers have reliable buyers and proper storage facilities, they are better equipped to handle and store their produce, minimizing wastage.
7. **Empowerment:** Market linkage empowers farmers by giving them more control over their agricultural activities. They become active participants in the value chain, capable of negotiating prices and terms with buyers. This empowerment fosters a sense of ownership and self-reliance.
8. **Economic Growth:** Effective market linkage contributes to the economic growth of rural communities. When farmers are able to sell their produce at fair prices, they inject money into the local economy, creating a ripple effect that benefits various stakeholders, including small businesses and service providers.
9. **Technology Adoption:** Market access often encourages the adoption of modern agricultural technologies and practices. Farmers connected to markets are more likely to invest in innovative solutions that can boost productivity and sustainability.
10. **Food Security:** A well-connected market system ensures a more efficient distribution of food from farm to table. This contributes to food security by reducing food wastage and ensuring a stable food supply for both rural and urban populations.
11. **Market Orientation:** Market-led extension systems prioritize understanding market demands and trends. By aligning agricultural practices with market requirements, farmers can produce goods

that have higher demand, better quality, and improved marketability. This approach empowers farmers to become more competitive and responsive to consumer preferences.

12. **Diversification:** Market-led extension encourages farmers to diversify their production based on market intelligence. By cultivating a variety of crops or products, farmers can reduce their vulnerability to market fluctuations and risks associated with monoculture.
13. **Efficient Resource Utilization:** Understanding market demand allows farmers to optimize the use of resources, such as land, water, and inputs. This leads to improved efficiency, reduced wastage, and better sustainability in agricultural practices.
14. **Entrepreneurial Mind-set:** Market-led extension encourages farmers to adopt an entrepreneurial mind set by viewing their farms as agribusinesses. This shift in perspective empowers farmers to explore new opportunities, take calculated risks, and invest in their farms for long-term growth.
15. **Value Chain Integration:** By understanding the entire agricultural value chain, farmers can identify potential market opportunities beyond production. This includes post-harvest processing, packaging, and marketing, leading to higher-value products and better profitability.
16. **Rural Development:** Empowering farmers through market-led extension contributes to overall rural development. As incomes rise, it stimulates local economies, creates job opportunities, and improves the standard of living in rural communities.
17. **Sustainable Agriculture:** Market-led extension emphasizes sustainable agricultural practices that are economically viable, socially equitable, and environmentally friendly. This focus on sustainability ensures the long-term viability of agricultural activities.
18. **Public-Private Partnerships:** Market-led extension systems often involve collaboration between public and private sector stakeholders, including governments, NGOs, agribusinesses, and market intermediaries. These partnerships foster a more robust and inclusive agricultural ecosystem.
19. **Resilience to Market Volatility:** By being market-oriented, farmers are better equipped to respond to market changes and adapt their production strategies accordingly. This resilience helps them navigate market fluctuations and uncertainties more effectively.

Finally, market-led extension systems capitalize on market opportunities, empower farmers to make informed decisions, and promote sustainable agricultural practices. By connecting farmers with markets and enhancing their capacity to meet market demands, this approach plays a crucial role in driving rural development and agricultural growth. Proper market linkage is essential for farmers because it not only increases their income and profitability but also helps them manage risks, access resources, improve product quality, reduce post-harvest losses, and empower them as active participants in the agricultural value chain. Moreover, it has broader implications for rural

development, economic growth, and food security, making it a critical component of sustainable agriculture and rural livelihoods.

❖ **PRODUCTION-LED EXTENSION VS. MARKET-LED EXTENSION:**

Dimensions	Production-led Extension	Market-led Extension
Purpose	Transfer of production technologies	Enabling farmers to optimize returns
Expected End Result	Adoption of package of practices	High returns
Perception about farmers	Producers of commodities	Entrepreneurs
Focus	Production/Yield (seed to seed)	Enterprise/High-returns (Rupee/Rupee)
Technology	Production technologies for maximizing production	Technology for maximizing production as well as returns
Mode of Extension Interaction	<ul style="list-style-type: none"> • Motivation • K-A-S intervention • Training (all revolving around package of practices) 	<ul style="list-style-type: none"> • All interaction modes followed in product-led extension • Facilitation of marketing support for profit maximization
Inter-system Linkage	Research-Extension- Farmers	Research – Extension - (Processing/ Pricing/ Marketing) - Farmers
Extension Role	<ul style="list-style-type: none"> • Transfer of technology • Feedback to research system 	<ul style="list-style-type: none"> • Transfer of technology • Market intelligence • Marketing and agro-processing linkages

❖ **STAKEHOLDERS OF MARKET LEAD EXTENSION:**

The stakeholders of a market-led extension system encompass a diverse group of actors involved in the agricultural value chain, including both public and private entities. These stakeholders play different roles and collaborate to implement and support the market-led extension approach. Some of the key stakeholders include:

1. **Farmers:** Farmers are at the heart of the market-led extension system. They are the primary producers and implementers of market-oriented agricultural practices. Farmers actively participate

in market-driven decision-making, adopt new technologies, and adjust their production based on market demands.

2. **Agricultural Extension Agencies:** Public and private agricultural extension agencies are essential stakeholders in market-led extension. They play a crucial role in disseminating market information, providing technical support, and delivering capacity-building programs to farmers.
 3. **Market Research Organizations:** Market research organizations collect and analyze market data, including consumer preferences, market trends, and price information. They provide valuable market intelligence that informs farmers' decisions regarding crop selection and production planning.
 4. **Agribusinesses and Traders:** Agribusinesses and traders are key intermediaries in the agricultural value chain. They link farmers to markets and facilitate the purchase and sale of agricultural produce. Market-led extension systems often involve partnerships with agribusinesses to provide market linkages and support value addition.
 5. **Financial Institutions:** Banks and other financial institutions play a critical role in market-led extension by providing access to credit and financial services. Farmers often need financial support to invest in technologies, inputs, and infrastructure to align their production with market demands.
 6. **Research and Development Institutions:** Agricultural research institutions develop and promote market-oriented technologies, crop varieties, and farming practices. Their research helps farmers improve productivity, efficiency, and the quality of their products.
 7. **Government Agencies:** Government agencies are crucial stakeholders in market-led extension, as they formulate policies, provide support, and create an enabling environment for the implementation of market-oriented agricultural practices. They may also facilitate public-private partnerships to promote market-driven initiatives.
 8. **Non-Governmental Organizations (NGOs):** NGOs often play a role in supporting farmers' capacity building, providing training, and facilitating access to resources. They work alongside extension agencies to empower farmers and promote sustainable agricultural practices.
 9. **Farmer Organizations and Cooperatives:** Farmer organizations and cooperatives act as collective entities that represent the interests of farmers. They play a role in organizing farmers, negotiating with buyers, and collectively marketing agricultural produce.
 10. **Consumers:** While consumers may not be directly involved in the implementation of market-led extension, they are significant stakeholders as the ultimate beneficiaries of market-driven agricultural practices. Consumer preferences and demand influence farmers' production decisions.
- Collaboration and coordination among these diverse stakeholders are essential for the successful implementation of market-led extension systems. By leveraging the expertise and resources of each

stakeholder group, the agricultural sector can achieve sustainable growth and empower farmers to thrive in dynamic market environments.

❖ **STEPS TO IMPLEMENT MARKET LED EXTENSION:**

Implementing a market-led extension system requires careful planning, stakeholder engagement, and effective execution. Below are the steps to successfully implement market-led extension-

1. **Assessment of Local Context:** Conduct a thorough assessment of the local agricultural sector, including the types of crops grown, existing market linkages, and the needs and aspirations of farmers. Identify the key challenges faced by farmers in accessing markets and adopting market-oriented practices.
2. **Market Research and Intelligence:** Invest in gathering market research and intelligence to understand consumer preferences, market trends, and potential opportunities for farmers. This information will serve as the foundation for aligning agricultural practices with market demands.
3. **Capacity Building:** Provide comprehensive training and capacity-building programs to farmers. This includes technical training on modern agricultural practices, business skills, financial literacy, and market-oriented decision-making.
4. **Technology Adoption:** Encourage the adoption of appropriate agricultural technologies that enhance productivity, improve quality, and meet market requirements. Ensure that farmers receive training and support to effectively use these technologies.
5. **Value Chain Analysis:** Conduct a value chain analysis to identify the various stages involved in the production, processing, and marketing of agricultural products. Identify potential bottlenecks and opportunities for value addition.
6. **Market Linkages:** Facilitate linkages between farmers and buyers, including agribusinesses, processors, exporters, and retailers. Build partnerships with market intermediaries to connect farmers with the right markets.
7. **Access to Finance:** Work with financial institutions to provide farmers with access to credit and financial services. Financial support is essential for farmers to invest in their farms, adopt new technologies, and manage risks.
8. **Public-Private Partnerships:** Foster collaborations between government agencies, private sector stakeholders, NGOs, and farmer organizations to implement market-led extension programs effectively. Public-private partnerships can leverage resources, expertise, and reach.
9. **Gender and Social Inclusion:** Ensure that market-led extension programs are inclusive and consider the needs of women farmers and marginalized groups. Address gender disparities and social barriers to ensure equitable participation and benefits.

10. **Monitoring and Evaluation:** Set up a robust monitoring and evaluation system to track the progress and impact of market-led extension initiatives. Regularly assess the effectiveness of interventions and make necessary adjustments based on feedback and results.
11. **Policy Support:** Advocate for supportive policies and regulations that encourage market-led extension approaches. Policy frameworks should facilitate market linkages, technology adoption, and access to finance.
12. **Knowledge Sharing and Networking:** Promote knowledge sharing and networking among stakeholders to exchange best practices, lessons learned, and success stories. This can be achieved through workshops, seminars, and online platforms.
13. **Scaling Up:** Gradually scale up successful market-led extension initiatives to reach a broader number of farmers and regions. Replicate effective models and adapt them to suit local contexts.
14. **Sustainability:** Ensure the long-term sustainability of market-led extension programs by building the capacity of local institutions, empowering farmer organizations, and integrating market orientation into extension services.

❖ **MODELS OF MARKET LED EXTENSION -**

In the Indian context, there are several models and approaches for implementing market-led extension systems. Here are two commonly used models along with diagrams to illustrate their key components:

1. **Value Chain Extension Model:**

This model focuses on understanding the entire agricultural value chain, from inputs to end consumers. It aims to strengthen linkages between different actors in the value chain, including farmers, agribusinesses, processors, and retailers. The process starts with market research and intelligence to identify demand trends and consumer preferences. Based on the market information, farmers are trained to produce crops or products that are in high demand and have better market potential. The extension services include technical support and training to improve production practices and adopt modern technologies. Agribusinesses and processors are involved in providing market linkages, value addition, and marketing support to farmers. The model fosters public-private partnerships to coordinate activities and resources for effective implementation.

2. **Cluster-Based Extension Model:**

The cluster-based extension model involves organizing farmers into clusters or groups based on geographical proximity, similar agro-climatic conditions, or crop preferences. Market research is conducted to identify potential market opportunities and value chains that align with the strengths of each cluster. Extension services are delivered through cluster-specific training programs, demonstrations, and exposure visits. Farmers within the cluster work collaboratively to share

knowledge, resources, and experiences, creating a learning and support network. Agribusinesses, processors, and traders are encouraged to engage with the clusters, providing market linkages and value addition services. This model promotes collective marketing and bargaining power for the farmers in the cluster.

In the Indian context, both of these models have shown promising results in enhancing market access, improving farmers' incomes, and promoting sustainable agricultural practices.

❖ **MARKET LINKAGE APPROACHES:**

There are several approaches and involvements to select from, depending on the requirements of individual farmers or farmer groups.

1. Investment in value chains

A methodical procedure can be applied to expand market linkage for farmers, including building relationships between groups of organized farmers selling to known trading partners and establishing consistent sales. The construction and level of investments may vary, but the procedure generally follows these basic steps

- i) Organize support staff and meet the community.
- ii) Recognize goods that are in demand and farmers interested in supplying those goods.
- iii) Build relationships with buyers in formal markets to keep up to date with relevant information on market requirements, existing demand, accessible services, options for trading mechanisms.
- iv) Gather production, marketing and finance information for a business plan.
- v) Pen a group business plan and make farmer implementation schedules.
- vi) Market the produce as a group.
- vii) Evaluate the agro-enterprise performance of the group.

2. CONTRACT FARMING

Contract farming offers smallholders with a direct sales agreement for a particular product and a target market. The agreement is regularly based on specifications such as price, quality standards and sales volumes. Contracting is usually reinforced by an intermediary firm that secures the market and then sources smallholder produce to aggregate supply volumes, as well as controlling quality. These firms frequently support financing and technology and assistance to reduce risks for smallholders. Contracting allows farmers to access a more consistent market, though they often receive prices slightly below prevailing market prices.

3. CERTIFICATION SCHEMES

Certification schemes that sustain smallholder manufacture and marketing have been growing for more than 20 years. Chief food processing and retail companies in quest of more sustainable supply chains and ways to attract ethical-minded consumers have recently bolstered the certified market

segment. Under these schemes, farmers must comply with product and trading specifications to sell to a specific market with a minimum floor price. Fair trade schemes usually also provide farmers with a range of social benefits, and studies show that many farmers place substantial value on this form of cooperation and social support (Set boonsarng, 2008).

4. PUBLIC-PRIVATE APPROACHES TO VALUE CHAIN INVESTMENT

As formal markets develop through globalization and market consolidation, major food companies are aggressively seeking new sources of supply. Companies and development agencies are converging on the idea of inclusive business models to help informal smallholders access the complex world of formal corporate business.

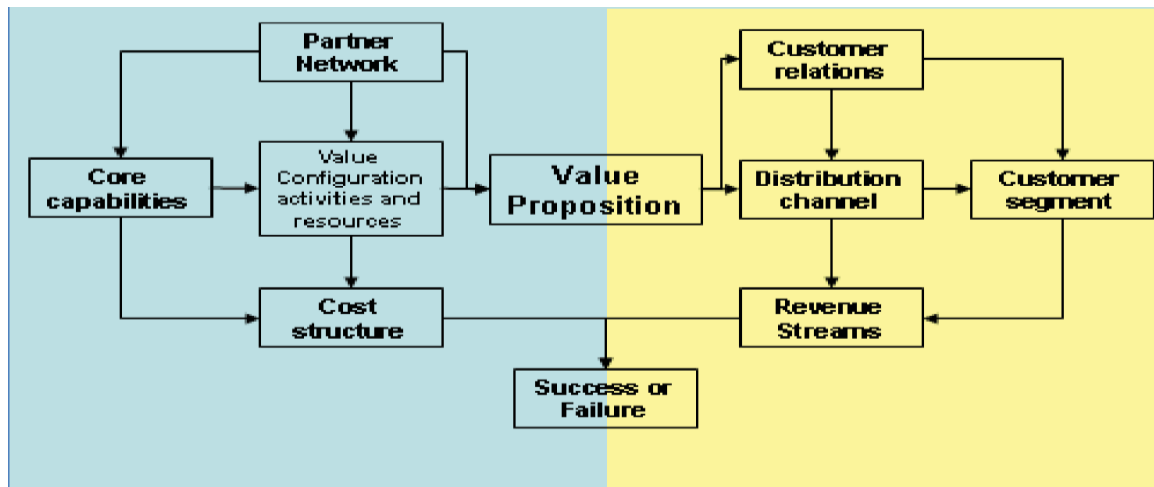


Figure 1: Business model based on single firm activities (Source: Vorley et al., 2008)

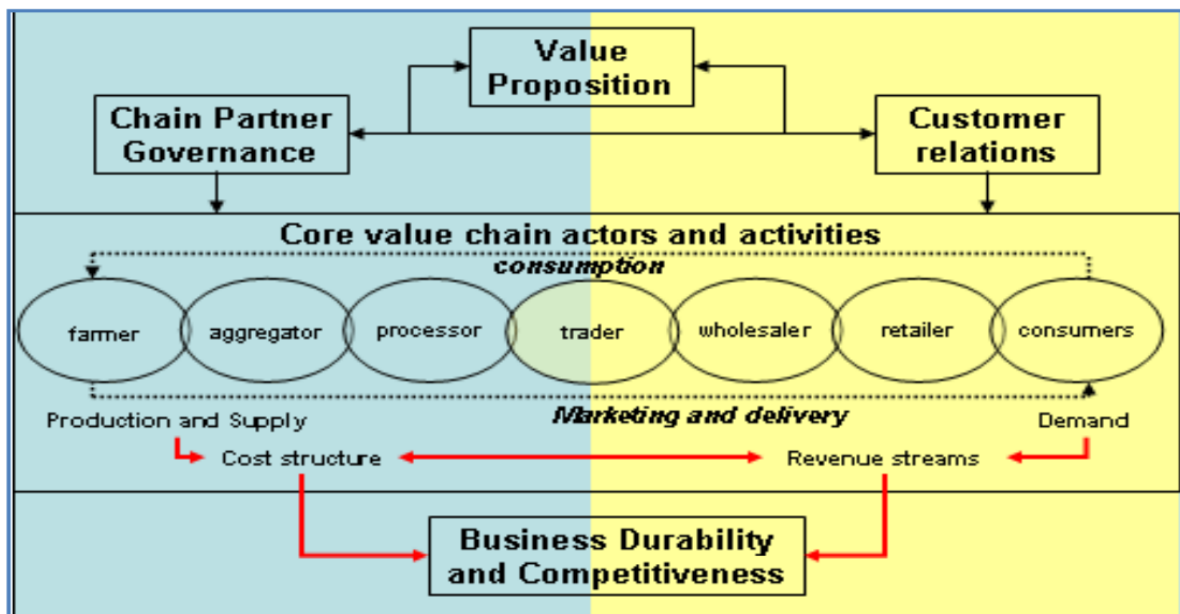


Fig-2: Business model based on integration of value chain partners (Source: Ferris et al., 2014)

❖ **Agri-Startups: Advances in Market Led-Extension System for Empowerment of Farm Stakeholder**

A. Sufal Bangla: Founded in 29th September 2014

Active Regions: West Bengal

The Sufal Bangla project commenced through door to door selling of vegetables in mobile vans from. This project ensures availability of food and nutritional security at reasonable price, and to secure remunerative prices for growers. This will also entail development of the agricultural economy. There are 105 outlets till date. The main centre of this project is Tapasi Malik Farmers' Mart at Singur. The project generated millions of on-farm and off-farm employment opportunity. Individual farmers or group of farmers may apply for sale of product and registered Farmers Producers Limited Companies may apply for outlet management.

B. NINJACART: Founded in 2015

Active Regions: Bengaluru, Chennai & Hyderabad

Ninja cart is a B2B agro-marketing platform that connects farmers to businesses. Ninja cart is India's largest agro-marketing platform, solving one of the toughest supply chain problems through technology. It connects vegetables and fruits farmers directly with businesses. At one end, Ninja cart helps farmers get better prices and deal with consistent demand and on another end; it helps retailers to source fresh vegetables at competitive prices directly from farmers. Ninja cart does this effectively at lower cost, better speed and larger scale using integrated supply chain powered by technology, data science, and infrastructure and logistics network.

C. AGROWAVE: Founded in 2017

Based in: Gurugram

Agro-wave was started with the aim of providing better returns to small and marginal farmers. The company buys fresh produce directly from farmers through its network of mobile pickup stations at farm gates in villages. Farmers can connect to the pickup stations with the Agro-Wave mobile app and the start-up then sells the produce to businesses, restaurants and at markets. In the last year, the company claims to have earned 60%-70% of its business through its farm-to-mandi chain and 30-40% through the demand-side chain. The company's farmer-to-mandi (F2M) and mandi-to-consumer (M2C) model is unique in many ways. There is end-to-end traceability of the product with quality control and little loss in storage and transportation.

D. BIJAK: Founded in 2019

Based in: Gurugram

B2B trading platform that helps mandi traders across India to buy/sell top-quality agricultural commodities with 30,000+ reliable traders at the best rates. Provider of a trading platform that

connects verified Agri traders like farmers, loaders, commission agents, brokers across India. It allows producers to sell their produce at real-time prices to wholesalers and retailers. It offers loans for buyers and working capital for producers. It also provides aggregated logistics services to eliminate wastage and avoid partial truck loads. Other features include digitizing transactions with electronic book-keeping, advance payments, and an individual rating system. The mobile application is available on iOS and Android platforms.

E. CROFARM: Founded in 2016

Based in: Delhi

Agriculture based F2B (Farm to Business) supply chain start up Crofarm, founded in 2016, buys fresh fruits and vegetables directly from farmers and supplies them to online and offline retailers. Crofarm services more than 100 small and medium retailers through its multiple distribution centres and claims wastage of less than 5% in its supply chain as compared to average wastage of 50% in fruits and vegetables throughout the supply chain in the country. Crofarm primarily operates in Delhi-NCR and has a network of farmers across UP, Haryana, and Delhi. The start-up hopes to reduce the menace of middlemen and streamline processes in the agricultural sector, which is largely unorganized.

F. DEHAAT: Founded in 2012

De-Haat is one of the fastest growing start-ups in Agri-Tech sector and one of the very few companies providing end-to-end solutions and services such as the agro-input distribution, crop advisory services, financial services, and market linkages for the farm product sales and distribution to the farming community in India. De-Haat used Information and Communications Technology (ICT) based platform which connects farmers with service providers through the micro entrepreneurs. De-Haat's business model is based on the franchisee concept, wherein the micro entrepreneur invested money on the purchase of agri-inputs and also served as the delivery centre for the input products.

G. KRISHIHUB: Founded in: 2016

Krishi Hub is building an agricultural B2B e-commerce platform to provide farmers with end-to-end managed supply chain for better returns and reduced crop wastage. Through a demand-driven platform, Krishi Hub delivers fresh vegetables to businesses like restaurants/hotels /canteens /hostels/government institutes/cafeterias etc. directly from farmers, who are spread across different districts in Uttar Pradesh. Krishi Hub's Artificial Intelligence (AI) powered supply chain enables farm-to-doorstep delivery in less than 12 hours along with up to 25 per cent reduction in vegetable wastage compared to the traditional system. This also allows deploying

proprietary algorithms for determining delivery routes for each delivery agent for logistics cost optimization and ensuring on-time delivery.

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*Chapter-4***MANAGEMENT OF CONFLICT & STRESS FOR OPTIMAL EFFICIENCY
IN EXTENSION ORGANIZATION****Prof. Arunasis Goswami¹ & Dr. Sukanta Biswas²**

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INTRODUCTION:

- Conflict is a topic of increasing importance in all human system scarcity of natural resources complexity and increasing interdependence of relations between individual groups and organisations do and lifestyle and personalities.
- Conflict is bound to happens when people differ in taste believe attitude, habits and needs.
- Conflicts common find complex entities such as individuals and small groups are brought together in formal organisation.
- Conflict is a state of discord caused by actual or perceived opposition of needs values and interests between people.
- It is defined as a process in which an effort is purposely made by x to upset the effort of bi some form of blocking that will result in frustrating why in a changing his or her goals for furthering his or her interest.
- It can be good or bad for the organisation. Conflict management is the process of limiting negative aspects of the conflict while increasing positive aspects.
- It aims at enhance learning effectiveness or performance of individuals and groups in organisational setting.

Signs of conflict in organisation:**Some of the symptoms of conflict in organisations are as follows:**

Frequent unresolved misunderstanding and arguments negative attitudes low moral high tension absenteeism, people feel they are not making a contribution employees feel they are or their work is not respected or valued people feel insecure an answer and talk behind people's back.

Sources of conflict in Organisation:

There are many sources of conflict in organisation which can be grouped into individual, group and organisational sources.

A) Individual Sources- Vested interest, power seeking, difference in perception, lack of trust, personality dissatisfaction with the job etc.

B) Group Level Sources-Value clash, heterogeneous members, unreasonable competition, lack of cooperation etc.

C) Organisational Sources-MBT of rules limited and scarce resources competition for limited rewards line hierarchy ambiguity in jurisdiction and favourable organisational climate incompatible goals etc.

Conflict Process: For a composite view of the antecedents and resolution of the total conflict situation conflict process has four components:

1. **The Parties:** At least two individuals groups or organisations.
2. **The Whole Set of Relevant Possible States of the Social System-** All possible alternative position towards which the conflict could move.
3. **Dynamics of the Situation-** Each party in conflict situations will it justice to one that he or she feels is congruent with the position of the opponents.
4. **Management, Control Resolution of Conflict-** Conflict are not discrete situation with a clear beginning and end.

Stages of Conflicts: *There are 5 stages of conflicts such as follows:*

1. **Latent Conflict-** At this state the basic conditions for potential conflicts exist but have not yet been recognised.
2. **Perceived Conflict-** The cause of the conflict is recognised by one or both of the participants.
3. **Felt Conflict-** Tension is beginning to build between the participants although no real struggle has yet begun.
4. **Manifested Conflict-** The struggle is underway and the behaviour of the participants makes the existence of the conflict Apparent to others who are not directly involved.
5. **Conflict Aftermath-** The conflict has been ended by resolutions of suppression. This establishes new conditions that will lead to more effective cooperation or to a new conflict that may be more severe than the fast.

Types of Conflicts: *Different categories of conflicts can occur in the work environment this includes:*

A) Institutional Conflict- Due to differences that results because of the structural relationship.

Interpersonal Conflicts-Due to personality differences, value differences and faulty communication etc.

B) Vertical Conflicts- Between hierarchical levels. & **Horizontal Conflicts-** Within some hierarchy.

C) Within Group Conflicts- Intergroup conflicts. **Between group conflicts-** inter group conflicts. **Between Organisation-** inter organisational conflict.

D) Intra Group (Within Group) Conflict- Role conflict, issue conflict, interaction conflict, personal conflict and substantive conflict.

Intergroup Conflict- Functional Conflict, hierarchical conflict, conflicts due to similar functions of groups and perceptions about others or outsiders.

Conflict Management: Workplace conflict can be resolved by the following-

- A) Looking at the communication skills training the employees to communicate effectively owing their feelings. How something is communicated is as important as what is communicated.
- B) Improve listening skills and involving in active empathetic listening.
- C) By establishing healthy boundaries to avoid squabbles and power struggle.
- D) By improving emotional intelligence focusing on its various facets and aspects.
- E) Shift perspectives and vision of the workplace to determine job satisfaction and fulfilment.
- F) Rather than trying to eliminate conflict or suppress its symptoms managing conflict so that which lenses people and organisation that interesting people and organisations.
- G) Asking the right questions to turn conflict into positive outcomes.

Process and structural model of conflict management:

Kenneth suggested two models of conflict Management- The process and structural model of conflict Management, which are as follows:

A) **Process Model-** This is concerned with identifying events, e.g. The frustration of one party conceptualization of the situation, behaviour and the reaction of the other party and the final agreement or lack of agreement. After this identification, the model is then concerned with the influence of each event.

B) **Structural Model-** The conflict phenomenon is understood by studying how underlying conditions shaped the event. The objective is to identify the parameters which influence conflict behaviour and to specify the form of that influence. This model is concerned with identifying the pressure and constraints which we are upon the parties' behaviour. It then attempts to specify the effect of these conditions upon behaviour, e.g. whatway does peer pressure influence behaviour how does frequency behaviour, how does frequency of etc.

STRESS MANAGEMENT IN AN ORGANISATION:

The nature of work is changing at whirl wind speed. Perhaps no more than even before jobs stress poses a threat to the health of workers in organisations. Stress is related to worst job attitude, higher turnover and decreases in job performance. Many research studies reveal that stressed individual have lower organisational commitment than those who are less stressed. Hans'sselye a famous stress researcher defines stress as the response of the body to any demand whether it is caused by or results in a pleasant or unpleasant condition.

Stress is to be viewed as a process whereby an individual perceives and responds to events that he appraises as overwhelming or threatening to his well-being. Thus, in stress demands of work exceed the mental and physical resources of the individual.

Certain amount to be stress is good and may lead to increasing productivity what he calls the eustress. However, continuous and prolonged exposure to stress lead to mental and physiological changes (exhibition) that leads to development of anxiety and depressions.

Positive & Negative Effect of Stress: Stress can have both positive and negative effects on individuals.

Positive Effect of Stress: The pressure leads to favourable consequences like positive anticipation a feeling of being stimulated and facing an exciting challenge.

Each individual needs moderate amount of stress to be allowed and capable of functioning effectively in an organisation.

Some Positive Effects of Stress are- Expresses talent, energizes and helps to pursue happiness, helps in overcoming challenges or problems, compel us to do a good job, heightened alertness etc.

Stress becomes negative when we stay pumped up and cannot or will not relax after meeting the challenge. This stress becomes vicious cycle affecting health and wellbeing. Stress is associated with anxiety depression hopelessness anger and helplessness. Stressed people are more likely to be physiologically distressed feel irritated angry depressed restless etc. Which also affect their performance in organisation.

Causes of Stress: Individual level stressors: personality (type a more prone to stress) hardiness, role conflict lower skills, low copying capacity, low resilience etc.

Organisational Stressors- Job design and technical problem, role demands role ambiguity unreasonable deadliness, environmental jobs stress, office politics, improper job conditions, high demanding jobs, in effective time management etc.

Extra Organisational Stressors- Technological changes social systems change lifestyle relocation of work or family, unexpected happening or changes in life.

STRESS MANAGEMENT MODELS:

Transactional Model-Stress can be thought of as resulting from an imbalance between demands and resources or as occurring when pressure exceeds ones perceived ability to cope. The transactional model conceptualizes stress as a result of how a stress is appraised and how a person appraises his or her resources to cope with the stressor. If stressors are perceived as a positive or challenging rather than threat and if individual is confident of adequate coping strategies then stress may not follow potential stressor.

Health realisation or innate health model- instead of focusing on the stressor, this model focuses on nature of thoughts, stating that it is ultimately the person's thought process that determines is response to potential stressors.

An Integrative model of stress management: In any particular situations, there may be perceived stress and the response that maybe avoidance or inaction leading to anxiety or depression or it may be an action oriented approach. *Furthermore action oriented approach can be categorised as follows:*

A) Proactive Approach- Resulting in sense of achievement

B) Reactive Approach- Resulting in anxiety followed by a sense of relief and achievement.

C) Defensive Approach- Resulting in fear and gilts

D) Fault Findings for Blaming Approach- Resulting in anger frustration and resentment.

THE STRATEGY OF STRESS MANAGEMENT IN ORGANISATION:

A) Job Related Strategies- Proper job designing and matching individuals to job proper recruitment and placement, training counselling proper delegation and allocation of task, proper allocation of monetary and non-monetary benefits.

B) Emotion Focused Strategies-Establish proper communication assistant programs to employees' wellness program and focus on emotional intelligence.

C) Problem Focused Strategies-Based on proper analysis of the situation.



PROGRAMME PLANNING AND DEVELOPMENT FOR EFFICIENT ORGANIZATION

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INTRODUCTION

Planning an extension project is a process used to develop, carry out, and assess various social development programmes. Local communities participate in the decision-making process, problem identification, and subsequent problem-solving because it is an ongoing process. Extension programme can be defined as a description of the scenario, the goals, the issues, and the remedies. Extension programmes are relatively permanent and serve as the foundation for Extension plans, but they need to be periodically revised. In other words it can be said that extension programme is a set of specific, purposeful educational goals that are to be attained through extension teaching and can be determined from a sufficient examination of the circumstance. On the other hand, extension programme development process can be defined as a continuous, collaborative process where challenges are recognized, objectives are established, and steps are taken to achieve the objectives, involving both ordinary people and extension professionals. Forest and Baker (1994) concluded that programme planning helps justify budget appropriations and brings understanding among the public. Israel and Brodeur (2011) opined that, extension programme is a comprehensive set of activities that are intended to bring about a sequence of outcomes among targeted clients. It can be stated that, extension programme is a statement of situation, objective, problems and solutions. It has been observed that, in many cases extension programmes and policies are formulated without due consideration to the end user's 'opinions and traditional knowledge system and hence Extension programme needs continuous revision and (Oladosu, 2006). It acts as blue print for the extension activities to be carried out in the field level. Recognizing the crucial function of a receiving/utilizing system for the rural poor in order to promote the efficient operation of the delivery system of government is a crucial part of extension programme planning (Ahmed, 2009). In a nutshell extension programme can be defined as a written statement of the situation, objectives, problems, and solutions that has been created on the basis of a sufficient and systematic planning effort and that serves as the foundation for extension teaching activities in a particular area, for a specific period of time. From the above discussion we can conclude that:

- Extension programme is a written statement
- Extension programme is the output of the extension programme planning
- Situation, Objective, Problems and Solution statements are included in the extension programme
- Though extension programme is relatively permanent in nature but requires constant revision
- Extension programme may have, short term, medium term or long term objective
- Extension programme is the foundation of extension teaching plan

For efficient functioning of an organization as a whole clear understanding of the concepts of programme planning must be clear to the responsible officials.

OBJECTIVES OF PROGRAMME PLANNING

Planning is the blueprint of activities to achieve satisfactory end result and attain programme objective. In other words, efficient planning helps in executing programme successfully. Calendar of work is the schedule of work, which states the exact activity schedule of a programme. It indicates time schedule of activities. Aim is the broader objective which provides direction statement that could contain numerous objectives. It is also claimed to be a goal with which to guide the creative process. An objective is a course of action. A clearly stated objective is always quantifiable. A goal is a distance that is intended to be attained in a specific amount of time in any specific direction. The specific objectives of programme planning are given in the following paragraphs:

1. Effective development: When an action plan is created and executed, progress occurs most quickly. When meticulous and advanced planning is done, coupled with the use of efficient teaching techniques, outcomes are productive and advancement is quick.

2. Action follows planning: The following inquiries are brought up during the planning process:

- a. What knowledge do farmers most require?
- b. What type of information has to be expanded?
- c. What facts should be revealed first?
- d. How much time will this type of task necessitate?
- e. How much work should indeed be put into this field?

The programme planning process contains the solutions to these queries.

3. Avoid wastages: Planning promotes overall efficiency by minimizing resource waste in an organization, which includes time, money, labour, and other inputs.

4. Efficient learning: The learning process is governed by a well-developed work plan. The established objectives and their achievement serve as the best indicators of this effort's direction. It requires time to contemplate issues, evaluate circumstances, establish goals, and come up with strategies.

- 5. Provides a clear direction:** Planning aid in articulating the programme's goals and also helps in choosing the best action to be taken to achieve them and eventually reviewing the achievements.
- 6. Consistency:** The programme will continue even when there is a change in staff because the plan is clearly laid out.
- 7. Effective application of innovations:** Planning a programme lays the foundation for the optimal application of modern methods and tools.
- 8. Developing leadership:** One of the finest ways to build leadership is through the programme, which creates the way for key individuals to be engaged in the development and execution of development programmes.
- 9. Authentic Information:** The genuine information necessary for programme planning and implementation is provided through a comprehensive examination of the situation and the collection of information.
- 10. Reduce Conflicts:** Because conflicts may be easily resolved during the planning stage, successful programme planning avoids unwanted conflicts such as conflicts of resources, personalities, etc.
- 11. Upcoming programmes:** Future development is continuously tracked and identified by competent programme planning.

Principles of programme planning process

A principle is a type of guideline, conviction, or notion. The principles of programme planning process are given as follows:

1. Planning for programmes must be based on a review of the past, the present, and the needs of the future

A sufficient amount of information on the individuals and their situations must be gathered in order to identify the programme. By engaging the locals, the current situation is evaluated and interpreted in light of previous knowledge in order to determine future demands.

2. Programmes should have concrete objectives that can answer the most pressing needs of the populace

The fulfilment of people's needs is the ultimate goal of programme development. Significant objectives related to the most pressing demands of the population should be identified and made clear for this purpose. The emphasis should be on what is realistic rather than what is ideal; nonetheless, the latter should not be ignored.

3. Depending on the amount of time and resources available, extension projects must be given more emphasis

People in rural areas, especially those who are in developing nations, face multiple problems. Due to a lack of trained personnel, cash, facilities, and other resources, all issues cannot be resolved at once for a solution. Time is another limitation because neither the participants nor the sponsoring organizations can wait endlessly for the results; in view of these constraints, it is crucial to establish priorities within programme.

4. Programmes need to mention the availability and use of resources

The programme should actually specify where the assets will be provided and how they will be used, including money, buildings, supplies, and employees. This will make the programme useful and feasible for the organization.

5. Programmes must to have a general understanding at different levels

Programmes created at several levels, including village, regional, state, and national levels, should be compatible with one another and not compete with one another. Similarly to this, one department's programme shouldn't be in conflict with or undermine an programme of some other department.

6. Local residents should be involved in extension projects

Local areas are where extension projects are put into action. Therefore, local residents should be involved from programme design to implementation of the programme.

7. Relevant Institutions and Groups should be involved in Extension Programmes

Extension programmes cannot be conducted independently. Several institutions and groups should support it. The programme's objectives should be stated clearly along with the institutions and groups engaged, as well as how they will contribute to achieve those objectives.

8. Programmes must have a defined work schedule

The work plan may be developed individually and later on integrated to the overall programme planning process. The programme must at least provide a general overview of its execution. The programme would be only relevant as a theoretical exercise if the work plan is not created.

9. Extension projects should include opportunities for results review and programme reassessment

An extension programme isn't a set-in-stone timetable of tasks. The programme should include provisions for on-going results evaluation and monitoring in order to evaluate its progress. The programme must be properly updated in light of the evaluation's findings in order to achieve its goals within the time allotted.

10. Extension programmes must provide advantages equally across all community members

The implementation of developmental extension programmes in may cases provide benefit to resource-rich people in a community more than resource-poor individuals, as this may lead to social

inequality and tensions. Planning for extension programmes should include sufficient attention to the community's most vulnerable people in society.

Programme planning steps:

Programme planning follows a well-defined process consisting of several steps; the details of the same are given in the following paragraphs:

1. Gathering facts: Relevant information can be gathered from the records already in existence and by conducting a local survey. It is possible to gather data on individuals, their occupation, technology levels, available resources, and other factors that are important for developing programmes. Additionally, data is gathered from nearby organizations. Extension professionals may carry out a survey of the village to gather data on its size, occupations, land use patterns, water resource use, marketing facilities, input and credit availability, residents' attitudes towards various farming systems, the effectiveness of the local extension services, etc. The extension officials may also gather pertinent data from other businesses.

2. Situation analysis: The situation is a statement of the current state of matters that incorporates the cultural, social, economic, and physical circumstances that a specific group of people are experiencing at a particular moment in time. Please keep in mind that the conditions that make up the planning environment are constantly changing. The gathered facts and information are then objectively analysed while taking into account the sentiment the farmers have expressed. This will aid in gaining the correct perspective on the problem pertaining to the farming system.

3. Problem identification: A problem is a situation or barrier that makes it challenging to accomplish an intended objective, goal, or purpose. It relates to a problem, condition, or circumstance that has not yet been addressed. A problem arises whenever someone identifies a sizable discrepancy between what is and what is sought. Correct interpretation and analysis of information may aid in accurately identifying problems. There may be numerous issues, but only those that are urgent, substantial, and solvable within the constraints of time and the resources at hand should be chosen. The programme's failure and the frustration of the people may result from the selection of numerous issues that cannot be handled properly within shortest possible time and limited resources. The most pressing problems may be determined following data analysis and consultation with stakeholders.

4. Determining objectives and goals: The goals are then established in tandem with the critical needs observed or experienced. The objectives must be clear and straightforward. The example of goals of extension programme planning may be improving the farm families' nutrition, possibilities

for employment, and income levels. Consequently, it is necessary to express them in terms of precise objectives to make the goals practical and achievable.

5. Creating a work plan and an operating timetable: The timeline should be in writing and specify who is responsible for each task. Particularly, what the change agent system and consequently the line departments are supposed to do, which institutions, organizations, and the Service Department are presumed to be engaged in the financial requirement and the way it is expected to be met, what preparations are supposed to be done for marketing the harvest, training the farmers, and other aspects. If the Extension Officers comprehend and adhere to the processes of developing the extension programme well, planning a good extension programme will certainly be produced (Anas et al., 2023).

6. Execution of defined work schedule and plan of action: Contrary to what many may assume, this is not an everyday task. An extension agent in this stage must carry out crucial tasks such as participant training, dissemination of information, method demonstration etc. The effort would involve addressing unforeseen issues and, where needed, taking corrective actions. Here one Work schedule is shown in figure no. 1 which is developed by Praxie (<https://boards.praxie.com/app-store>)

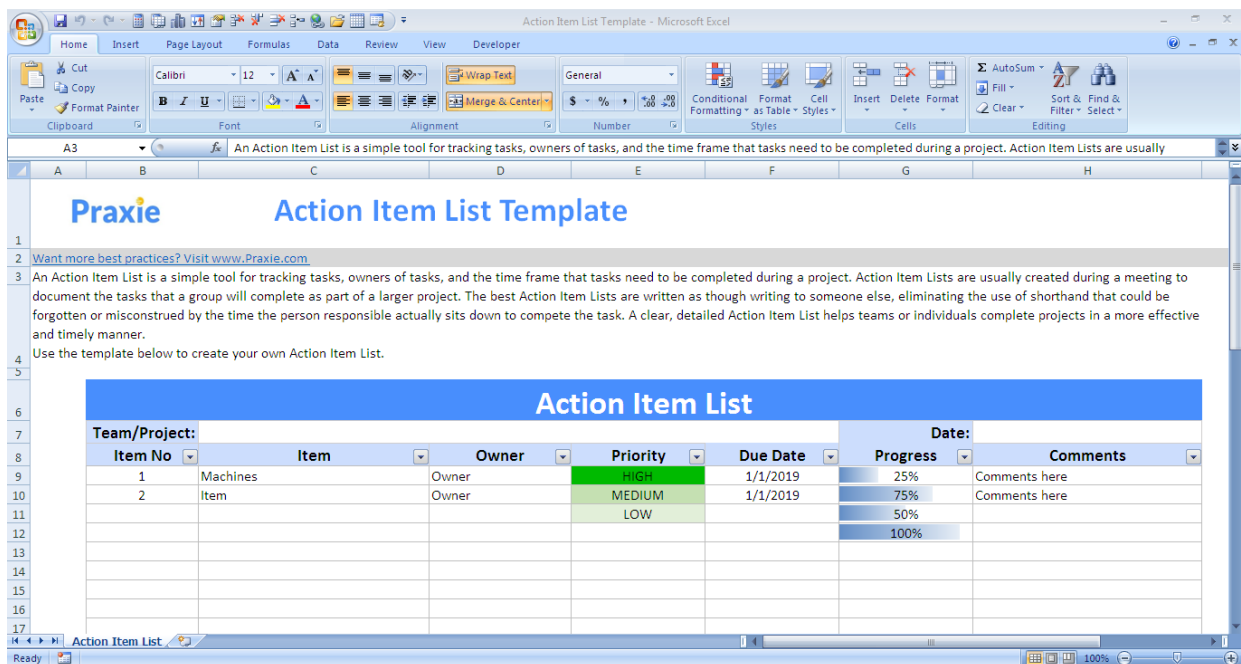


FIGURE 1: WORK SCHEDULE TEMPLATE

7. An evaluation of the progress: The process of evaluation means figuring out how well we did at reaching our objectives. Every program requires a built-in evaluation method to determine how successfully the task is done. To evaluate the outcome and make sure all the procedures are completed appropriately, the process should be continuous. Depending on the importance of the programme, the availability of qualified individuals, funding, facilities, and time, the evaluation

could be formal or informal. The following three crucial phases are included in the programme evaluation:

- a. Setting certain norms or criteria in relation to the objectives.
- b. Information gathering
- c. Making a decision and coming to some neutral, reliable conclusions.

8. Program reassessment and adjustment: The program should be re - evaluated and, if needed, altered in light of the evaluation's results. In addition to the participants, the scientist, managers of extension organizations, and local bodies should all be included in this reassessment process. Reconsideration will assist in the programme's necessary corrections and adjustments.

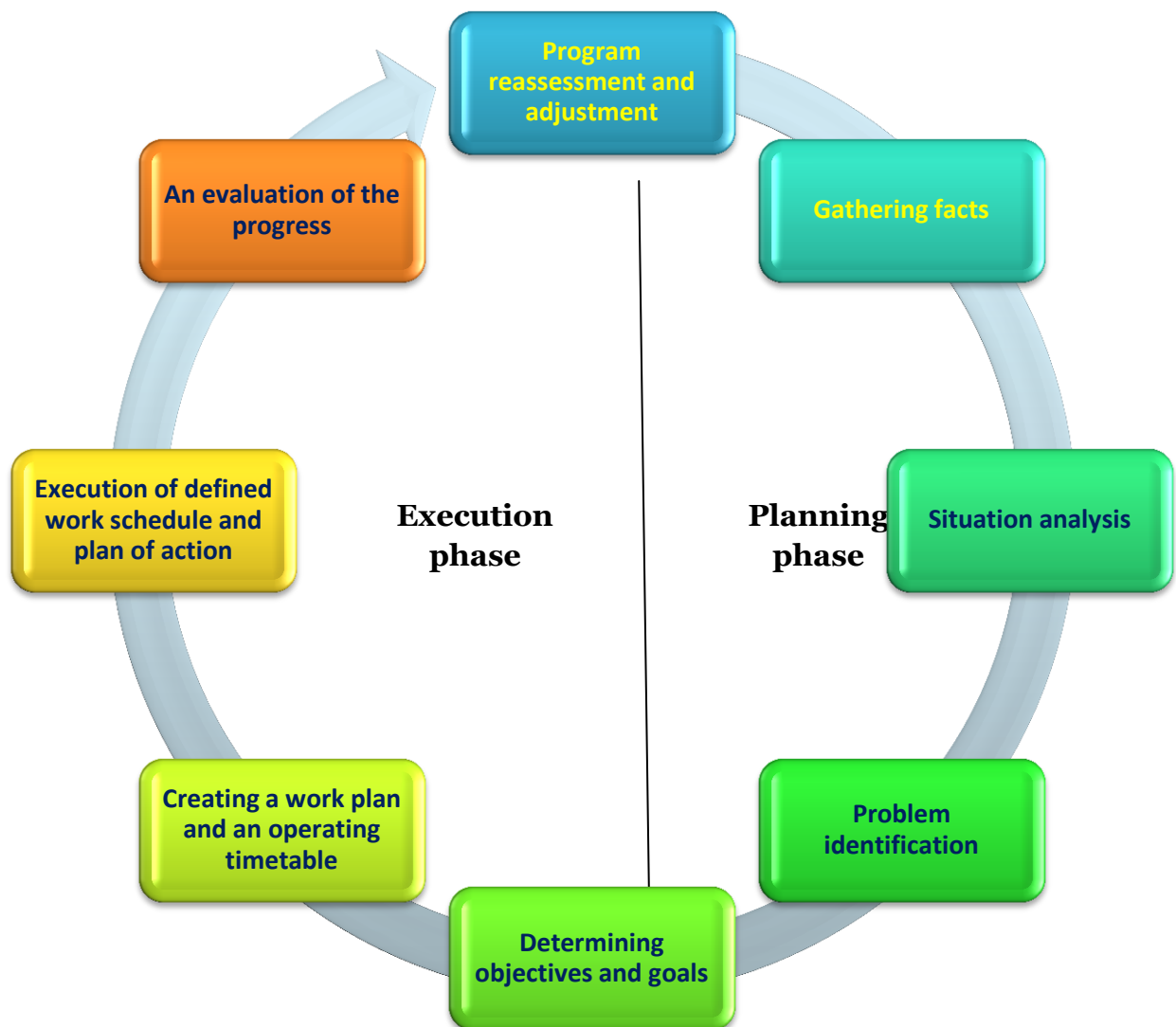


Figure 2: STEPS OF PARTICIPATORY PLANNING FOR DEVELOPMENT OF EFFICIENT ORGANIZATION

Through the process of participatory planning, an organisation works to achieve a specific socioeconomic objective by identifying its challenges and formulating a plan of action to address them. Participatory extension programmes are widely used to promote change in the agricultural

sector, and an important question is how best to measure the effectiveness of such programmes after implementation (Knook et al., 2018). There is a need for professionals, but only as mediators. Additionally, no one likes taking part in activities that are not their own. Despite their technical validity, plans developed by outside specialists are unable to inspire the public to join in their implementation.

Steps involved in the participatory planning

1. Evaluate the local needs, especially for rural impoverished households:

Asking people directly is the best way to learn what they require and what they think could solve their problems. Additionally, it increases people's awareness of and readiness to participate in any subsequent activity. But first, it's necessary to find an agreement that connects with them before we ask them what they want. Conflicting interests are unavoidable within a community. To create consensus, it's necessary to have a unique set of abilities and honesty. A pro-poor development effort must be guaranteed continuous community backing. The consultations and debates must include participation from local government representatives, CBOs, volunteers on the ground, educators, women, and elderly individuals.

2. Gather fundamental information:

Following the creation of local relationships, it is essential to gather, with the support of the community, fundamental information regarding the neighbourhood, its characteristics, the accessibility of resources, its socioeconomic condition, and other relevant information. The objective is to establish an accurate baseline picture that will aid in later goal-setting and change assessment related to the project. Respecting individual views and skills is essential to get their cooperation. Community involvement as a whole should be the emphasis, and its dedication to aiding those who are impoverished should be sought after. A helpful strategy for gathering and analysing participatory data is Participatory Rural Appraisal (PRA).

3. Creation of working committees: To gather information on progress and develop viewpoints, it is beneficial to create working committees which involve officials from local governments. In today's constantly changing world, professional staff of an organisation must demonstrate effective action (Namdar et al., 2010). The working groups' objectives include data comparison and analysis, inference-making, and the identification of future action priorities. This aims to boost transparency and promote communities' participation, especially that of the rural poor. Disagreements and disputes may occur during the process, but they must be properly handled and managed throughout the entire decision-making process.

4. Defining the objectives: The initial phase in participatory community planning is to clearly state the objectives that must be achieved. These objectives should be described in concrete terms, such as

raising the i) incomes of specific families, ii) the output of specific crops, and iii) the literacy rate. It's possible that the goal won't always be measurable, especially if it entails shifting attitudes. To assist people understand how much has changed, it continues to assist to be as explicit as one can.

5. Selecting the approach:

The selection of method for planning and the assessment and mobilization of the required resources make this step as the most challenging. It is essential to identify i) both locally accessible resources and those that must be sourced from outside ii) if resources will be accessible when required; and iii) who should be contacted, who will approach, and with whose assistance these resources can be acquired. Consider several local planning strategies, such as (i) whether to use independent contractors or a cooperative; (ii) whether to concentrate on multiple small family-based units or one large unit; and (iii) whether to train locals as trainers for the positions or not.

6. Ensuring assured feasibility:

At this point, working committees should think about how practical the objectives are. Assumptions and conditions regarding the accessibility of resources, managerial skills, and technical experience must be reasonable. Proposed activities must also be economically viable, and the local marketplace must be able to take in the predicted products. Finding prospective participants and determining how the advantages would be distributed to them is crucial.

7. Designing the timeline for work:

The project execution committee should create a decentralized project management plan outlining the "what, who, when, and how" of local project execution. Timeline for work (Fig 3) can be prepared by using the template developed by Praxie (<https://boards.praxie.com/app-store>)

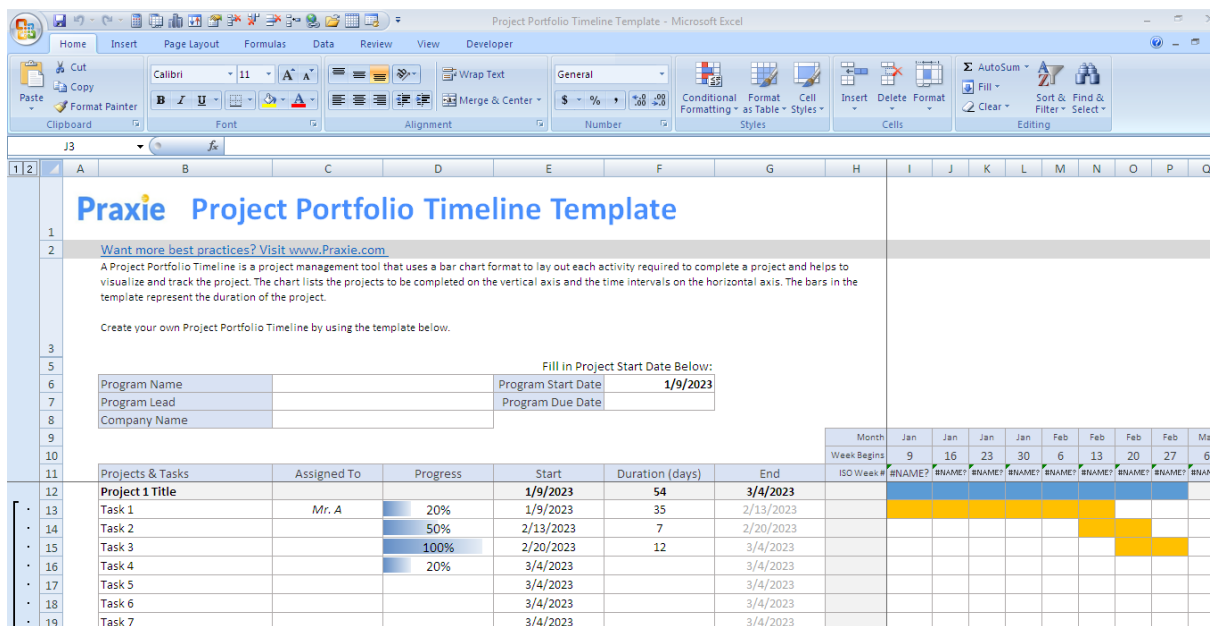


Figure 3: TIME LINE FOR WORK TEMPLATE

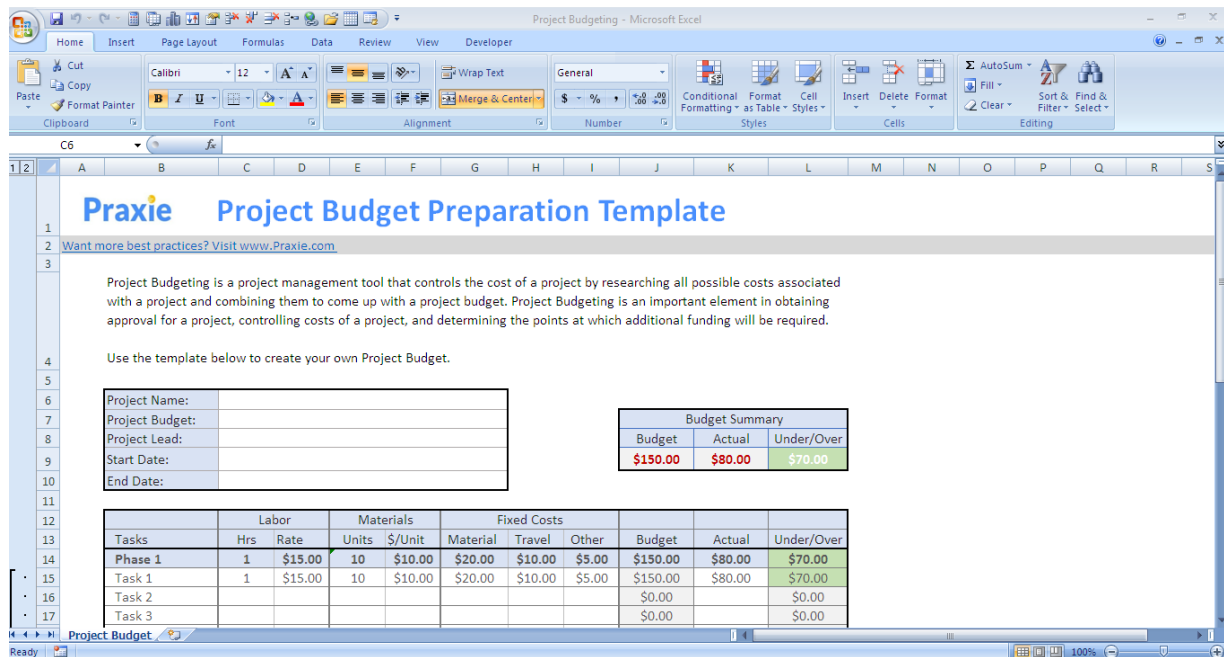
The following details should be provided simply in a table in the work plan: (i) all of the project's implementation-related activities; (ii) the identities of the person(s) in charge of each task; (iii) the start and end times for each task; and (iv) the resources needed to complete the tasks. In order to efficiently track and assess each action, it should also specify the results that can be expected from every phase of the process.

Format of a project schedule

The description of the task	Name(s) of the person accountable	The timetable		Resources needed (cash, goods, and labour)	verifying availability and acceptability
		When to begin	When to finish		

8. Setting up the budget:

The project budget is created by allocating a monetary value to the supplies and personnel. The price is further divided by every point in time as well as availability, including whether it can be found



locally or needs to be obtained from somewhere else. Government loans or borrowing from financial entities are examples of outside funding. Here a template of calculation of budget is shown in figure no. 4 which has been developed by Praxie (<https://boards.praxie.com/app-store>)

Figure 4: BUDGET PREPARATION TEMPLATE

Identification of stakeholders

People who could be impacted by or possess an impact on an endeavour are known as stakeholders. They may also include those who, despite the fact that they, friends, family, and colleagues are not immediately impacted by the initiative, have a significant interest in it for philosophical, political, or academic reasons. Beneficiaries, policymakers, and other stakeholders are simple to spot, but indirect effects and, consequently, secondary stakeholders, can occasionally be harder to perceive. There are various methods for identifying stakeholders. The best outcomes are frequently obtained when using many.

- ✓ Brainstorming: Contact groups and names gathered by representatives from any organization, government officials, and anyone already involved or aware of the initiative. The objective of brainstorming includes producing anything that pops into our thoughts, regardless of how absurd it may appear. Be as diverse as possible since, upon reflection, some of the silliest ideas may end up being among the best. After ten or fifteen minutes, halt the discussion and go over each suggestion. One might classify them as primary, secondary, or key stakeholders.
- ✓ If community sources are not available to participate in a brainstorming session, gather categories and names from them, especially from members of the community or locals in the affected region.
- ✓ Consider organisations that either have or have previously participated in related initiatives or that operate with the target population or the affected area.
- ✓ As we identify stakeholders, solicit more thoughts from them.
- ✓ Promote, if needed. To spread the message, one can use a variety of tools, including the media, community meetings, newsletters from local groups and organisations, social media, targeted emails, announcements made by leadership at meetings and religious gatherings, and word-of-mouth. It's possible to come across stakeholders previously hadn't considered.

CONCLUSION

Programme planning is crucial to any deliberate effort to accomplish specific objectives. It is the process of enacting intentional modification in an organization. Planning's purpose is to identify and prepare the conditions for action that has to be taken. Therefore, programme planning must produce approaches that assist an organization in locating adequate means of subsistence. Gaining a sense of direction is made easier with knowledge of the programme planning process, which boosts productivity and improves personal satisfaction in an organization. Thus, effective programme planning is crucial for the success of outreach efforts because it provides a simpler option to select opportunities that will help an organisation to achieve its targets vis-a-vis objectives and makes it possible to evaluate how well they are being met.

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ICT AND SOCIAL MEDIA APPLICATION IN THE DEVELOPMENT OF AGRICULTURAL EXTENSION ORGANIZATION**Aditya Sinha^{1*} & Sukanta Biswas²**

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INTRODUCTION*Background and Significance of Agricultural Extension Services in India*

Agriculture has been the backbone of India's economy for centuries, deeply intermingled with the cultural and social fabric. The significance of agriculture extends beyond economic sustenance; it plays a pivotal role in addressing food security, poverty alleviation, and rural development (Hazell et al., 2010). However, the sector has been facing multiple challenges, including diminishing yields, shrinking landholdings, climate change, and the need for sustainable practices. Agricultural extension services have been the forefront in disseminating knowledge, innovative techniques, and best practices to farmers, empowering them to navigate these challenges effectively.

Agricultural extension services in India have a rich history dating back to the early 20th century, marked by the establishment of institutions like the Imperial Council of Agricultural Research (ICAR) and the Directorate of Extension (Jha and Pal, 2008). These services aimed to bridge the knowledge gap between agricultural research and farming community, ensuring that scientific advancements reached the grassroots level. Over the decades, extension services have evolved from their traditional advisory role to encompass a broader spectrum of activities, including capacity building, skill development, and the promotion of sustainable farming practices.

The significance of agricultural extension services in India is underscored by the massive size of the sector. India is home to over 120 million farming households, making it the world's second-largest agricultural producer. The sector employs more than half of the country's workforce, directly contributing to the livelihoods of millions (Rosencranz et al., 2022). The ability of extension services to enhance the efficiency and productivity of this vast agricultural workforce is pivotal not only for rural prosperity but also for ensuring food security and economic stability at the national level.

However, despite the historical importance of agricultural extension services, the sector faces several contemporary challenges. These include the need to adapt to rapidly changing agricultural practices, address the impacts of climate change, and cater to the information needs of a technologically evolving farming community. It is in this evolving landscape that Information and Communication

Technologies (ICT) and social media have emerged as transformative tools with the potential to revolutionize agricultural extension.

2. EVOLVING ROLE OF ICT AND SOCIAL MEDIA IN AGRICULTURE

The past two decades have witnessed a digital revolution in India, characterized by increased access to smartphones, improved connectivity, and growing digital literacy. This digital transformation has had a profound impact on agriculture. ICT and social media platforms have emerged as game-changers, facilitating the flow of information, knowledge, and resources across the agricultural value chain. ICT tools encompass a wide range of applications, including mobile apps, agronomic advisory services, farm management software, and weather forecasting systems. These tools provide farmers with real-time information on crop management, pest control, market prices, and weather patterns, enabling them to make informed decisions (Casciani, Chkanikova and Pal, 2022). Similarly, social media platforms have become virtual agora's where farmers exchange ideas, share experiences, and access expert advice from the comfort of their homes.

The significance of ICT and social media in agriculture lies in their ability to overcome traditional barriers to extension services. They transcend geographical limitations, making expert knowledge accessible to remote and marginalized farming communities (Balogun et al., 2022). Moreover, these digital tools have the potential to enhance the scalability and cost-effectiveness of extension services, ensuring that every farmer, regardless of their location or resources, can benefit from the latest agricultural innovations.

3. History and Evolution of Agricultural Extension Services

Agricultural extension services in India have a legacy that can be traced back to the early 20th century when the country was under British colonial rule. During this period, the British administration recognized the importance of disseminating agricultural knowledge to Indian farmers to improve crop yields and ensure a stable supply of raw materials for their industries. The British established the Imperial Council of Agricultural Research (ICAR) in 1929, which played a pivotal role in shaping agricultural research and extension in India. The first agricultural universities were also established during this era, serving as centers of research and education for agriculture. After gaining independence in 1947, India placed a strong emphasis on agricultural development as a means to alleviate poverty and achieve food security (Rao and Jayaraman, 2022). The Directorate of Extension was established to bridge the gap between research institutions and farmers. This marked the beginning of a more organized approach to agricultural extension services.

3.1 Key Milestones and Initiatives in Indian Agricultural Extension

Several key milestones and initiatives have contributed to the development of agricultural extension in India:

Green Revolution: The 1960s and 1970s witnessed the Green Revolution in India, characterized by the adoption of high-yielding crop varieties, modern farming practices, and increased agricultural productivity. Extension services played a crucial role in spreading these innovations.

Krishi Vigyan Kendras (KVKs): In 1974, the Indian government launched KVKs, which are agricultural science centres aimed at providing practical training and advice to farmers at the grassroots level. KVKs have played a vital role in disseminating knowledge and technology to rural areas.

ICT Adoption: With the advent of information and communication technologies, Indian agricultural extension began to embrace digital tools. Initiatives like the Farmers' Portal and m-Kisan have provided farmers with access to agricultural information via mobile phones and the internet.

Public-Private Partnerships: Collaboration between the government and private sector organizations has led to the development of innovative extension models. Public-private partnerships have facilitated the delivery of technology and market-related information to farmers.

Integrated Farming Systems: Efforts have been made to promote integrated farming systems that encompass crop cultivation, animal husbandry, and agroforestry. Extension services have been instrumental in promoting these sustainable farming practices.

3.2 Challenges Faced by Traditional Extension Methods

Despite the historical importance of agricultural extension services, they face several challenges in the contemporary Indian context:

Limited Reach: Traditional extension services often struggle to reach remote and marginalized farming communities. Geographical barriers and inadequate infrastructure hinder the dissemination of information.

Out dated Practices: Some extension methods rely on out dated practices and technologies. Farmers need access to up-to-date information and solutions to address modern challenges.

Extension Worker Shortage: India faces a shortage of trained agricultural extension workers. This shortage limits the ability to provide personalized assistance to farmers.

Climate Change Adaptation: With the increasing impact of climate change on agriculture, extension services must adapt to provide guidance on climate-resilient farming practices.

Digital Divide: While ICT adoption is increasing, there remains a digital divide in rural areas. Many farmers lack access to smartphones and the internet, limiting their ability to benefit from digital extension services.

4. Role of Agricultural Extension: Defining Agricultural Extension and Objectives

Agricultural extension is a vital component of India's agricultural ecosystem, serving as a bridge between agricultural research institutions, government policies, and the farming community (Upadhyaya et al., 2019). It can be defined as a dynamic process that facilitates the transfer of knowledge, information, and technology from experts and institutions to farmers, empowering them to improve their farming practices, crop yields, and overall livelihoods.

4.1 Objectives of Agricultural Extension

The primary objectives of agricultural extension services in India can be summarized as follows:

Dissemination of Knowledge: The core objective of agricultural extension is to disseminate scientific knowledge, innovative technologies, and best practices to farmers. This includes information on crop varieties, pest and disease management, soil health, and sustainable farming practices.

Skill Enhancement: Extension services aim to enhance the skills and capabilities of farmers by providing hands-on training and demonstrations. The goal is to equip farmers with the necessary skills to adopt modern farming techniques effectively.

Technology Adoption: Encouraging the adoption of modern agricultural technologies and practices is a fundamental objective. This includes the promotion of improved seeds, mechanization, irrigation methods, and post-harvest management techniques.

Farm Management: Agricultural extension helps farmers improve their overall farm management skills. This includes financial management, crop planning, resource allocation, and decision-making.

Market Access: Extension services assist farmers in accessing markets and understanding market dynamics. Farmers are educated about market prices, value addition, and marketing strategies to ensure better returns on their produce.

4.2 Significance of Extension Services in Indian Agriculture

The significance of agricultural extension services in the Indian context cannot be overstated. India is primarily an agrarian economy, with more than half of its population engaged in agriculture (Dasgupta, 2021). The sector contributes significantly to the country's Gross Domestic Product (GDP) and is a source of livelihood for millions of rural families. Some of the key aspects are:

Knowledge Transfer: Agricultural extension acts as a knowledge conduit, ensuring that the latest research findings and technological innovations reach farmers. This knowledge transfer is essential for improving agricultural productivity and sustainability.

Poverty Alleviation: Extension services play a pivotal role in poverty alleviation by increasing farmers' incomes. Improved crop yields and better farm management practices contribute to higher profitability.

Food Security: India's food security heavily relies on agriculture. Extension services help farmers adopt practices that enhance crop yields and ensure a steady food supply for the country's growing population.

Rural Development: The success of Indian agriculture is intertwined with rural development. Extension services contribute to rural development by empowering farmers with the skills and resources to improve their quality of life.

Inclusive Growth: Extension services aim to benefit all farmers, including smallholders and marginalized communities. They bridge the gap between resource-rich and resource-poor farmers, promoting inclusive agricultural growth.

5. ICT in Agricultural Extension and its Applications

Information and Communication Technology (ICT) has revolutionized agricultural extension services in India. ICT encompasses a wide range of technologies, including the internet, mobile phones, Geographic Information Systems (GIS), and more, which have transformed how agricultural knowledge is accessed and shared.

Applications of ICT in Agriculture: ICT in agriculture serves various purposes:

Access to Information: Farmers can access real-time information on weather forecasts, market prices, and crop management techniques through mobile apps and websites.

E-Learning: ICT platforms offer e-learning modules and videos, allowing farmers to enhance their skills and knowledge conveniently.

Market Linkages: Farmers can use ICT to connect directly with buyers and markets, reducing intermediary costs.

Data Collection: ICT tools enable the collection of data on soil health, crop diseases, and pest management, aiding in precision agriculture.

Artificial Intelligence and Block chain: ICT tools related to artificial intelligence and block chain are a game changer in the field of traceability in agriculture along with facilitation of better export capabilities (Sinha et al., 2021).

6. Emergence of Social Media in Agriculture

Social media has emerged as a powerful tool in agricultural extension, offering dynamic and interactive platforms for farmers and experts to engage in knowledge-sharing and networking.

Platforms and Tools for Agricultural Information Dissemination

Numerous social media platforms and tools are being used in agricultural extension:

Whats App: Whats App groups facilitate communication and information exchange among farmers and extension workers.

Facebook: Agriculture-focused Facebook pages and groups provide a space for farmers to seek advice and share experiences.

Twitter: Twitter is used for real-time updates on agricultural news, trends, and events.

YouTube: Video-sharing platforms like YouTube host tutorials and educational content for farmers.

Instagram: Visual platforms like Instagram showcase agricultural practices through images and short videos.

6.1. Benefits of using social media in Extension Services

The utilization of social media in agricultural extension offers several advantages:

Real-Time Interaction: Farmers can ask questions and receive instant responses from experts and peers.

Cost-Effective: Social media platforms are cost-effective for both farmers and extension agencies, reducing the need for physical meetings.

Wide Reach: Social media has a vast user base, ensuring that information reaches a broader audience.

Visual Learning: Visual content on social media aids in understanding complex agricultural practices.

Community Building: Social media fosters the creation of online agricultural communities, encouraging collaboration and support among farmers.

6.2. Challenges of using social media in Extension Services for Extension Organizations

While social media has immense potential, it also presents challenges:

Digital Divide: Not all farmers have access to smartphones and the internet, creating a digital divide.

Quality of Information: The accuracy and reliability of information shared on social media need to be monitored.

Privacy and Security: Farmers' privacy and data security must be safeguarded on social media platforms.

Language Barriers: Language can be a barrier, as agricultural information may not always be available in local languages.

Integration of ICT and social media in Indian Agriculture: In recent years, India has witnessed a significant transformation in its agricultural landscape through the integration of Information and Communication Technology (ICT) and social media into extension services (Phillips, 2021). This chapter delves into the strategies, collaborations, success stories, and challenges surrounding the fusion of ICT and social media in Indian agriculture.

6.3 Future outlook

To pave the way for a technologically empowered future in Indian agriculture, a comprehensive policy framework is essential. Firstly, the government should prioritize investing in rural digital infrastructure, ensuring widespread internet access and reliable power supply in remote farming regions. Additionally, initiatives must be launched to educate and train farmers in digital literacy and advanced agricultural technologies, fostering a culture of innovation and data-driven decision-making. Collaborative research and development partnerships between public institutions, private sector stakeholders, and agricultural universities should be encouraged to promote indigenous technological solutions tailored to India's unique agro-climatic conditions. Furthermore, robust data collection and analysis systems should be established to provide actionable insights for farmers, policymakers, and agribusinesses. Finally, policies should incentivize the adoption of precision agriculture, IOT devices, and AI-driven predictive models to enhance crop yield, reduce wastage, and ensure food security, ultimately positioning Indian agriculture at the forefront of global agro-tech innovation.

7.CONCLUSION

The chapter discusses the pivotal role of agricultural extension services in India, recognizing their historical significance and evolving nature. Agriculture, deeply interwoven with India's culture and economy, serves as a crucial source for food security, poverty alleviation, and rural development efforts. The emergence of Information and Communication Technology (ICT) and social media has ushered in a transformative era for agricultural extension, offering new avenues for knowledge dissemination and empowerment. The historical journey of extension services, from the colonial period to contemporary initiatives, showcasing their evolution in disseminating knowledge, skill development, and sustainable farming practices. Traditional methods, while valuable, grapple with challenges such as limited outreach, out dated practices, and digital disparities. ICT and social media have emerged as tools to address these issues, breaking geographical boundaries and providing real-time access to agricultural information. The integration of ICT and social media has revolutionized extension services by providing accessible, cost-effective, and scalable solutions. However, challenges like the digital divide and information quality need careful consideration.

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LEADERSHIP: CONCEPT & ROLE FOR DEVELOPING BETTER EXTENSION ORGANIZATION

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INTRODUCTION:

Leadership is the art or process of influencing and motivating the behaviour and performance of others for achievement of common goal. Leadership can be stated that the ability to influence the behaviour and performance of an individual or group of individuals toward the achievement of common objectives in a given situation.

A leader is one who has the aptitude of motivating and influencing the behaviour of his group members enthusiastically for the attainment of common goals. A leader must have the ability to guide, inspire, persuade, influence, direct, motivate, communicate, creative etc. A successful leader is someone whose followers accept his guidance undoubtedly.

SOME OF THE COMMON DEFINITIONS OF LEADERSHIP ARE AS FOLLOWS:

- **George R. Terry** – Leadership is the activity of influencing people to strive willingly for mutual objectives.
- **Stephen P. Robbins** – Leadership is the ability to influence a group of people for the achievement of goals.
- **Koontz and Weihrich** – Leadership is the art or process of influencing people so that they will strive willingly and enthusiastically toward the achievement of common goals.
- **Keith Davis** – Leadership is the ability to persuade others to seek defined objectives enthusiastically. It is a human factor that binds a group together and motivates it toward goals.

A leader may be a political leader, a spiritual leader, a person elected by team members, or a person will be a leader who has knowledge and wisdom, and a willingness to lead but remember leadership is a choice, not a responsibility because it possesses the personal qualities of a leader.

Leadership is equally applicable to managers. Managers also become good leaders. A manager is a successful leader when he possesses the leadership qualities to influence the behaviour of his subordinates. He has to guide his subordinates in such a manner that organizational and individual

objectives can be achieved. Thus, the manager must have a complete vision of how to operate resources and achieve organizational objectives.

QUALITIES OF AN EFFECTIVE LEADER

Leadership skills are the strength and abilities individuals demonstrate that help to oversee processes, guide initiatives and steer their followers or employees towards the achievement of goals. A leader should have specific abilities and skills in order to lead, guide, and influence the actions of the people in a group or organisation. Some of the qualities that are very much essential to make a leader effective are as follows:

1. **Communication skill:** Leaders are someone who can act as motivators and able to encourage others to work toward a common goal. This ability to inspire has largely been an outcome of concrete communication skills. A good leader possesses an open line of communication with team members and can precisely explain organizational goals and tasks using diverse communication channels. An effective leader shares clear messages and makes complex ideas easy to understand for one and all.
2. **Empathy:** Empathy is all about putting yourself in another person's shoes. Recognising and identifying other's state of mind and then responding to it accordingly is empathy. Empathy between leader and followers can boost the character of both people which in turn will be good for the overall business. Empathetic leadership focuses on recognising with others and understanding their perspective. Leaders who show empathy are effective because they can better understand how the employees feel about their working situation. This enables the leaders to bring positive changes to the workforce.
3. **Strategic thinking:** Strategic thinking is a long term thought process to achieve a successful team or company. This means having the capacity to anticipate, the discipline to prepare now, and the ability to position you to compete and win in the future. When a leader is capable of strategic thinking, they gain an important skill. They are able to work through unknown situations, and gain abilities to reason, learn, and make decisions that enable employees the impetus to move forward along the hurdles. A strong leader makes well-researched and objectively scrutinized decisions that can lead an organization toward achieving its goals.
4. **Creativity:** Creativity in leadership is the ability to innovate actionable ideas and inspire others in the workplace to solve problems individually and as a team. Leaders can use creative approaches to generate new business plans, restructure a work environment or make valuable professional connections with other people. A creative leader can brainstorm new ideas and inspire others toward creativity and innovation.

5. **Positivity:** The road to success is full of difficulties, obstacles, and challenges. When you have an optimistic perspective, these things are minor setbacks and not overwhelming morale killers. The better your attitude, the quicker you rebound after a setback. When people see your resilience, they feel braver and hardier themselves. A great leader brings positivity into the work environment, which in turn uplifts the employees and encourages them to perform better. Positivity can be cultivated by showing care, respect, diplomacy and empathy toward the team. As you seek to fulfil your mission, positivity both empowers you and removes friction.
6. **Flexibility:** Flexibility in leadership is the ability of a leader to adjust their leadership style so that they can best serve their team. Flexibility in leadership can occur in both long-standing situations and times of change. Flexible leaders can solve problems creatively and may use limited resources to do so. The best leaders get out the zone of ease and quickly acclimatise to changing work conditions.
7. **Conflict resolution:** It would have been very nice if you never have to deal with conflict. But, it is never possible. Therefore, conflict resolution is one of the important qualities of an effective leader. Conflict resolution is the art of diffusing tension between parties to reach a mutually beneficial agreement. A great leader can avoid conflicts skilfully in the workplace and can also resolve them in an efficient and timely manner. While resolving conflicts, the leaders have to stay calm and decide analytically.
8. **Time Management:** This is an essential skill for leaders, as they need to delegate tasks, prioritize commitments, set attainable goals and multitask. Successful leaders practice time management skills by setting SMART goals for themselves and their team members.
9. **Reliability:** Being reliable is more than just being trustworthy; it's performing consistently at a high level. A strong leader is reliable and one that people can be sure of fulfilling commitments and meeting deadlines. This inspires the team to raise the value of the leader's decisions and follow in their footsteps.
10. **Mentorship:** Mentoring is something that can be done effectively by anybody having experience. The role of the mentor is basically to nurture the mentee, inspiring them to learn, grow and up skill. This empowers them not only to perform better in their role but progress further in their career. Mentoring is very much significant to leaders as it can bring the best out of the people you lead. Mentoring generates confidence, inspires trust and fast-tracks team development. Great leaders are always ready to mentor and teach to bring out the best in their employees. They put in a lot of effort to make the team successful by using positive reinforcement, clarity, motivation and by rewarding achievements.

11. **Recognizing potential:** When employees feel valued at work, it increases engagement, productivity, and even company loyalty. Recognition shows employees that they're valued and they aren't invisible. This is especially important with remote work, where it's even easier for employees to feel like their work isn't being seen. Great leaders have a keen eye for recognizing potential talent and competencies in the workplace. They also don't shy away from acknowledging the abilities and achievements of their employees.
12. **Responsibility:** The success and failure of a team ride on the shoulders of a leader. Therefore, leaders should be accountable for their actions and willing to take the blame when mishaps happen. Great leaders take responsibility and devise strategies for improvement instead of pointing fingers and blaming others.
13. **Organization:** Leadership positions depend heavily on organizational skills. A successful leader can handle a variety of different projects, spend ample time on each, prioritize and ensure that all project deadlines are met.
14. **Delegation:** Delegation is the assignment of authority to another person (normally from higher official or leader to a subordinate) to carry out specific activities. It is the process of distributing and entrusting work to another person. Sometimes, it's difficult for leaders to let go of the projects they're passionate about. However, a great leader knows the strengths and key skills of each employee and delegates accordingly based on the project requirements. This also helps with relationship building within the team as employees feel valued, respected and trusted.
15. **Feedback:** The performance of a team depends on the leadership it has. A leader's job is to drive the team's performance and success. Leadership feedback is an essential tool for the development and growth of teams. By providing team members with information about their performance, behaviour, and impact on others, feedback allows them to understand how others perceive them, identify areas where they can improve, and gain insight into the effects of their actions on the organization and its people. Effective leaders never miss an opportunity to provide constructive feedback to team members regarding their performance. Without feedback, employees can't gauge where they stand and which areas they need to improve on.

FUNCTIONS OF LEADERSHIP

The function of a leader is to improve the overall mechanisms of the organization to achieve the planned goals in a stipulated time. Generally, a leader generally does the following functions:

- **Goal Setting:** Setting up realistic and achievable goal is vital in any type of organisation. A leader's first task is to set goals that should be attainable.

- **Motivate Employees (Followers):** Motivating an employee is a crucial task for a leader. He must motivate his followers as they may feel at some point distracted, and he must inspire-motivate them to do tasks effectively.
- **Coordination:** Leaders should maintain warm relations between the different departments of the organization, employees, and resources for achievement of the common goal.
- **Encourage Team Work:** Teamwork is always better than individual work. A leader should develop a sense of team spirit among his followers to efficiently and effectively execute the given task.
- **Communication:** A leader should communicate with all his followers and also let them depict their concerns. He must develop a system of two-way communication for better understanding among the leaders and his followers.
- **Other important functions of a leader** include representation of the organization, integration of objectives with his follower's objectives, taking initiative, and taking control & supervision.

STYLES OF LEADERSHIP

Style of leadership simply can be defined as the behaviour and actions shown by the leader while leading the team members. Leadership styles are classifications of how a person behaves while directing, motivating, guiding, and managing groups of people. There are many leadership styles. The common ten types of leadership styles are discussed below.

1. **Autocratic Style:** The autocratic style is a one-way communication system. All the authority, power, and decisions remain only to the leader. Here, the leader is a dictator and he believes in the centralization of authority. A leader makes plans, takes decisions, and leads his followers. Here, the followers are bound to follow the direction of the leader. The followers do not have any right to share feedback and has follows as their leader wants.
2. **Democratic Style:** In democratic style, the followers and employees participate, in important meetings, share their views and their concerns are considered. Here, the leader believes in the decentralization of authority. The leader as an executive, formulate plans considering the points of his followers and followers are liable for its execution. Two-way communication is applied as it makes leaders understand what followers want and execute proper action which will inspire the followers to do more.
3. **Delegate (Laissez-Fair Style):** In the Laissez-fair-style the leader grants decision-making powers to his followers and employees. Here, the leader acts as an adviser only. They work on their own

and make decisions as the situation wants. Though the leader is present here, he only acts as a group member.

4. **Affiliated:** Affiliated leadership is an emotional leadership style that entirely focuses on relationships and people. It primarily involves forming social and emotional bonds with team members and encourages leaders to follow a team-first approach. It helps in building a team and creating a harmonious workplace. Leaders who follow this style promote trust and community building within the team. Typically, an affiliated leader is caring and considers the team's emotions.
5. **Visionary leaders:** Visionary leaders can often see what no one else sees, finding potential and opportunity in a time of change or even organisation's decline. They can see what's not there—or what's not there yet.

A visionary leader ensures the vision becomes reality by stating clear goals, outlining a strategic plan for achieving those goals and equipping and empowering each member to take action on the plan at the organizational, team and individual levels.

6. **Pacesetting leadership:** Pacesetting leadership is a leadership model in which, as the name suggests, the leader sets the pace for the organisation. Pacesetting leadership is the perfect leadership model for overachievers. That's because, in this leadership model, the leader sets the benchmark for performance. So, the higher they set that benchmark the better; a pacesetting leader is a line manager who wouldn't ask their employees to do anything they're not able to do themselves.

Pacesetting leadership generally doesn't work for everyone, but it can be useful during huge workload. When the workload is huge and it has to be done rapidly, then the goal can be achieved using this leadership model. However, in order to be effective, both the pacesetting leader and their team need to be highly skilled. This approach will only work if everyone involved knows what is expected of them and can execute those expectations to a high standard.

7. **Transactional leadership:** Transactional leadership is a managerial style that relies on achieving goals through structure, supervision and a system of rewards and punishments. This results-oriented mechanism can be well adapted with self-motivated and energetic employees. Transactional leadership doesn't focus on altering or improving the organization as a whole rather aims to hit short-term goals while establishing unity and conformity with the organisation. The rewards or punishments are therefore referred to as the "transaction".

Transactional leadership is typically used by middle and upper management in a medium- or large-sized organisation. In most instances, the organisation is well-established and not searching for change within the organization. The organization also has fixed methods and operations that require little flexibility or creativity to get the job done.

Teams that use transactional leadership:

- Sales teams that have commissions are using a form of transactional leadership. When a member of the sales team achieve the target they receive a reward—but on the contrary, corrective action may be taken if they couldn't.
- Sports teams often use a form of transactional leadership to convince team members to do something unpleasant, like training, in order to hit a personal reward—in this case, doing well in a competition.

8. **Transformational Leadership:** Transformational leadership is a leadership style that can inspire positive changes in those who follow. Transformational leadership is a theory of leadership where a leader works with teams or followers beyond their immediate self-interests to identify needed change, creating a vision to guide the change through influence, inspiration, and executing the change in tandem with committed members of a group. Transformational leaders are generally energetic, enthusiastic, and passionate. Not only are these leaders concerned and involved in the process, but they are also focused on helping every member of the group succeed.

According to Burns, transformational leadership can be seen when "leaders and followers make each other advance to a higher level of morality and motivation". Through the strength of their vision and personality, transformational leaders are able to inspire followers to change expectations, perceptions, and motivations to work towards common goals.

9. **Coaching:** These leaders believe in themselves. They are self-motivated further they give people confidence to achieve goals. They focus on other people's strengths and not weaknesses. These leaders understand the importance of continuous personal and professional improvement. They offer encouragement at just the right time when it is needed the most. They always actively seek out new ideas through various sources, such as books, seminars and conferences, professional publications, or networking and sharing ideas with others.

10. **Bureaucratic leadership:** Bureaucratic leadership relies on a clear chain of command, strict regulations, and conformation by its followers. Bureaucratic leadership structures, also known as bureaucracies, are authoritarian methods of leadership. They enforce tight rules and regulations on members of staff, encompassing an entire line of authority and following a set of stringent guidelines in the leadership processes of the organisation. There can be confusion about the difference between bureaucratic leadership and autocratic leadership, which can overlap in certain characteristics. The main difference is that, autocratic leadership focuses on the leader – who is responsible for making all the key decisions. On the other hand, bureaucratic leadership relies more on the entire line of authority versus a single leader.

CONCLUSIONS:

The role of leadership and management can work in different capacities, yet it is same in case of developing an organization. Leadership is nothing if it doesn't build a systems' based management structure, and management would have no support without the work of leadership as the backbone of ideals. It is to remember that leadership style not only depends on the leader but also should depend on the type of organisation. It is very essential to understand that whatever leadership or management style chosen, it has to relate to inherent beliefs. Essentially, the iceberg below the surface is not just made in a day, it is designed and refined throughout life through natural and social occurrences, assumptions, and inherent beliefs. It is very important for leaders to find their own icebergs and self-reflect on what their beliefs mean to their leadership styles and how they develop their management strategies. As promising leaders and managers in society, it is extremely important to find out and develop a personal leadership style to become successful in a future society.



PERSONAL EFFECTIVENESS APPLYING MANAGEMENT TOOLS

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INTRODUCTION:

The Management tools are very useful to achieve the objectives of any Extension Organization. There are no of management tools, which extensively used for better personal and organizational effectiveness, such as follows: Johari window, SWOT analysis, Agro-Ecosystem analysis, PRA, Transaction Analysis, etc.

A. Personal Effectiveness-Johari Window:

The personal effectiveness is very useful for success of management in any extension organization. In Extension organization, the manager or leader has to deal with human beings to obtain the objectives’ of the organization through better personal effectiveness. The basic precondition for personal effectiveness is better self-awareness but understanding one does not alone make a person effective.

The Johari Window: The simple and widely used model of self-awareness is the Johari window, developed by Joseph Luft & Harry Ingham in 1973. In this model, there are two main dimensions for understanding the self: Those aspects of a person’s behaviour and style that known to him(Self) and those aspects of his behaviour known to those with whom he interacts(Others). A combination of these two dimensions reveals fur areas of knowledge about the self.

	Know to self	Not Known to self
Known To Others	ARENA	BLIND
Not Known To Others	CLOSED	DARK
	JOHARI WINDOW	

- a) **ARENA:** The upper left hand square is the arena of the public self that part of an individual’s behaviour known both to the person and to others with whom he interacts. The arena includes information such as- name, age, physical appearance and familial or organization affiliation.
- b) **BLIND AREA:** This area contains those aspects of the person’s behaviour and style that others know but that the person himself does not know. A person may have mannerism of which he is not

aware that are perceived by others as funny, annoying or pleasing. Ex- An individual might be surprised to hear that his methods of asking questions annoys others because it is interpreted as cross examination rather than curiosity or a request for information.

- c) **CLOSED AREA:** This area involves that which is known to the person but not revealed to others. Things in this area are secret. Ex- A subordinate may be, if his supervisor does not ask him to sit down during a meeting, but he will remain standing without letting the supervisors know that he is annoyed. The supervisor may think that the subordinate does not mind standing and accept his behaviour as a part of their hierarchical relationship. Most of the people have many such feelings in their closed areas that they are unwilling to reveal to the persons concerned.
- d) **DARK AREA:** This area is inaccessible both to the person and others. Some psychologist believe that, this is a very large area indeed and those certain circumstances (Ex- An accident, particular life stage or special techniques such as- psychoanalysis or psychodynamics may suddenly make a person realize some hidden aspects of himself. Because the dark area cannot be consciously controlled or changed and therefore cannot be considered in a discussion of personal effectiveness, this discussion will be limited to the arena, blind & closed areas of a personality.

PERSONAL EFFECTIVENESS: It may be assumed that, a large arena and small blind and closed areas would be desirable and would contribute to the personal effectiveness.

This is not necessarily so, a person with a large arena may still be ineffective because a large arena is not the only factor in personal effectiveness.

PERSONAL EFFECTIVENESS COMBIATION:

By combining high or low effectiveness with large or small area in the arena and the blind and closed areas gives 12 possible personality combinations as depicted below:

Self-Confident: A person with large blind area and high effectiveness is likely to be self-confident. He may not be aware of his limitations, but he may also not be aware of some of his strengths. However, he is likely to rely on his strengths and be blind to his weakness. Although his effectiveness may see him through situations, it will certainly be limited because of his lack of awareness of some of his limitations and strengths.

Arena	Blind Area	Closed Area	Effectiveness	Type of Person
	Large		High	Self-confident
	Large		Low	Unperceptive
	Small		High	Perceptive
	small		Low	Overly Cautious
		Large	High	Good Listener

		Large	Low	Secretive
		Small	High	Frank
		small	Low	Ego-centric
Small			High	Task Oriented
small			Low	Closed
Large			High	Superficial
Large			Low	Open

Unperceptive: A person with a large blind area and low effectiveness is unperceptive to the non-verbal cues that people may send about his behaviour. Example- A professor who cannot see that the whole class is drowsy from a dull lecture may continue to bore the class. Unperceptive people find it difficult to realize subtle sarcasm, subdued communication of resentment and negative feelings and body language.

Perceptive: A person with a small blind area and high effectiveness is quite perceptive of verbal and non-verbal cues. This perceptiveness help him to pick up such cues quickly and use them to change his strategy of interaction and hence his effectiveness. A perceptive supervisor who sees that a subordinate about what is bothering him before pursuing task related topics. This is likely to help the subordinates become more open and relate to the supervisor more effectively.

Overly Cautious: A person with a smaller blind area knows more about his strengths and limitations. However, if such a person has low effectiveness he is more likely to be overly concerned with his weakness than he is to concentrate on his strengths. An over cautious persons finds it difficult to take the initiatives and to risk because his limitations loom large to him and may immobilize him. Just having a smaller blind area does not necessarily make a person effective.

Good Listener: A person with a large closed area and with high effectiveness is likely to be good listener. Instead of giving his own opinions, he listened to the opinions of others and makes decisions based on his own judgments. He may not share his own points of view, even if his views are not close to the views of others.

Secretive: A person with a large closed area and with low effectiveness is likely to be secretive. Other people may wonder what criteria he uses to judge them or what he expects from them. They are also not likely to know how he feels, as he will not share his feelings with others.

Frank: A person with a small closed area and with high effectiveness is likely to be quite outspoken and frank. He gives feedback and expresses his opinions and points of views without any inhibition. He shares his personal feelings, experiences, joys and sorrows as well.

Ego-centric: A person with a small closed area but with low effectiveness may tend to talk excessively about himself, his achievements, his talents, his experiences and even his personal life. He is so ego-centric that he is not likely to pay attention to others and their needs.

Task Oriented: A person with a small arena can be quite effective in a limited way. One model for an effective administrator is a person with a small arena and a high task orientation. Such a person does not relate to others on a personal or social level. He is mainly concerned with task performances and may restrict his communication and interaction with others only to the tasks involved.

Closed: A person with a small arena and low effectiveness is usually closed, neither sharing his impressions or listening to others and using the feedback he receives. Such a person will be quite ineffective.

Superficial: A person with a large arena but with low effectiveness does not use his openness to good effect with others. He may interact with others, offer his opinions and listen to others, but these acts are usually of a superficial nature. He does not exercise his judgment about when to open and what to look for in the feedback he receives from others.

Open: A person with a large arena (the open self) and high effectiveness is open. His opinions are given freely and are well understood, he feels free to communicate his impressions and he gives feedback to others with sensitivity that they appreciate. Similarly, he is eager to receive feedback from others: he solicits it and then critically examines and uses it to good effect.

Developing Personal Effectiveness:

Personal effectiveness must be viewed across 03 dimensions, such as-Openness, Perceptiveness and communication, all significant dimensions in interpersonal relationship. By becoming more open, a person reduces his closed area, the blind area is reduced by increasing perceptiveness and communication can be improved in various ways. These three dimensions, however, do not function in isolation: each interacts with the others. In order to increase effectiveness, it is necessary to work on a combination of all three dimensions.

Openness: It is the extent to which one shares ideas, feelings, experiences, impressions, perceptions and various other personal data with others. It is an important quality and contributes a great deal to a person's effectiveness.

Perceptiveness: The ability to pick up verbal and non-verbal cues from others indicates perceptiveness. This should be combined with other two dimensions. It can be increased by checking with others about their reactions to what has been said. If a person does not do so this he may become overly concerned about the cues he receives.

Communications: It is an important decision to increase the personal effectiveness and it should be combined with other two for higher effectiveness in personality & persons.

SWOT ANALYSIS: SWOT analysis is an extremely useful tool for understanding and decision making for all sorts of situation in business and farm organization.

SWOT is an acronym for Strength, Weakness, Opportunities and Threats and these 04 attributes are also called SWOT parameters.

STRENGTHS: It is the basic asset of the organization that would provide competitive advantage for its growth and development, Eg. Patents, strong brand names, good reputation among customers, cost advantages from proprietary know-how, exclusive accesses to high natural resources, favourable access to distribution networks.

- What advantages do you have? What do you do well?
- What relevant resources do you have access to?
- What do other people see as your strengths?

Consider this from your own point of view and from the point of view of the people you deal with. Don't be modest, be realistic. If you are having any difficulty with this, try writing down a list of your characteristics. Some of these will hopefully be strengths.

In looking at our strength, think about them in relation to our competitors- Example, If all our competitors provide high quality products, the high quality production process is not a strength in the market, it is a necessity.

WEAKNESS: Absence of certain strength may be viewed as a weakness. It is the inability of an organization that can create a state of time and situation, specific advantage for its growth and development, Eg. Lack of patent protection, A weak brand name, poor reputation among customers, high cost structure, lack of access to the best natural resources, lack of access to key distribution channels.

What could we improve? What do we do badly? What should we avoid?

Again consider this from an internal and external basis: Do other people seem to perceive weakness that we do not see? Are our competitors doing any better than me? It is best to be realistic now, and face any unpleasant truths as soon as possible.

OPPORTUNITIES: It is the ability of an organization to grow and achieve its specific objectives in a given situation, Eg. An unfulfilled customer needs arrival of new technologies, loosening of regulations and removal of international trade barriers.

Where are the good opportunities facing you?

What are the interesting trends you are aware of?

Useful opportunities can come from such things as:

Changes in technologies and markets on both, abroad and a narrow scale.

Changes in Govt. policies related to you filed.

Changes in Social Patterns, Population Profiles, Life Style Changes etc.

A useful application to looking to opportunities is to look at your strength and ask yourself whether these open up any opportunities. Alternatively, look at your weakness and ask yourself whether you could open up opportunities by eliminating them.

THREATS: It is a situation that blocks the abilities of the extension organization to grow and develop for meeting its ultimate goals, Eg-shift in consumer tastes away from the firm’s products, emergence of substitute products, new regulations, and increased trade barriers.

- What obstacles do you face?
- What are your competitors doing?
- Are the required specifications from your job products or services changing?
- Is changing technology threatening your position?
- Do you have bad debt or cash flow problems?

Could any of your weakness seriously threaten your business?

- Carrying out this analysis will often be illumination-both in terms of pointing out what needs to be done and in putting problems into perspectives.
- Strength and weakness are the corporate, organizational characteristics in nature which are internal. Opportunity and threat are external in nature.

INTERNAL	EXTERNAL
Share holders	Government
Employees	Customers
Product qualities	Economic/Political situation
Price of the products	Price policy of the Govt.

Examples of SWOT:

A Start up small consultancy business might carry out following SWOT Analysis:

Strengths:

We are above to responds very quickly, as we have no red tape. No need for higher mgmt. approval etc.

We are able to give really good customer care, as the current small amount of work means we have plenty of time to devote to customers.

Ur lead consultants has strong reputation within the market

We can change direction quickly if we find that our marketing is not working.

We have little overhead charges so we can offer good value to customers.

Weakness:

Our farm has to market prestige or reputation

We have a small staff with shallow skills base in many years

We are vulnerable to vital staff being sick, leaving etc.

Our cash flow will be unreliable in the early stages.

Opportunities:

Our business sectors are expanding with many futures opportunities for success.

Our local council wants to encourage local businesses with work where possible.

Our competitors may be slow to adopt new technologies.

Threats:

Will developments in technology change this market beyond our ability to adapt?

A small change in focus of a large competitor might wipe out any market position we achieve.

The consultancy might therefore decide to specialize in rapid response, good value services to local business. Marketing would be in selected local publications, to get the greatest possible market presence for a set advertising budget. The consultancy should keep up t date with changes in technology where possible.

Uses of SWOT Analysis:

- a) It plays an important role in understanding the management problems at all stages irrespective of the type of organization.
- b) It helps in taking appropriate decisions for development of an organization in a particular operational environment.
- c) It is useful for increasing competitive abilities of scientist and organizations.
- d) It helps to bring out the relevant changes in projects and organizations.
- e) It gives the scope for safety and security t every organization without facing hurdles in running the organization profitably.
- f) SWOT analysis is a framework for analysing our strength and weakness and opportunities and threats we face.
- g) It helps to focus our strength. Minimize weakness and take the greatest possible advantage of opportunities available.

Application of SWOT:

Some examples of what a SWOT analysis can be used to assess, as follows:

i) **Industry:** Many industrial scientist, managers and technical personnel applied the SWOT analysis frequently on systems and organizations for taking appropriate decisions for their smooth running. SWOT application was first used in 1910 in European and other developed countries.

ii) **Strategic Management & Planning:** It is a continuous process of effectively relating the organizations objectives and resources to the opportunities in the environment. SWOT analysis helps policy makers and managers in shaping the strategic directions of a specific agency operating within a given situations or context.

Besides industry, SWOT analysis in general is applicable in many walks of life as follows:

Individual/Household or families/ Private or Govt. Organizations/Politics/ A Company/ A methods of sales distribution/ a product or bran/ a business idea/ a strategic options/ an opportunity to make an acquisition/A potential partnership/Changing a supplier/ Outsourcing a service, activity or resources/ An investment opportunity etc.

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**ORGANIZATIONAL MANAGEMENT FOR SUSTAINABLE DEVELOPMENT OF
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CONCEPT OF MANAGEMENT:

Management is the brain of an Organization and it is the process of utilization of resources in an effective and efficient manner in the today's dynamic environment. Management today unifies and focuses on the approaches to manage the work of any Extension Organization. Several well-known authors and thinkers have provided common definitions of management, such as follows:

Management, according to Harold Koontz and Heinz Weihrich, is the process of creating and upholding a setting where people may effectively achieve particular goals while cooperating in groups.

Robert L. Trewelly and M. Gene Newport define management as the process of organising, implementing, and overseeing an organization's operations in order to achieve coordination of the human and material resources necessary for the effective and efficient achievement of goals.

Management, in Kreitner's words, is the process of collaborating with and working through people to successfully accomplish organisational goals while utilising limited resources in a changing environment.

George R. Terry defined management as the activities of planning, organising, acting, and controlling done to establish and achieve the goals using people and resources.

Therefore, management may be summed up as the process of getting things done with the intention of efficiently and effectively achieving goals. The following definition includes some crucial terms:

Process: By "process," we imply the main tasks or actions that management carries out to complete tasks. Planning, organising, staffing, directing, and managing are some of these duties.

Effectiveness is concerned with the final outcome. It basically means completing the assignment. In light of this, management effectiveness is concerned with carrying out the proper tasks, finishing up activities, and achieving objectives.

Efficient means carrying out the task correctly and affordably. Efficiency in the use of input resources is important to management since it lowers costs and increases profits.

In order to achieve objectives (efficacy) with the fewest resources or as efficiently as feasible, management must strike a balance between the two.

APPROACHES OF MANAGEMENT:

There are numerous management strategies, each with a distinct goal and set of guiding principles. Typical examples include:

- **Traditional Approach:** This encompasses Administrative Management (concentration on general organisation and coordination) and Scientific Management (efficiency through methodical processes).
- **Behavioural Approach:** Stresses the value of comprehending employee motivation and behaviour in the workplace.
- The quantitative approach involves employing statistical analysis and mathematical modelling to help solve problems and make decisions.
- **Systems Approach:** Views an organisation as a networked system of many components cooperating to reach a common objective.
- The contingency approach postulates that there is no one-size-fits-all management strategy and that the optimum course of action is dependent upon the circumstances.
- Utilising techniques like Total Quality Management (TQM) and Six Sigma, the quality management approach focuses on enhancing the quality of products and services.
- Setting long-term objectives, creating plans, and coordinating resources are all part of the strategic management approach, which aims to provide organisations a competitive edge.
- **Human Relations Approach:** Emphasises the value of creating strong bonds amongst co-workers to boost productivity and job satisfaction.
- Encourages creativity, adaptability, and risk-taking to stimulate innovation and progress. Innovation and entrepreneurial approach.
- The socio technical approach takes into account how social and technical aspects interact while building productive work systems.

Various are but a few examples, and depending on their objectives and environmental conditions, many organisations frequently combine various strategies.

FUNCTION OF MANAGEMENT:

- **Planning:** Setting goals, formulating plans, and choosing the appropriate course of action are all aspects of planning. It aids in giving the organisation a clear direction and guarantees that resources are distributed effectively.
- **Organising:** Organising is the process of setting up people, tasks, and resources to fulfil the objectives determined at the planning stage. This entails outlining roles and duties, developing organisational structures, and setting up communication pathways.

- **Leading:** Leading, also known as directing, concentrates on directing and inspiring workers to contribute to the objectives of the company. Giving direction, making choices, and settling disputes while promoting a healthy work atmosphere are all aspects of effective leadership.
- **Controlling:** Controlling entails keeping track of how tasks and projects are doing, contrasting the outcomes achieved with what was anticipated, and making required corrections. It makes sure that the company stays on course and those deviations are quickly addressed.
- **Coordinating:** Synchronising various initiatives and efforts within an organisation is the process of ensuring that everything runs smoothly. To produce a unified result, it entails managing interdependencies across tasks and departments.

These constant and interconnected tasks help organisations run smoothly and successfully accomplish their objectives.

PRINCIPLES OF ORGANIZATIONS:

No matter what type of organisation it is—a company, a non-profit, or a government agency—it is governed by a set of guiding principles that determine its composition, conduct, and success. These rules serve as the cornerstone for the organization’s operations, culture, and purpose. The following fundamental ideas are frequently seen in effective organisations:

- **Unambiguous Vision and Mission:** A good organisation starts with a vision that is both captivating and unambiguous, outlining its long-term goals. The mission statement elaborates on the goal of the organisation and the benefits it offers to its constituents.
- **Effective Leadership:** Establishing strategic objectives, leading the organisation, and making vital decisions all depend on strong leadership. A sense of unity and direction is fostered by effective leaders who inspire and drive their staff.
- **Open Communication:** Promoting collaboration, trust, and well-informed decision-making requires open and honest communication. This approach promotes communication between all organisational levels.
- **Accountability:** People and teams take ownership of their duties in successful organisations. A culture of accountability encourages accountability, dependability, and a dedication to attaining common objectives.
- **Adaptability:** Businesses that can adjust to shifting conditions will succeed in today’s dynamic business environment. Organisations may remain competitive and relevant by being flexible and open to innovation.
- **Employee Empowerment:** Giving employees the freedom to make decisions and the chance to grow can boost their sense of fulfilment at work, their inventiveness, and their performance as a whole.

- **Diversity and Inclusion:** Supporting a diverse range of backgrounds, viewpoints, and skill sets helps to create an inclusive organisational culture. This could improve the effectiveness of the organisation as a whole and problem-solving and innovation.
- **Customer-Centric Approach:** Giving customers' and clients' needs and preferences first priority guarantees that products and services stay current and meet market demands.
- **Organisations should work to create effective systems that reduce waste and increase productivity.** The achievement of objectives and efficient utilisation of resources are ensured by effectiveness.
- **Ethical Conduct:** Upholding integrity and ethical standards is essential for winning over stakeholders, preserving a good reputation, and achieving long-term success.

PROCESS OF ORGANIZATIONS:

The act of organising entails the orderly arrangement and synchronisation of materials, activities, and people in order to successfully complete particular tasks. Establishing goals and dividing them into manageable steps is usually the first step. Then, duties are delegated, timelines are established, and resources are allocated. As team members must comprehend their duties and responsibilities while maintaining open lines of communication to achieve progress, communication and collaboration are vital. Regular evaluations and modifications may be required as the process progresses to account for evolving conditions. In order for a group or entity to function cohesively and provide the desired results, effective organisation necessitates a balance between structure and flexibility.

HIERARCHY OF ORGANIZATIONS:

1. **Top-Level/Executive Management:** This refers to positions like CEO, President, or Director, who are in charge of formulating strategic objectives and reaching important conclusions.
2. **Middle Management:** Managers and department heads are in charge of particular divisions or departments within the company, making sure that strategies are put into practise.
3. **Supervisors and team leaders** oversee groups of workers, delegating tasks, assessing performance, and reporting to middle management.
4. **Employees/Staff:** These are the people who carry out the routine duties and tasks required for the operation of the organisation.
5. **Support Staff:** Positions like administrative assistants, receptionists, and IT support specialist's aid in the efficient operation of the company.
6. **Specialised Roles:** Depending on the nature of the organisation, specialised roles like analysts, designers, engineers, and more may exist.

Do not forget that the size, sector, and organisational structure of an organisation can all affect the exact hierarchy. There may be fewer layers of hierarchy in some organisations, while there may be more levels of complexity in others.

DEPARTMENTALISATION:

The practise of organising teams or operations into departments or functions with particular aims, goals, and outputs to be attained is known as departmentalization, also known as departmentation. It is a technique for breaking up an organisation into distinct units (departments), each with their own duties and responsibilities but all working to achieve the organization's overarching objectives. Every person in a department either works in a diverse department with a range of talents or performs comparable tasks and has a similar objective. Both the ability to hold individuals accountable for their activities and the coordination between these employees are crucial.

Departmentalization process has numerous goals, some of which are as follows:

- **Combining related specialised activity**
Employees who do specialised jobs or have specialised expertise are grouped together by departments. Every member of the department has clearly outlined tasks and obligations. Managers can more easily allocate work, plan activities, and oversee personnel thanks to this grouping. Additionally, it makes authority delegation by managers possible.
- **Boosting coordination and communication**
Any organisation, regardless of size, needs effective collaboration and communication. They enable managers to assign duties, issue directives, and offer feedback. They also enable workers to communicate, settle disputes, and work together on projects.
- **Establishing the organization's ability to make decisions**
Every organisation is complex to some extent. The complexity of the organisation increases with its size. The expansion of the company may make it challenging for managers to oversee all of the personnel and operations.
- **Increasing effectiveness and output**
Efficiency and productivity can be increased by grouping people in the same department who have comparable tasks, abilities, and knowledge. To work together on projects, employees can exchange resources, information, and skills. The creation of novel and cutting-edge goods or procedures may result from this collaboration.

Types-

Departmentalization can be divided into five primary categories, each of which has its own distinctive traits. An organization’s choice of departmentalization depends on its size, industry, and

Types of Departmentalization



business model and the standards that are set are crucial in determining how activities are divided among the many departments.

BENEFITS:

- **Specialisation:** It’s critical that specialisations be consciously grouped in order to maximise efficiency and production. Therefore, whenever an organisation combines several specialisations, it should be done for a stated cause or goal.
- **Coordination:** Different tasks are more urgent and important than others. To prevent overlap and duplication of labour, it is crucial to take coordination across departments into account while departmentalizing.
- **Making decisions with clarity:** A balance between having too much and too little control is required. A lack of control can result in anarchy, while too much can impede innovation and creativity. Finding a balance that gives workers the freedom to be innovative and productive is the aim.

AUTHORITY & RESPONSIBILITY:

The ability to formally and legally issue commands, make decisions, and assign responsibilities is known as authority. It is also known as the ability to persuade others. The ability to make and execute judgements is known as authority, and it can be transferred to another individual or organisation.

Responsibility is the duty to see that work is done and that choices are made with the company’s best interests in mind. Setting explicit expectations, monitoring others’ performance, and ensuring that all required procedures are done to ensure the success of a project or assignment are all examples of responsibility.

DIFFERENCE BETWEEN AUTHORITY & RESPONSIBILITY-

To succeed in the workplace, managers and supervisors need to know the distinction between authority and responsibility. While both power and accountability are involved, authority and responsibility are two separate notions that go hand in hand.

The ability to manage and lead the actions of others is known as authority. The authority to issue commands, renders judgements, and enforces compliance. Being in a position to affect others' behaviour is what gives authority its association with power. A someone in a position of power, such as a manager, supervisor, or leader, can grant authority.

The requirement to complete a work or accomplish a duty is known as responsibility. It is a duty to finish a work or assignment that has been entrusted to you and to hold a higher power accountable for the results. Being held accountable for the outcomes of the actions is a concept that goes hand in hand with responsibility. The individual in a position of authority is the one who bears responsibility; they are in charge of the outcomes of their actions and are accountable for those outcomes.

SIMILARITIES BETWEEN AUTHORITY & RESPONSIBILITY-

In the workplace, managers grapple with the ideas of responsibility and authority all the time. These concepts are crucial to a successful business, even if many individuals might not understand their significance or what they mean. In this blog article, we'll look at the definitions of authority and responsibility, how they relate to one another, and how trust and respect are crucial to both of these ideas.

The relationship between authority and responsibility is reciprocal. The capacity to decide and act is referred to as authority. It is the capacity to control and direct the behaviour of others. The duty to complete a task or make a choice, on the other hand, is responsibility. Making ensuring that the decisions taken are carried out is the responsibility.

AUTHORITY AND RESPONSIBILITY WORK TOGETHER-

Understanding the connection between authority and responsibility is crucial for managers. Being effectively handled, authority and responsibility, which are two sides of the same coin, can contribute to an organization's success. While responsibility requires them to assume accountability for their decisions and actions, authority grants individuals and teams the freedom to make judgements and take action. Authority should be delegated to the lowest level possible to empower workers and ensure that everyone is held accountable. To ensure that people and teams are held accountable for their choices and deeds, responsibility should be allocated to the appropriate level.

Components of individual behaviour in Organizations:

Several factors, such as the following, influence individual behaviour in organisations:

- **Personality:** The distinct collection of qualities, propensities, and tendencies that shape how someone perceives and reacts to their surroundings.
- **Attitude:** An Individual's attitudes towards certain topics might influence their behaviour and interactions with other people.
- **Perception:** It is the process through which people understand and make meaning of the data they gather from their surroundings, which has an effect on their behaviour and ability to make decisions.
- **Motivation:** The force that propels a person's actions; it may be intrinsic (internal) or extrinsic (external), and it can affect the person's level of effort and engagement.
- **Values and Ethics:** Personal convictions and rules that direct a person's actions and choices, frequently reflecting what is deemed right or wrong.
- **Learning and Experience:** The process by which people acquire knowledge, abilities, and behaviours through formal education, practical experience, and life events.
- **Cognition:** Mental functions including reasoning, problem-solving, making decisions, and creativity that affect a person's behaviours and interactions.
- **Emotions:** Feelings that people have and express that have an effect on their interactions, behaviour, and decision-making.
- **Biological variables,** such as genetics, the shape of the brain, and chemical makeup, can affect a person's behaviour and reactions.
- **Self-Concept and Self-Esteem:** How people view themselves and their value, which can have an impact on their confidence, behaviour, and interpersonal relationships.
- **Social and Cultural Influences:** How social interactions, cultural values, and societal conventions affect a person's behaviour and decisions.

These factors interact in intricate ways to influence a person's behaviour in an organisational setting.

ORGANIZATIONAL CLIMATE:

The term "organisational climate" refers to the atmosphere, culture, and work environment that permeate a business or other organisation. It is the overall impression that workers form over time, impacted by a variety of elements including management techniques, communication patterns, corporate guidelines, and physical working conditions. Understanding and controlling the organisational environment has become essential in contemporary workplaces as it plays a critical role in determining employee engagement, satisfaction, and overall organisational performance.

Despite their close connections, organisational climate and culture are separate concepts. Organisational climate focuses on the prevalent emotional tone and atmosphere that employees encounter on a daily basis, as opposed to organisational culture, which refers to the shared values,

beliefs, and behaviours that define an organization's identity. Organisational climate essentially represents how staff members feel about their working conditions, including whether it promotes engagement, growth, and motivation or causes stress, disengagement, and unhappiness. Beyond employees' wellbeing, organisational atmosphere has an impact. It and the results of performance are directly correlated. A favourable environment tends to improve performance on an individual and group level, boost job satisfaction, and encourage loyalty to the company. This may result in increased creativity, increased productivity, and a willingness to go above and beyond to meet organisational goals. A bad environment, on the other hand, can stifle productivity, undermine teamwork, and result in lost chances for development and innovation.

The task of managing and influencing the workplace culture is on-going and calls for a diversified strategy. It entails coordinating the leadership style with the company's principles, fostering open dialogue at all levels, and fostering an inclusive and empathetic workplace culture. Insights into the existing environment can be gained from employee feedback methods, surveys, and routine evaluations. This information enables organisations to pinpoint problem areas and put successful plans into action.

DECISION-MAKING BY CONSENSUS & PARTICIPATION BY SUBORDINATES:

Successful organisations place a high priority on effective decision-making, using a variety of techniques to make decisions that are well-informed and consistent with the organization's mission and values. Consensus decision-making and subordinate involvement are two examples of these strategies. These techniques not only provide employees more authority, but they also improve the decisions made and promote a sense of ownership within the company.

Consensus-Based Decision-Making: Before a plan of action is decided, all pertinent stakeholders must come to an agreement collectively. This strategy places a strong emphasis on compromise, cooperation, and open discussion. Participants have in-depth discussions to comprehend various points of view and issues. Although this process can take some time, it frequently yields judgements that are well-rounded and supported by a variety of viewpoints. This strategy, however, can be difficult, particularly when there are sharp differences in opinion or when there are time restraints. Consensus-building may necessitate compromises that lessen the impact of some suggestions or solutions. Additionally, it could take longer, which might be problematic in areas with high activity levels.

Participation of Subordinates: Enabling employees at various levels of the organisation to contribute their thoughts, ideas, and expertise through subordinate participation in decision-making. This method recognises that those who are most familiar with the operational details frequently have insightful knowledge that can help them make better decisions. Decision-makers can get a plethora

of practical expertise from subordinates that might otherwise go unexplored. This strategy must be applied carefully, though. Striking a balance between involving subordinates and upholding effective decision-making procedures is crucial. Not every decision calls for input from all organisational levels, thus decision-makers must use discretion in determining which issues are best served by greater participation.

ORGANIZATION DEVELOPMENT:

History- Organizational development was implemented in organisations by consultants in the late 1960s, but the term was self-known as a theory of practise and its practitioners did not agree on what it meant. An expert on organisational development and change management named Richard Beck hard defined organisational development as “an effort, planned, organization-wide, and managed from the top, to increase organisation effectiveness and health through planned interventions in the organization’s processes, using behavioural-science knowledge” (Beck hard 1969).

With courses and programmes being provided in business, education, and administration curricula, organisational development became a more established field throughout the 1970s and 1980s. Throughout the 1990s and 2000s, organisational development continued to expand and change and its influences could be seen in theories and practises including total quality management (TQM), team building, and job enrichment and re-engineering.

Nature-Organisation entails people, equipment, working procedures, connections, coordination, and more. All of these are dynamic. These elements do not endure for a very long time. As time passes, human traits must be cultivated, machinery becomes out-dated, working practises are flexible, and interpersonal relationships either get better or, in some situations, worse. The organisation needs to take some actions to adapt to these developments. Organisation development may be used to describe these actions. Organisational development is a constant, methodical process. To execute any kind of change within the organisation, this procedure is started. It may be hoped that organisation development will be secured if the modifications are implemented with a predetermined purpose, good intention, and a scientific mind-set. It draws on ideas of motivation, learning, and personality as well as sociology, psychology, and other multidisciplinary fields. The field of organisational development is expanding and open to new ideas.

CHARACTERISTICS-

- Long-term effort: OD is not intended to address transient, one-off, or isolated issues. It’s a long-term strategy designed to raise the organisation to a higher level of performance by raising member performance and satisfaction. Programmes for organisational development typically last three to five years.

- **Wide-Reaching:** OD is a general term used to describe a range of change initiatives. It mostly addresses a broad topic—an Organisation. It is a smart effort to implement a significant change throughout the entire Organisation. In other words, it is concerned with changes in organisational ideologies, as well as in the abilities of both individuals and groups, in addition to changes in organisational design.
- **Dynamic Method:** OD encompasses both the struggle to cope with or adapt to impose change, as well as the effort to guide and direct change. OD is aware that the organization's objectives change with time, and as a result, so should the strategies used to achieve them. Thus, OD is a dynamic process requiring a substantial time and money investment. It is a continuous, participatory, and iterative process rather than a one-time deal.
- **Systems viewpoint:** Systems thinking is used in OD. It is founded on the idea of open, adaptable systems. It acknowledges the interdependence between organisational structure and managerial effectiveness. No aspect of the organisation can be changed without having an impact on other sections since it is viewed as a cohesive whole.
- **Research-Based:** The majority of OD interventions are evidence-based. Change agents conduct surveys, gather data, analyse it, and then make decisions rather than simply examining the personnel and introducing changes. OD projects are often run by a specific task force and make use of the expertise of external behavioural consultants.
- **Planning and goal-felting:** The change agent sets the group's objectives and ensures that everyone works together to achieve them because OD affects the entire organisation. Goal setting occurs at all levels in healthy organisations, according to Beck Hard.
- **Rehabilitative normative strategy:** The foundation of organisational development (OD) is the idea that “norms form the basis for behaviour and change is a re-educative process of replacing old by new ones.” For example, some OD programmes demand a change in managerial leadership styles and represent significant departures from the bureaucratic framework of an organisation.

Due to the fact that OD is founded on proven concepts about both individual and group behaviours inside the organisation, “it is relatively easy for OD practitioners to launch and diffuse the required changes by educating them.”

ASSUMPTION & PROCESS:

The majority of organisation development operations are predicated on certain sets of beliefs about people as individuals, as members of groups, as leaders, and as constituents of larger organisational systems.

- ✓ The Assumption about People as Individuals- The majority of people are motivated to advance personally. Most people desire to develop to their fullest potential in a challenging and encouraging atmosphere. In other words, people desire personal growth and development, which can be done in an environment that is both demanding and supportive at work. What the manager should do is inquire, listen, support, challenge, encourage risk-taking, allow failure, eliminate hurdles and obstacles, assign authority and responsibility, establish higher expectations, and reward accomplishment. Using suggestions to solve issues as an example and taking action.
- ✓ The Assumption about People in Groups and About Leadership- For the majority of people, their workplace is their most psychologically significant reference group. It basically means that work team dynamics, especially at the informal level, have a significant impact on emotions of competence and happiness. Consequently, it is important to combine personal and group objectives. What the manager should do is encourage the formation of work teams, provide opportunities for teams to thrive, replace a one-on-one leadership style with a leadership style that encourages active participation from members in problem-solving and decision-making, provide extensive training, help members deal with both positive and negative emotions, and encourage members to solve problems through interpersonal interactions. Teams or groups must be supported by the manager (the leader).
- ✓ Assumptions about People in Organisational Systems- Organisations no longer operate in traditional hierarchical structures. Therefore, it is crucial (extremely important/essential) to experiment with different organisational structures and forms of power. One of the organization's main goals is to foster cooperative rather than competitive organisational dynamics.

PROCESS-The organisational development process consists of a number of organised, research-based processes. Following are examples of typical implementation steps:

- Locating a potential place for development. Finding a need that is in line with corporate objectives is the first step in any organisational change. Companies frequently recognise this need right away, but they might also take into account a data-driven strategy to pinpoint issues via official surveys and feedback. This method enables a more detailed comprehension of the region that needs improvement. Companies should reflect on the changes they want to make and the reasons behind them.
- Researching the issue. When a problem area is found, businesses look into it to see what caused it, what obstacles stand in the way of repair, and what approaches have been tried in the past. Additionally, focus groups, surveys, and one-on-one interviews may be a part of this step.
- Putting together an action plan. Following that, the organisation develops a plan with allotted funds and distinctly defined personnel duties. This strategy will outline specific assistance for everyone

engaged and specify a quantifiable objective. Companies should consider how they'll manage comments and inform personnel of changes throughout this process.

- Creating a vision and motivating factors. The leadership of the organisation must inspire its workers to share a vision after a plan has been clearly outlined and conveyed. In this step, leaders serve as enthusiastic role models for their teams by explaining the plan's overarching objectives and intended impact.
- Implementing. While maintaining stability during implementation is critical, helping staff members adjust by providing mentoring, training, and coaching is just as crucial. Management should examine what new skills employees would require and the most efficient delivery methods when thinking about such help. The transition process can be facilitated by on-going communication and feedback.
- Assessing preliminary findings. After a plan has been implemented, a company's management may set aside time for collective reflection, during which they and their staff members can discuss whether the change successfully furthered the company's objectives. Additionally, they will assess the change management procedure and think about potential improvements. This phase cannot be skipped; if the organisation does not assess the changes, it will not be able to determine whether interventions have been successful.
- Continuing or adapting. The business may decide to modify its plan in response to the assessment of the preliminary outcomes. If the outcomes indicate success, the current plan may be kept in place to continue improving.

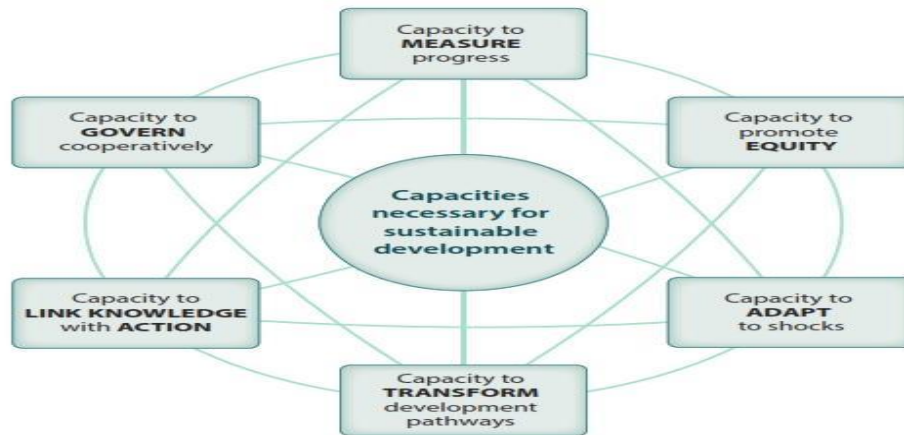
ORGANISATION DEVELOPMENT INTERVENTIONS:

Interventions in organisational development are deliberate actions or approaches intended to enhance several facets of an organisation. These initiatives seek to improve the efficacy, efficiency, and general performance of the organisation. Initiatives for team building, leadership development, process optimisation, and culture transformation are a few examples. The choice of intervention is based on the objectives and needs of the organisation.

SUSTAINABLE DEVELOPMENT:

Sustainable development is defined as “development that satisfies present needs while not compromising the capacity of future generations to satisfy their own needs.”

The phrase "sustainable development" can be construed in a variety of ways, but at its heart, it refers to a method of growth that seeks to balance many, frequently incompatible needs with an



understanding of the social, economic, and environmental constraints that our society is subject to.

SUSTAINABLE DEVELOPMENT REQUIRES SIX CENTRAL CAPACITIES

The environment, economics, and society are considered to be the three dimensions of sustainable development. A healthy equilibrium between the three dimensions is supposed to be attained. Other common names for them include pillars, realms, facets, and spheres instead of calling them dimensions.

The Sustainable Development Goals, also known as the Global Goals, are a set of 17 interconnected goals that are meant to act as a “common blueprint for peace and prosperity for people and the planet, now and into the future.” The Sustainable Development Goals (SDGs) are: no poverty; no hunger; good health and wellbeing; quality education; gender equality; clean water and sanitation; affordable and clean energy; decent work and economic growth; industry, innovation, and infrastructure; reduced inequalities; sustainable cities and communities; responsible consumption and production; climate action; life below water; life on land; peace, justice, and strong institutions; and partnerships for the goals. By placing sustainability at their core, the SDGs highlight how the environmental, social, and economic facets of sustainable development are interconnected.

CONCLUSION:

In conclusion, management is the process of getting things done with the intention of efficiently and effectively achieving goals. There are various management strategies, each with a distinct goal and set of guiding principles. The function of management involves planning, organising, staffing, directing, and controlling. These functions are interrelated and essential for achieving organisational goals. Management must strike a balance between effectiveness and efficiency to achieve objectives with the fewest resources or as efficiently as feasible.

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INNOVATIVE EXTENSION APPROACHES IN AGRICULTURAL SAFETY MEASURES**Biswajit Pal^{1*}, Susmita Mondal² & Sukanta Biswas³**¹Assistant Professor, Dept. of Rural Studies, W.B. State University, Kolkata-700126, India²Research Scholar, Dept. of Rural Studies, W.B. State University, Kolkata-700126, India³Associate Professor, Dept. of Vety. & AH Extension Education, WBUAFS, Kolkata-37**INTRODUCTION:**

With the development of technology, the probability of technical development in all sectors has been taken into motion. This kind of innovation in all respects has become the cornerstone of progress in today's rapidly evolving world. It motivates the social system and drives economic growth. But all the innovations are not suitable for all communities perhaps all cannot bear the cost of the innovation. Sometimes the innovation can't reach to the target population due to a lack of proper extension services. The traditional extension education process somehow does not cover all the target population due to technical and physical barriers. Sometimes the innovation itself needs some innovative method for dissemination. The innovative extension is a fusion of two elements innovation and extension. Innovation encompasses the application of new ideas, thoughts, technologies, and practices that encourage out of the box thoughts. Extension, on the other hand, involves the dissemination of knowledge, skills and innovations to the end-users, particularly in the hard-to-reach areas. Innovative extension combines these elements, bridging the gap and delivering the ultimate knowledge to the communities as per their needs. This is where the concept of innovative extension comes into play, bridging the gap between cutting-edge ideas and their implementation in local contexts. Innovative extension is a dynamic approach that brings transformative change to rural communities, enabling them to adapt, thrive, and contribute to sustainable development.

The extension process not only disseminates the development of the situation some time we need the extension mechanism to prevent the unwanted situation. In health education and communication mechanisms, the role of extension machinery is very important in preventive health measurements. Also in agriculture and animal husbandry practices apart from the technology development, the prevention of unwanted hazards needs to be prioritized.

IMPORTANCE OF INNOVATIVE EXTENSION FOR COMMUNITY DEVELOPMENT:

1. Rural communities often face unique challenges, such as limited access to resources, lack of infrastructure, and constrained opportunities for growth. Innovative extension is a comprehensive approach that empowers these communities by providing them with the tools and knowledge needed to overcome these challenges. It introduces modern technologies, sustainable agricultural practices, and entrepreneurial opportunities that can transform local economies and enhance the standard of living. By doing so, innovative extension fosters economic diversification, enhances livelihoods, and contributes to poverty alleviation.

2. What sets innovative extension apart is its recognition of the diverse needs and contexts of different communities. It takes a participatory approach, engaging communities in the decision-making process and co-creating solutions that align with local traditions, resources, and aspirations. This approach ensures that innovations are tailored to the specific needs of each community, increasing the chances of successful implementation and sustainable impact. Innovative extension also involves capacity building, working with local people to develop skills, knowledge, and leadership capacity.

3. Rural communities are often vulnerable to environmental changes and socioeconomic fluctuations. Innovative extension builds resilience by equipping communities with the knowledge to adapt to shifting circumstances. Climate-smart agriculture, water management practices, and disaster risk reduction strategies are some examples of how innovative extension enhances communities' ability to withstand and recover from challenges. By promoting sustainable natural resource management, innovative extension also helps protect the environment and preserve natural resources for future generations.

4. Innovative extension plays a crucial role in knowledge transfer and capacity building. It brings together experts, researchers, and practitioners to share their insights with rural communities. This knowledge transfer goes beyond technology, encompassing skills, best practices, and methodologies that empower individuals to take charge of their development journey. Capacity building workshops and training sessions are also important, nurturing local expertise and leadership. Innovative extension also encourages networking and collaboration among communities, enabling them to learn from each other and share resources.

5. Entrepreneurship is a powerful driver of rural development. Innovative extension identifies untapped opportunities within communities and helps individuals harness their potential. By promoting entrepreneurship and guiding aspiring business owners, innovative extension stimulates local economies and generates employment opportunities, thereby reducing migration to urban areas.

Innovative extension also promotes gender equality by creating opportunities for women and marginalized groups to participate in economic activities.

6. Innovative extension aligns with the principles of sustainable development. It harmonizes economic growth, environmental stewardship, and social equity. Introducing sustainable farming practices, renewable energy solutions, and responsible resource management, paves the way for a future in which rural communities flourish without compromising the well-being of future generations. The innovative extension also helps promote social inclusion by working with marginalized groups, including women, youth, and indigenous communities, to ensure that they have access to the resources and opportunities they need to thrive.

SAFETY MEASURES FOR THE USE OF AGRICULTURAL PESTICIDES:

India relies heavily on agriculture as a cornerstone of its economy. Ensuring an ample production of agricultural commodities and their equitable distribution requires adept management. To combat the challenge of insufficient agricultural yields, the 1960s marked a pivotal period in India's agricultural landscape, famously termed the Green Revolution. This metamorphic shift not only led to a considerable surge in agricultural output but also sustained the adoption of chemical fertilizers and pesticides in substantial measures. Presently, the utilization of these chemicals is widespread in farming practices. It's well-established that these chemical agents can have detrimental effects on human health. Just as their incorporation in food can give rise to a plethora of health ailments, individuals engaged in daily usage of these pesticides or fertilizers in agricultural domains find themselves grappling with both short-term and lingering health complications. Esteemed organizations such as the Food and Agriculture Organization (FAO) and the International Labor Organization (ILO), alongside diverse agricultural extension departments, have delineated explicit directives regarding the application of chemical fertilizers or pesticides in the realm of agriculture. In the discourse presented in this article, we delve into the imperative need for judicious management pertaining to the utilization of pesticides and fertilizers in the sphere of agriculture.

IMPORTANCE OF AGRICULTURAL SAFETY MEASURES:

Agricultural safety is an incredibly important aspect of farming that needs to be considered. It has a direct impact on the well-being of farmers, farmworkers, and the sustainability of agricultural practices. There are several reasons why agricultural safety should be a top priority:

- **Human Well-being:** Ensuring the safety of those working in agriculture is a crucial moral responsibility. Farming can be a dangerous occupation, with a high risk of injuries and fatalities due to accidents involving machinery, chemicals, livestock, and other farm-related activities. Prioritizing safety helps safeguard the lives and health of farmers and farmworkers. Promoting agricultural safety

measures can significantly reduce these statistics, preventing accidents and their associated hardships. Safe farming practices also benefit public health. Proper handling of pesticides, for example, reduces the risk of chemical exposure for farmworkers and the contamination of food and water supplies for consumers.

- **Livestock Issues:** Livestock sheds or farms are often situated in or beside agricultural land, which can pose a risk to their health due to the use of agrochemicals and other hazardous materials without proper preventive measures. This can result in severe effects on the health of livestock with acute or chronic diseases. Ensuring proper safety measures are in place can prevent these risks and protect the health of the animals.
- **Economic Impact:** Farm accidents cause significant damages in the farming sector that directly affect farm families, labourers, market chain, and lead to economic losses. These losses include medical expenses, lost productivity, and potential legal costs. Investing in safety measures helps protect the financial stability of farming operations. By implementing safety measures, farmers can avoid financial losses associated with accidents.
- **Sustainability:** Ensuring safety in agriculture contributes to the long-term sustainability of farming practices. Safe practices reduce the risk of soil and water contamination from chemical spills, promote responsible land management, and minimize the environmental impact of agriculture. Safe working conditions lead to increased productivity. Farmers and farmworkers who are confident in their safety can focus on their tasks more effectively and efficiently, resulting in higher crop yields and better farm outcomes. Safe and sustainable farming practices ensure the long-term viability of agricultural operations. Protecting the health and safety of the workforce is essential for maintaining a skilled and capable labour force for the future.
- **Rural Communities:** Agriculture is often the backbone of rural communities. When farming accidents occur, they not only affect individual farmers and farmworkers but can also have a ripple effect on the entire community. Safe farming practices help maintain the health and vitality of rural areas. The economic stability of rural communities is largely dependent on the success of farming operations. By implementing safety measures, farmers can protect their livelihood and contribute to the well-being of their community.
- **Child Safety:** Many children grow up on farms or are exposed to agricultural environments. Ensuring safety on farms protects children from potential hazards and injuries, promoting their well-being and development. By creating a safe environment for children, farming families can reduce the risk of injuries and accidents that may impact their children's growth and development.

- **Environmental Conservation:** Safe farming practices align with environmentally responsible agriculture. Minimizing chemical spills, reducing soil erosion, and conserving resources all contribute to the preservation of ecosystems and biodiversity. By prioritizing safety, farmers can protect the environment and promote sustainable agriculture practices that benefit all living creatures.

PREVENTION GUIDELINES FOR AGROCHEMICAL USAGE:**PRECAUTIONS BEFORE PESTICIDE APPLICATION**

1. Before using agricultural pesticides, the user must read and follow the instructions provided by the manufacturer on the label affixed to the bottle. If necessary, additional information can be found in the attached paper to learn about the guidelines. Alternatively, when purchasing, detailed information about the guidelines should be obtained from the shop or dealer.
2. In addition to written information, some images with the bottle can assist by indicating the toxicity level of the pesticide, and it is essential to view them before usage.
3. It is crucial to select the appropriate agricultural pesticide based on the type of pests or diseases and to ensure minimal environmental impact by observing the surroundings during this selection process.
4. Bottles containing pesticides with no label should never be used.
5. If the bottle is damaged or if the liquid is leaking from the bottle's cap, it is advisable not to collect it.
6. When transporting pesticides to distant locations, never store them together with food items.
7. When preparing a mixture of agricultural pesticides, it is important to wear a mask over the face and use gloves or cloth on your hands. The liquid should be poured from a safe distance, and hands should not be used in this process.
8. Use a funnel while pouring pesticide liquid into the sprayer drum. Avoid overfilling the drum with excess liquid, as it could lead to spillage. A leaking or damaged sprayer drum should never be used.
9. Keep children at a safe distance while preparing pesticide solutions, and it is not advisable to store the solution near households or water bodies.
10. If you are physically unwell, it is not appropriate to work with agricultural pesticides. Using pesticides on an empty stomach is also discouraged.

PRECAUTIONS DURING PESTICIDE APPLICATION:

1. When applying pesticides on the field, wear full protective clothing including a jacket, pants, covered shoes, goggles for eye protection, and a mask or cloth to cover the mouth.
2. Avoid using torn clothing as it can allow chemicals to come in contact with the skin.
3. After filling the sprayer with pesticide, always wash your hands thoroughly with soap.
4. If the sprayer nozzle gets blocked, never blow on it to clear it.

5. During pesticide application, users must refrain from consuming food, drinking, smoking, and visiting the restroom.
6. Do not touch the face, mouth, or nose repeatedly during pesticide application.
7. Keep children away from the area where pesticides are being applied and alert individuals nearby about the on-going application. Do not store food items near the area where spraying is being done.
8. In case of cooler temperatures, it's best to apply pesticides in the early morning or late afternoon.
9. If there is a strong wind, avoid pesticide application. When applying powders or granules, make sure to stand against the wind. Also, refrain from spraying if rain is expected or if rain follows shortly after spraying.

PRECAUTIONS AFTER USING AGRICULTURAL PESTICIDES:

1. After using agricultural pesticides and chemical fertilizers, hands should be washed thoroughly with soap. Take a proper shower at the end of the day when the use of agricultural pesticides is complete. The clothes worn during application should be washed and dried properly. Separate clothes should be kept for pesticide application. Other used equipment like spray drums should be cleaned properly after each use.
2. After application, hands, feet, and used tools should be cleaned in a nearby water source. Instead of directly washing at the site, collect water in a large container, clean the tools, and then dispose of the water far away from local water bodies.
3. Empty pesticide containers should be labelled and stored in a designated area, kept out of the reach of children and individuals who might not understand its dangers.
4. Pesticides and food materials should never be stored together in the kitchen. Pesticides should not be stored in places where direct sunlight or rainwater can reach them. After using a pesticide bottle, it should not be repurposed for any other task. Empty containers should be punctured and buried in the ground at a safe distance.
5. Pesticide packaging that comes in paper or plastic packets, which may have residue, should be cut with a knife or scissors (not using the mouth). After use, the packets should be discarded in a separate steel container and not thrown in the local surroundings.
6. If any signs of infection or toxicity are observed on the body after pesticide use, seek immediate medical attention. People who handle pesticides regularly should undergo health check-ups at least once or twice a year.
7. After pesticide application, warning signs should be placed as indicators that entry is prohibited. Flags or markers should be placed to prevent others from entering, especially ensuring that children do not enter the treated area.

8. Crops should not be harvested immediately after pesticide application. The duration for which the pesticide residue remains effective should be estimated, and crops should be harvested after that period. Crops treated with pesticides should not be used as animal feed.

9. Pesticides should always be used as recommended. Using excessive amounts with the hope of better results is not advisable. Pesticide application should consider the economic threshold level, which determines the point at which the cost of using the pesticide is justified by the potential damage caused by pest infestations.

10. Overall, pesticide use is never a permanent solution. If there is an alternative approach that can be economically viable, it should be considered. Pesticide use should only be opted for when other methods cannot achieve the desired results.

Safety in agriculture is crucial to sustain the agriculture process for the farmers, environment and economic development. Farmers practising agricultural operations related to agrochemical use create hazards for the environment and treat the life of humans as well as livestock. Improving safety in agriculture is crucial to protect the well-being of farmers and agricultural workers. Innovative extension methods can play a significant role in promoting safety in the agricultural sector.

Some innovative extension approaches for effective management and prevention towards effective safety measures in farming.

- Digital literacy and app-based technology: By developing mobile applications and digital tools to educate farmers and workers about safety practices. These apps can be very helpful in providing real-time safety alerts and access to safety resources. The knowledge and effecting agrochemical uses also can be communicated through this kind of mobile app.
- Promotion of wearable technologies: Wearable technology is an excellent way to monitor vital signs and environmental conditions and provide early warnings about health risks. It's a great initiative to equip farm workers with wearable devices to prevent accidents and illnesses.
- Use of Drones: Drones can be very helpful in identifying potential hazards and structural issues, reducing the risk of accidents and injuries. It's a smart move to employ drones for safety inspections of farm equipment, infrastructure, and fields.
- Formation of safety community: Creating online communities or forums where farmers and agricultural workers can share safety tips, best practices, and lessons learned is an excellent way to foster a culture of safety and encourage knowledge exchange.
- Use of safety farm equipment: Regular use of safety gear to reduce the exposure of agrochemicals to the farmers. The mechanism of use and proper demonstration of safety instruments should be

promoted for true effectiveness. In the real situation, many farmers do not know how to use safety equipment and wearable's.

- **Interactive safety training:** Gamifying safety training programs can make learning more engaging and interactive. Incorporating elements of competition and rewards can incentivize safety-conscious behaviour.
- **Regular extension assistance:** Enabling farmers and workers to connect with safety experts remotely through video conferencing or mobile apps can be very helpful. Experts can guide safety procedures.
- **Regular health communication:** Proper health communication and preventive, as well as curative health care for human and animal health, can detect and identify probable health hazards related to agrochemical use. Chronic health issues can be reduced and acute issues can be resolved early.
- **Emergency Response Apps:** Developing mobile apps and IVR centres that allow users to call for help or report accidents and incidents quickly is a great initiative. These apps can also provide first-aid instructions and connect users to emergency services. Establishing communication systems that enable farmers and workers to receive emergency alerts and safety information during adverse weather conditions or other emergencies is essential.
- **Collaboration with NGOs and Government Agencies**
Partnering with non-governmental organizations (NGOs) and government agencies to promote safety programs, provide training, and distribute safety resources to rural communities can ensure the safety of farm workers and promote safety awareness. By working together, we can create a safer and more secure agriculture industry for everyone.
- **Promotion of mass media:** The mass media can play an effective role in promoting agricultural safety measures. Apart from regular newspapers, TV shows, radio broadcasts, use of different media platforms through the internet can educate people through audio-visual mode. The local authority or line departments can arrange this kind of community program with less financial burdens.

The gradual increase in the population's food demand and the extent of crop damage has led to the continuous use of chemical fertilizers and pesticides. In today's world, the use of pesticides and chemical oils has become an integral part of agricultural activities. However, the use of various types of chemical fertilizers and a mixture of multiple pesticides in the same area has resulted in environmental pollution. The residues of chemical fertilizers and pesticides persist in the environment for a long time, contributing to pollution of water, soil, and air. In this context, labelling it as a human-made disaster would not be an exaggeration. Indirectly, through environmental pollution, it has been causing harm to the human body.

Agricultural safety is a critical concern that impacts the well-being of farmers and farmworkers, as well as the sustainability of agricultural practices. The farming industry carries inherent risks, including accidents involving machinery, chemicals, and livestock, and it is imperative to prioritize safety measures to protect the lives and health of those working in agriculture. Furthermore, promoting agricultural safety measures can significantly reduce accidents and their associated human suffering, benefiting public health at large. For instance, proper handling of pesticides reduces the risk of chemical exposure for farmworkers and prevents food and water contamination. Livestock health is another concern in agriculture, as agrochemicals used on farms can be associated with livestock health issues and fatalities. In India, most farms have livestock sheds or farms located in or adjacent to agricultural land, and an excessive amount of agrochemicals and other hazardous materials without proper preventive measures can lead to acute or chronic diseases in livestock. Apart from human and animal safety concerns, farm accidents can cause significant damages that directly affect the farming sector's financial stability. These losses include medical expenses, lost productivity, and potential legal costs. Investing in safety measures can protect the financial stability of farming operations.

Ensuring safety in agriculture contributes to the long-term sustainability of farming practices. Safe practices reduce the risk of soil and water contamination from chemical spills, promote responsible land management, and minimize the environmental impact of agriculture. Safe working conditions lead to increased productivity, and farmers and farmworkers who are confident in their safety can focus on their tasks more effectively and efficiently, resulting in higher crop yields and better farm outcomes. By protecting the health and safety of the workforce, we can maintain a skilled and capable labour force for the future, contributing to the long-term viability of agricultural operations. Agriculture is often the backbone of rural communities, and farming accidents can have a ripple effect on the entire community. Safe farming practices help maintain the health and vitality of rural areas.

Moreover, many children grow up in or are exposed to agricultural environments, making it crucial to ensure safety on farms to protect them from potential hazards and injuries, promoting their well-being and development. Excessive use of pesticides in agriculture poses various risks to users and consumers, leading to various diseases. The solution lies in reducing pesticide usage and adopting Integrated Pest Management techniques, such as crop rotation and intercropping. Creating awareness among farmers about reducing pesticide usage and adopting proper application methods can help in pest control. Organic fertilizers can replace chemical fertilizers, contributing to sustainable agriculture practices. Through this approach, we can ensure overall protection of the ecosystem from the harmful aspects of pesticide application.

In conclusion, agricultural safety is a shared responsibility that promotes human safety, economic stability, sustainability, and environmental protection. Innovative extension in sustainable agricultural practices empowers rural communities to overcome challenges, seize opportunities, and lead sustainable, prosperous lives. This approach fosters a sense of ownership over the development process and acknowledges the central role that local communities play in shaping their own destinies.

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LIVESTOCK BASED EXTENSION ORGANIZATION FOR SUSTAINABLE DEVELOPMENT

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INTRODUCTION:

Livestock rearing has been an integral part of India's rural economy and culture for centuries. With a vast population dependent on agriculture and livestock for their livelihoods, the effective management of livestock resources plays a crucial role in ensuring food security, poverty alleviation, and rural development. In this context, the role of Livestock-Based Extension Organizations (LBEOs) becomes paramount. Livestock is important in supporting the livelihoods of poor farmers, consumers, traders and labourers throughout the developing world (FAO, 2002). Livestock extension is an important tool in achieving changes in animal production. This system has been created and recreated, adopted and developed over the centuries for the dissemination and application of research results in order to improve animal production and health, including food safety (Khoury, 2011).



Fig-1: Rural Livestock scenes in India

Importance of Livestock-Based Extension Organizations

Livestock-based extension services serve as a bridge between scientific knowledge and practical implementation at the grassroots level. They facilitate the dissemination of innovative practices, technologies, and information to farmers, enabling them to enhance their livestock productivity, improve animal health, and adopt sustainable farming methods.

Livestock-Based Extension Organizations provide basic facilities like:

1. Training and education – Farmers are trained on modern animal husbandry practices, breeding techniques, disease management, and fodder cultivation. Workshops and seminars are conducted by LBEOs facilitate the exchange of knowledge and experience among farmers.



Fig-2: Livestock training workshop

2. Technology transfer – LBEOs act as agent for introducing new livestock technologies and innovation to farmers. This range from improved feeding practices to efficient use of money for sustainable farming management.

3. Disease control and health management – Line department of veterinary plays a crucial role in preventing and controlling livestock diseases by educating farmers about vaccination, biosecurity measures, and proper animal care management practices. Involvement of Pashu sakhi , private AI workers to veterinarians everyone on the hierarchical level of the dept. act as LBEOs .

4. Market Access and Value Addition- The organization assist farmers in accessing and understanding of markets for their livestock products, they provide guidance on value addition, processing and marketing strategies, and result in increased income of farmers.

Organization for Livestock Extension –

1. Directorate of Extension, ICAR - The Indian Council of Agricultural Research is an apex research organization of the country with a high standing amongst international agricultural research institutions. Since its inception in 1930, the Council has been spearheading agricultural research, education and extension activities for productivity enhancement and diversification of Indian agriculture. The Indian Council of Agricultural Research (ICAR) and the National Agricultural Research and Education System at large, are determined to harness the advances of science for the welfare of society. The Council is committed to transform itself into an organization engaged fully with the farmers, industry, entrepreneurs and consumers at large.

To keep pace with the changing environment, the ICAR has been updating its visions and strategies from time to time.

2. Animal Science Institutes of ICAR – The institute continues its focus on animal health products, most importantly to develop new vaccines and diagnostics and improvise the old ones. It also provides diagnostic services to various stakeholders including wildlife organizations, and contributes immensely to monitoring and surveillance of diseases in the country, development of low cost therapeutic agents based on indigenous herbal preparations and advanced stem cell-based therapeutics. The institute has successfully transferred some of these technologies to various commercial manufacturers and entrepreneurs in the country and has disseminated these technologies to end users. The institute has a dedicated unit to promote entrepreneurs and commercialize the technologies. E.g. ; NDRI , IVRI etc.

3. NDDB – The **National Dairy Development Board (NDDB)** was founded in 1965 to replace exploitation with empowerment, tradition with modernity, stagnation with growth, transforming dairying into an instrument for the development of India's rural people.

NDDB began its operations with the mission of making dairying a vehicle to a better future for millions of grassroots milk producers. The mission achieved thrust and direction with the launching of "**Operation Flood**", a programme extending over 26 years and which used World Bank loan to finance India's emergence as the world's largest milk producing nation. Operation Flood's third phase was completed in 1996 and has to its credit a number of significant achievements.

The National Dairy Development Board's (NDDB) creation is rooted in the conviction that our nation's socio-economic progress lies largely on the development of rural India.

The Dairy Board was created to promote, finance and support producer-owned and controlled organizations. NDDB's programs and activities seek to strengthen farmer owned institutions and support national policies that are favourable to the growth of such institutions. Fundamental to NDDB's efforts are cooperative strategies and principles.

NDDB's efforts transformed India's rural economy by making dairying a viable and profitable economic activity for millions of milk producers while addressing the country's need for self-sufficiency in milk production.

NDDB has been reaching out to dairy farmers by implementing other income generating innovative activities and offering them sustainable livelihood.

4. Krishi Vigyan Kendra – A Krishi Vigyan Kendra (KVK; transl. "farm science centre") is an agricultural extension centre in India. The centers are associated with a local agricultural university, and serve as links between the Indian Council of Agricultural Research and farmers to apply agricultural research in a practical, localized setting. All KVKs fall under the jurisdiction of one of the 11 Agricultural Technology Application Research Institutes (ATARIs) throughout India.

As of KVK, is an integral part of the National Agricultural Research System (NARS), aims at assessment of location specific technology modules in agriculture and allied enterprises, through technology assessment, refinement and demonstrations. KVKs have been functioning as Knowledge and Resource Centre of agricultural technology supporting initiatives of public, private and voluntary sector for improving the agricultural economy of the district

The mandate of KVK is Technology Assessment and

Demonstration for its Application and Capacity Development.

- To implement the mandate effectively, the following activities are envisaged for each KVK
- On-farm testing to assess the location specificity of agricultural technologies under various farming systems.
- Frontline demonstration to establish production potential of technologies on farmers' fields.
- Capacity development of farmers and extension personnel to update their knowledge and skills on modern agricultural technologies.
- To work as Knowledge and Resource Centre of agricultural technologies for supporting initiatives of public , private and voluntary sector in improving the agricultural economy of the district.
- Provide farm advisories using ICT & other media means on varied subjects of interest to farmers

In addition, KVKs produce quality technological products (seed, planting material, bio-agents, and livestock) and make it available to farmers, organize frontline extension activities, identify and document selected farm innovations and converge with on-going schemes and programs within the mandate of KVK.2023, there are approximately 731 KVKs throughout India.

5. State Veterinary Universities – The first Army Veterinary School was established at Pune (1862) . On the recommendations of the Indian Cattle Plague Commission (1871) civil veterinary schools were set up at Hapur 1877, Ajmer 1881 and Shimla 1888 basically to control plague. Veterinary College started at Lahore in 1882; Duration of course was 2 years subsequently 4 years from 1930. The veterinary colleges initially established at Mumbai 1886, Kolkata 1893, Chennai 1903 and Patna 1930

First Agriculture University based on the pattern of US land grant established in 1960 at Pantnagar in Uttarakhand. Subsequently, Veterinary colleges transferred to the State Agricultural Universities.

State Governments delinking veterinary education from Agriculture, in 1989, the first veterinary university in India, Tamil Nadu Veterinary and Animal Sciences University (TANUVAS).

Presently, out of 54 recognized veterinary colleges, 42 under 16 Veterinary Universities; 10 under 10 Agricultural Universities; and 02 under 02 General Universities

6. NGOs- NGOs are defined here as non-membership development-oriented organizations. Our concern here is with the stronger of the south-based NGOs that provide services either directly to the

rural poor or to grass-roots membership organizations, and with the local branches of international NGOs that enjoy varying degrees of autonomy.

Some are based on religious principles, others on a broadly humanitarian ethos, and yet others were set up as quasi-consultancy concerns in response to recent donor-funding initiatives. Some NGOs reject existing social and political structures and see themselves as engines for radical change; others focus on more gradual change through development of human resources (usually through group formation) to meet their own needs or to make claims on government services; yet others focus more simply on the provision of services (e.g., advice, input supply) largely within existing structures.

Their ideological orientations also differ widely in relation to agricultural technology: many are concerned with low external input agriculture, 1 others pursue fundamentally organic approaches, 2 and, especially in the case of Andean societies, some are concerned to strengthen or reinstate traditional agricultural practices which formed the basis of social organization (CAAP, 1991).

7. FPOs (Farmers producing organizations) - It is one type of Producing organization where the members are farmers. Small Farmers' Agribusiness Consortium (SFAC) is providing support for promotion of FPOs. PO is a generic name for an organization of producers of any produce, e.g., agricultural, non-farm products, artisan products, etc.

NABARD, SFAC, Government Departments, Corporates and Domestic & International Aid Agencies provide financial and/or technical support to the Producer Organization Promoting Institution (POPI) for promotion and hand-holding of the PO. Each agency has its own criteria for selecting the project/promoting institution to support.

Essential features of a FPO-

- a. It is formed by a group of producers for either farm or non-farm activities.
- b. It is a registered body and a legal entity.
- c. Producers are shareholders in the organization.
- d. It deals with business activities related to the primary produce/product.
- e. It works for the benefit of the member producers.
- f. A part of the profit is shared amongst the producers.
- g. Rest of the surplus is added to its owned funds for business expansion.

8. Dairy Cooperatives- The Cooperatives plays an important role for educating dairy stakeholders how to live better by learning ways to improve their farm, home and community institutions. Cooperative also works on increasing the knowledge, management skills of farmers by various extension works. e.g.- AMUL , MIMUL , SANCHI, DEVBHOG etc.

9. MVUs – Mobile veterinary units The Department of Animal Husbandry & Dairying, Ministry of Fisheries, Animal Husbandry & Dairying is implementing the "Livestock Health & Disease Control

Program” to improve the animal health by way of implementation of prophylactic vaccination program against various diseases of livestock and poultry, capacity building, disease surveillance and strengthening of veterinary infrastructure.



Fig: Launching Of Mobile veterinary units (Ambulatory)

A component under the scheme is Establishment & Strengthening of Veterinary Hospitals & Dispensaries – Mobile Veterinary Unit (ESVHD-MVU). The aim of the scheme is to provide veterinary services at farmer’s doorstep by mobile veterinary units.

The scheme provides 100% financial assistance to states/UTs towards non- recurring expenditure on procurement of mobile veterinary units and central share towards recurring expenditure (90:10 for North Eastern States & Himalayan States, 100% for Union territories and 60:40 for all other States) on running of these mobile veterinary units for delivery of veterinary services at farmer’s doorstep.

10. Vet. Pharmacy Companies - Many Pharmaceutical companies reach out directly to the farmers, making them aware regarding different livestock they can rear and make profit by good rearing and management of livestock. The agent of Pharmacy companies Encourage farmers to increase productivity and also to increase number of animal. The agent provide them trial feed supplement for their animal whenever new products came into the market.

11. Private Sector Agencies – Privatization of agriculture extension service may be defined as the service rendered in the area of agriculture and allied sectors by extension personnel working in private agency or organization for which farmers have to pay a fee (or free) , and it can be viewed as supplementary and complimentary to public extension services

Privatization as system of agriculture extension is gradually being followed in Indian agriculture because of following reasons:

- Decline trend in govt. expenditure in due to heavy financial burden.
- Perception of public extension service as less effective in meeting current needs of farmers.
- A shift in agriculture from subsistence level to commercialized agribusiness.
- To meet the challenges of globalization and liberalization of farm sector.
- Demand of farmers for special tech and consultancy.

12. State Dept. of Animal Husbandry - Animal husbandry and dairy development plays a prominent role in the rural economy by supplementing the income of rural households. The major agency responsible for livestock development is the State Department of Animal Husbandry (SDAH). Keeping this in view, SWOT analysis of SDAH, Tamil Nadu state, India was done with respect to its extension education role. The study was based on the information available through annual reports of SDAH, information elicited from Director, Veterinary Assistant Surgeons (VASs), Livestock Inspectors (LIs) of the SDAH and Livestock owners (LOs).

The major parameters like organization structure, clarity regarding extension functions, infrastructure facilities, number of veterinary institutions, sensitivity and promotion of extension programs, in-service training programs, level of contact by Livestock owners and number of veterinary personnel's were taken into account.

The results indicate that though the top level hierarchy had clear role perception towards extension educational efforts, due to inadequate infrastructure facilities, poor level of training towards extension programme and lack of personnel diminished any extension service to the LOs. LOs on the other hand without any gender prejudice depend on these veterinary institutions not only for the animal health concerns but also demanding more livestock related information.

13. Farmers' Fair/ Kisan Mela- Fairs, or melas, are part of our culture. Rural fairs attract a large number of persons dressed in their best, with joy and gaiety, bringing together rustic culture and traditions. With the establishment of agricultural universities, the concept of rural fairs has been used to organize farmers' fairs as an effective method of communicating improved practices to a large number of farmers.



Fig: Animal fair of Rural Indian Market

These fairs generally include an interesting agro- industrial exhibition, effective demonstration of improved seeds in small packets. These fairs are generally held at a place where some institution or research farm is located as their organizers need the participation and coordination of a larger number of departments and persons.

14. Kisan Call Centre (KCC)



Fig: Kisan Call Centre , Kanpur District

The Department of Agriculture & Cooperation, Ministry of Agriculture, Govt. of India has launched Kisan Call Centers with a view to leverage the extensive telecom infrastructure in the country to deliver extension services to the farming community. The purpose of these Call Centres is mainly to respond to issues raised by farmers instantly in the local language, on continuous basis. It operates nationwide through a toll free number 1551 which farmers can dial freely from anywhere in the country.

15. ATMA

ATMA is a society of key stakeholders in agricultural activities for sustainable agricultural development in the district. It is a focal point for integrating research and extension activities and decentralizing day to day management of the public Agril. Technology System (ATS).

It is a registered society responsible for technology dissemination at the district level. The ATMA was initially pilot tested in 24 districts across six participating states (Andhra Pradesh, Bihar, Himachal Pradesh, Maharashtra, Orissa and Punjab).

The ATMA at district level would be increasingly responsible for all the technology dissemination activities at the district level. It would have linkage with all the line departments, research organizations, non-governmental organizations and agencies associated with agricultural development in the district.

16. ATIC (Agricultural Technology Information Centre)

ATIC is a “Single Window” support system linking the various units of a research institution with intermediary users and end users (farmers) in decision making and problem solving exercise.

17. SREP (Strategic Research and Extension Plan)

It is the process of finding the best scenario for agricultural development and setting the best path to reach that destination by rigorous analysis and choices about:

Goals-what is intended to be accomplished Opportunities and Threats- what is needed and feasible
Strengths and Weakness-what is the capability of doing things

CONCLUSION:

Livestock-Based Extension Organizations are crucial for promoting sustainable livestock practices, enhancing rural livelihoods, and contributing to India's overall development goals. By addressing challenges, embracing digital advancements, and fostering collaborations, LBEOs can continue to play a pivotal role in transforming India's livestock sector into a more productive, efficient, and sustainable enterprise. As we continue to navigate the complex landscape of global challenges, the role of livestock-based extension organizations remains instrumental in building a more resilient, equitable, and sustainable future for all.

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INNOVATIVE EXTENSION APPROACHES IN SUSTAINABLE DEVELOPMENT OF EXTENSION ORGANIZATIONS

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This e-book is a compilation of resource text obtained from various subject experts for the Collaborative Online Training Programme of West Bengal University of Animal and Fishery Sciences, Kolkata & MANAGE, Hyderabad, Telangana on Innovative Extension Approaches in Sustainable Development of Extension Organization from 27th to 29th July, 2023. This e-book is designed to educate extension workers, students, research scholars, and academicians related to veterinary science and animal husbandry about various Innovative Extension Approaches And New Technologies in Extension Organizations for improvement of Overall Capacity developemnt.

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