

# Empowering the Coconut Sector through LSGIs: Potential and Perspectives

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Coconut assumes considerable significance in the national economy of India in view of rural employment and income generation. The traditional coconut farming in our country is an integral part of our life, culture and identity. The coconut palm exerts a profound influence on the rural economy of many states where it is grown extensively and provides sustenance to more than 10 million people in the country. The processing and related activities centered on the crop, generate employment opportunities for over three million people in India. Production and marketing of diversified high-value coconut products from every part of coconut; the kernel, husk, shell, wood, water and leaves are potential source of income and employment for the rural people. In addition, the crop contributes Rs.92000 million annually to the Gross Domestic Product (GDP) of the country. The coconut sector contributes to foreign exchange earnings to the tune of Rs.21,385 million through the export of coconut and coir products. Over 90 percent of coconut farmers in India are small holders and are considered resource-poor.

Of late, apart from price and market related constraints, coconut growers face many other challenges like scarcity of skilled labourers, high wage rate, low productivity of coconut, depletion of natural resources in coconut gardens and soil related constraints, inadequate irrigation facilities, crop loss due to incidence of pests and disease and natural calamities. A substantial number of technologies have been



developed for enhancing productivity and income from coconut farming. These include high yielding varieties and hybrids, water management and irrigation techniques, integrated nutrient management, coconut based cropping/farming system models, integrated pest/disease management practices and technologies for value addition through product diversification. However, due to various factors, the adoption level of these technologies is comparatively low. Hence, it is highly imperative that a favourable pro-poor policy environment is evolved to protect the interest of coconut growers in the country and appropriate development and extension interventions are implemented to enhance the efficiency of coconut sector.

Various agencies are currently involved in implementing development and extension initiatives for improving coconut

sector. Schemes to promote coconut sector are mainly implemented by Coconut Development Board under the Ministry of Agriculture, State Departments of Agriculture/Horticulture, ATMA and local self governments. Lack of coordination among various coconut development agencies is often experienced as a bottleneck in achieving the desired results of coconut development initiatives. Many of the constraints experienced by coconut growers are location specific and hence centrally planned top-down approach in implementation of development/extension interventions may not augur well to address the problems. To be effective, the interventions are to be planned and implemented with a decentralised participatory approach to suit the bio-physical and socio-economic resource situations prevailing in different coconut growing tracts. It is in this context that the role of Local Self Government Institutions (LSGI) to implement coconut based interventions assumes much significance. Further, LSGIs can provide an effective platform for the convergence of activities of different coconut development agencies and programmes.

## Existing innovation system and institutional voids

The innovation system for coconut in India is unique wherein several governmental agencies and institutes undertake the research and development for the commodity, with evidently lacking collaborative efforts. Seven components delineated in the sectoral innovation system of coconut are: (i) In the research front, Central Plantation Crops

Research Institute (CPCRI), the spearhead of technology generation for coconut production along with the agricultural universities of Kerala and Tamil Nadu(ii) At the policy level, Coconut Development Board (CDB), which is a statutory body under the Government of India for the integrated development of coconut production and utilization in the country. Thrust areas of CDB include increasing production of quality planting material, creating production potential by bringing more area under coconut, improving productivity of the existing coconut holdings and undertaking integrated management of major pests and diseases (iii) For marketing aspects of coconuts, National Agricultural Cooperative Marketing Federation of India Ltd (NAFED), established in 1958, has been entrusted to procure the copra from market at the minimum support price (MSP) in the event of market price crash. However, the procurement system of copra in India has been ineffective, and it has never elevated the market prices. From the NAFED's point of view, the agency, though could procure large quantum of copra and has the capacity to convert copra into coconut, never finds the market to push their product with at least a minimum margin(iv) The unorganized producers with small and marginal holdings constitute the fourth component of the coconut innovation system (v) The evolving Farmer Producer Organizations (FPOs) in the form of Coconut Producer's Societies, Federations and Companies (vi) The intermediaries in the coconut sector operate in a very large grey area forming syndicates, lobbies and also practice the copra/coconut oil hoarding which causes continuous price fluctuations in the market (vii) The state departments of agriculture/horticulture which are entrusted with the field level transfer of technologies. Besides these components, the most

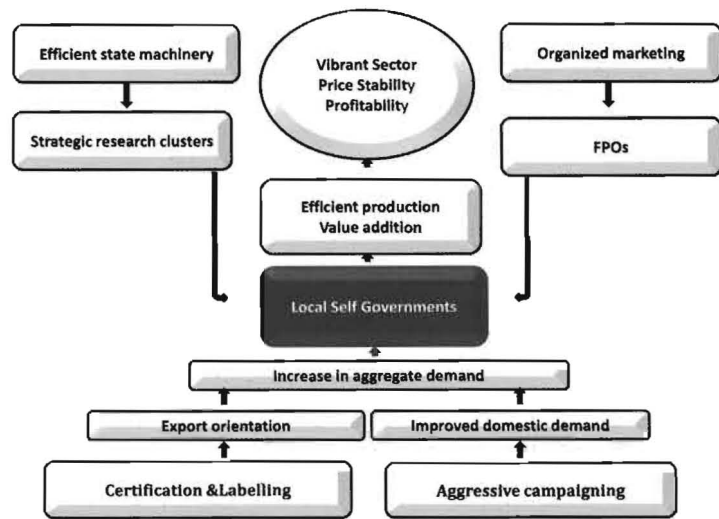


Figure 1. The crucial role of LSGs in the sectoral innovation system of coconut- A schematic depiction

important but ironically the most underrated component is the local self government institutions which systematically operate at the grass root level.

India has huge strengths on the research front of coconut, but unilateral increase in productivity is not the sole solution for the sectoral crisis. The lack of price stability, inadequate price support mechanism and marketing facilitation are the other factors detrimental to the functioning of coconut value chain. The lack of effective group coherence and professional approach (among different stakeholders) are still the problematic facets. An effective monitoring and management of value chain system with appropriate horizontal and vertical linkages along with price support system would play a crucial role in the formation of a vibrant coconut sector in the country. In this context, the desirable restructured sectoral innovation system of coconuts in India is depicted in Figure 1. The importance of local self-government as the strategic convergence agency of all other components of innovation system should be viewed exactly in this context, and the necessary steps

for strengthening and streamlining the role of LSGs should be given utmost importance.

### Local Self Government Institution and participatory planning for agricultural development

Small and marginal farmers, owing to their poor resource endowments, are unable to effectively utilize the innovations in production, post harvest processing and value chain management. Inadequate market development compounds the problem further by restricting the access to guaranteed outlets and fair prices for their surplus produce. Low level of participation of farmers in designing, planning and executing the development initiatives often results in ineffective implementation and suboptimal achievements. Improving the performance of agricultural development initiatives thus requires enhancing the quality of participation of farmers in the decision making process. Same is the case with coconut development programmes also.

Among the various institutional forms, democratic decentralization has been appreciated as a robust method of making participation work

in a comprehensive manner, addressing wider concerns. It involves bestowing power as well as resources to the people through well defined processes of local governance. With the enactment of the Constitution (73rd and 74th Amendment) Act, 1992, constitutional status has been provided to the Panchayati Raj Institutions (PRIs) and almost all the States / UTs have enacted the necessary legislation pertaining to PRIs. Consequently, Panchayats at village level; Panchayats at intermediate level; and Panchayats at District level have been constituted in the country. In states like Kerala, it has gone much further with about 20-30 per cent of the state plan funds earmarked for implementing development projects formulated by local self governments. The two decade long experience of democratic decentralization in Kerala has witnessed substantial improvement in people's participation in deciding development priorities at the grass root level.

### **Responsibilities of LSGIs for development of agriculture sector**

The guidelines on decentralized planning and implementation in agriculture and allied sectors through LSGIs explicitly declare that decentralized planning should promote local economic development by increasing production and productivity of small and marginal farmers and the traditional and small-scale industries with focus on employment generation and poverty reduction, natural resource management and integrated area development.

Under the decentralized planning programme, various activities for agriculture development are identified and responsibilities are allocated among LSGIs. Responsibilities allocated to grama panchayats include increasing agricultural production through formulation of crop development projects covering diversification by taking into account soil-crop suitability, pest and disease control activities, promotion of seed production/ planting material production, establishment of smaller commercial input production units, dissemination of new technologies, assistance to farmers' clubs, samithies etc., establishment of demonstration plots, promotion of group farming, promotion of biofertilisers and vermiculture, collection of soil samples and communication of results, organising mobile soil testing camps and monitoring of adoption of test results by farmers, prioritization of watersheds, assisting the professional and official machinery in formulation and implementation of soil conservation activities, organizing farmers' markets, arranging credit to farmers and self help groups, formulation of projects for crop insurance etc.

Similarly block panchayats are assigned with responsibilities like compilation of database for crops

and preparation of block level perspective plan, assisting in assessment of demand and supply of inputs to district panchayats, quality control of seeds and seedlings, support to agricultural extension, project preparation and establishing value added units, compilation of database and preparation of block level watershed plan, coordination with the professional/official/ soil conservation machinery and giving assistance in its work etc. Responsibilities of district panchayat include compilation of database from block panchayats and preparation of a district level perspective plan for agriculture development, development of infrastructure, promotion of commercial crops, bio technology application, pest and disease control affecting larger areas, preparation of seed/planting material/plan, arranging storage facilities for inputs, arrangement of larger mechanized applications, establishment of commercial input production units, organize research-extension interface, preparation of district level credit plan, compilation of district level database and preparation of district level watershed plan, preparation of district plan for soil and water conservation projects etc.

### **Potential for decentralized coconut development initiatives through LSGIs**

Responsibilities of LSGIs for development of agriculture sector discussed as above clearly indicate the tremendous potential for formulating and implementing coconut development initiatives through LSGIs. In Kerala, coconut is the major cultivated crop in almost every grama panchayat barring the high range region. The problems experienced by the coconut growers are unique to different agro-ecological units and to be effective, development/extension programmes for improving coconut sector should invariably be formulated and implemented through a decentralized approach. It is all the more relevant since the sector is dominated by small and marginal resource poor farmers and democratic decentralization is the effective institutional mechanism for ensuring their participation in planning and implementing appropriate development/extension programmes.

In spite of the potential, extent of implementation of coconut based interventions through LSGIs is not up to the desired level. For example, a study conducted by CPCRI revealed that stem bleeding disease of coconut was present in all the grama panchayats of Kasaragod district of Kerala state. However, none of the panchayats implemented any scheme for the control of the disease under the decentralized planning programme in spite of the fact that coconut is the major crop cultivated in all the grama panchayats of the district covering more than 60,000 ha area, which apparently indicates the negligence towards the coconut sector in the district.

## Coconut based interventions

Following are some of the coconut based interventions that can be taken up by local self governments. LSGIs can also facilitate convergence of state sector or centrally sponsored schemes for coconut development with similar objectives along with their decentralized planning programme.

### Production and distribution of quality coconut seedlings including hybrids

Local Self Government Institutions can implement schemes to promote farmer participatory decentralized seedling production to meet the planting material requirement utilizing the locally available resources/mother palms. Decentralized approach for enhancing production of seedlings of improved varieties should be promoted by establishing more number of nucleus seed gardens. Such seed gardens may be encouraged in marginal and small farmer holdings. LSGIs can effectively utilize Coconut Producers' Societies/Federations, the grass root level collective of coconut growers facilitated by Coconut Development Board, and trained youths under the Friends of Coconut Trees (FoCT) programme in the implementation of scheme for decentralised production and distribution of quality coconut seedlings.

### Promoting soil and water conservation and water harvesting in coconut gardens

The techno-economic feasibility of the soil and water conservation technologies such as mulching coconut basins with leaves, coir pith etc., coconut husk burial in the interspaces of coconut, half-moon bund around coconut basin reinforced with pineapple, trench filled with coconut husk, catch pits with pineapple border and cover crops as green manure and to reduce soil erosion etc and low cost water harvesting structures like roof water harvesting in storage tanks using ferrocement technology, run off collection in storage tanks, percolation tanks, recharging wells and check dams in enhancing productivity and sustainability in coconut based farming system has been amply demonstrated in farmers' gardens.

Local Self Government Institutions (grama panchayats, block panchayats and district panchayats) can play a significant role to ensure convergence of activities of various agencies and programmes including watershed development initiatives to promote adoption of soil and water conservation and water harvesting in coconut gardens apart from implementing their own schemes.

### Soil health management in coconut gardens and

## promoting soil test based nutrient management

One of the factors contributing to the low productivity of coconut palms is the inadequate nutrient management practices. Studies have indicated that the extent of adoption of recommended nutrient management practices by coconut farmers is very low in states like Kerala. A recently published report related to a project coordinated by State Planning Board, Kerala, on the fertility status of soils of the state clearly indicate that soils in the state are nutrient hungry and also suffer due to soil acidity adversely affecting productivity of crops like coconut. Strong soil acidity, deficiency of major nutrients especially potassium, extensive deficiency of secondary nutrients like calcium and magnesium and wide spread deficiency of micro-nutrients such as boron are the soil related constraints in coconut growing tracts resulting in poor health and low productivity of coconut palms. Local Self Government Institutions can implement schemes to facilitate coconut growers to adopt soil health management in coconut gardens and promote soil test based nutrient management. LSGIs can also provide a platform for convergence of similar schemes implemented by agencies such as Coconut Development Board.

### Irrigation and water management in coconut gardens with emphasis on micro irrigation

Lack of irrigation is one of the reasons attributed for the low productivity of coconut. Yield of coconut palms can be substantially increased if irrigation is assured. In regions where water is scarce, water saving improved irrigation methods such as drip irrigation can be adopted in coconut gardens. Local Self Government Institutions can implement schemes to provide irrigation facilities to enhance coconut productivity and ensure convergence of efforts of other agencies aiming expansion of irrigation including promotion of microirrigation.

### Popularizing coconut based inter/mixed cropping and mixed farming

An important strategy to enhance income from coconut farming in small holdings is adoption of coconut based inter/mixed cropping and mixed farming which is highly relevant in the present day context of price fluctuation of coconut. Schemes to promote coconut based inter/mixed cropping and mixed farming for sustainable coconut development can be formulated by LSGIs through decentralised planning. Component crops/enterprises for the system are to be decided taking into account the agro-ecological characteristics of the locality, market potential and farmers' preferences.

### Implementing interventions for integrated pest and disease management in coconut

Crop loss due to pests and diseases is a major constraint experienced by coconut growers. Community/group approaches ensuring active participation of farmers are needed for the effective implementation of integrated pest/disease management in coconut. Depending on the extent of area affected by the pest/disease incidence, the appropriate tier of LSGIs can formulate and implement scheme for adoption of integrated pest and disease management in coconut. If pest/disease problem is observed in more than one gramapanchayat, block panchayat can implement the scheme and if the problem is spread in more than one block district panchayat can take the initiative. There are success stories of LSGIs effectively implementing decentralized participatory approach for pest/disease management in coconut especially control of bud rot disease, red palm weevil etc. Support of development/research institutions like CDB and CPCRI can be made available by the LSGIs for the effective implementation of such schemes.

#### **Establishing demonstration plots on scientific coconut cultivation practices including coconut based inter/mixed cropping and mixed farming, IPM/IDM practices etc.**

Though the techno-economic feasibility of scientific cultivation practices of coconut has been highlighted through achievements of research institutions, field level utilization of such technologies for enhancing productivity and income from coconut farming is not at a satisfactory level.

Hence, it is important that demonstration plots on scientific coconut cultivation practices are established through the decentralized schemes of LSGIs so that farmers are made aware about the technical feasibility and economic viability of scientific coconut cultivation practices. Local Self Government Institutions can also ensure convergence of efforts of other agencies like CDB, State Department of Agriculture/Horticulture, ATMA etc while streamlining schemes to establish demonstration plots.

#### **Promotion of vermicomposting of coconut leaves**

Lack of availability of quality organic manure is a major constraint experienced by coconut farmers in adopting sustainable eco-friendly farming practices. Coconut garden of one ha area can generate up to eight tonnes of leaf biomass residues every year. Fallen coconut leaves in the coconut garden can be effectively converted into rich vermicompost using the earth worm, *Eudrilus* spp. and recycled to coconut and component crops as organic manure. Schemes to promote production and use of coconut leaf vermicompost can be implemented

under the decentralized planning programme of gramapanchayats. Microenterprises managed by rural women SHGs or coconut farmer organizations also can be supported by LSGs for the production and marketing of vermicompost using coconut leaves.

#### **Creating facilities for mass production, distribution, demonstration and popularization of plant growth promoting microbes and biocontrol agents for eco-friendly management of diseases, soil health and fertility for sustainable coconut production**

LSGIs can implement interventions for creating facility for mass production of the biocontrol agents like *Trichoderma*, *Bacillus* and *Pseudomonas* to cater to coconut farmers. Frontline demonstration of biocontrol/PGPR technologies at the farmers' fields can also be organized in collaboration with KVKs and Department of Agriculture. Besides, programmes to train farmer groups to take up multiplication of these biocontrol agents at farm level can also be taken up under decentralized planning initiative.

#### **Facilitating production and marketing of coconut value added products**

Value addition through product diversification is an important strategy recommended for enhancing income from coconut farming. Microenterprises managed by women SHGs and farmer organizations for production and marketing of value added coconut products can be promoted by LSGIs through decentralized planning. Many LSGIs in Kerala state have promoted production and marketing of coconut value added products. For example Perambra block panchayat in Kozhikode district implemented 'SUBICSHA' (Sustainable Business Development Innovative of Coconut Based Microenterprises) project which aimed to promote federation of women SHGs for the production and marketing of coconut value added products.

#### **Promoting farmer organizations**

LSGIs can implement schemes to support grass root level organizations of coconut growers such as Coconut Producer Societies/Federations/ Companies facilitated by CDB to enable them to implement group activities for the socio-economic upliftment of the farmers through productivity improvement, cost reduction, efficient collective marketing and processing and product diversification. Besides, LSGIs can play a role in linking skilled palm climbers and coconut farmers by promoting labour bank concept to address the problem of shortage of labour and high wage rate.

#### **Organize extension activities including research-extension interface programme on coconut farming**

Participatory extension activities can be conducted

through decentralized planning programme of LSGIs for enhancing awareness of coconut growers on technologies for scientific coconut farming and value addition through product diversification. LSGIs also can provide a platform for the convergence of technology transfer activities of CDB, State Department of Agriculture, ATMA, KVKs and front line extension activities of research institutions like CPCRI and SAUs.

## Conclusion

To remain competitive in the era of liberalized trade, our coconut growers need to enhance efficiency for effectively integrating available technologies for sustainable and profitable coconut farming. A favourable

policy environment and appropriate development programmes are necessary for enabling coconut growers to achieve efficiency for better technology utilisation.

Convergence of efforts of various agencies implementing development/extension initiatives and active participation of coconut growers in implementing the same are essential for improving coconut sector.

Local Self Government Institutions have tremendous potential for formulating and implementing coconut development/extension initiatives at grass root level through decentralized planning ensuring active participation of farmers. Besides, LSGIs can also provide a platform for convergence of efforts of various agencies for coconut development. ■

## How Indulekha created a premium product for the common man

Kerala-based Mosons Group, established in 1976, was a manufacturer and supplier of coconut oil extractions before Fayas MP, 30, took it in a new direction. A psychologist by qualification, the third-generation businessman and managing director of the company, successfully experimented with premium coconut oil under the personal care brand Indulekha, now being acquired by Hindustan Unilever.

Fayas wanted to challenge himself by launching a premium hair oil in the Kerala that was already flush with coconut hair oil. Indulekha Skin Care Oil was launched in 2008-9, followed by Indulekha Gold Hair Oil, which was renamed and relaunched in 2010-11 as Indulekha Bringha Oil, now the group's flagship. The fine-tuning helped. The company market the brand as a 100% ayurvedic and medicinal brand rather than a cosmetic product and stressed on its main content, bringha. Today, the brand has 10 products in the hair and skin care segments. Indulekha is now the common man's



premium product. Fayas could find a foothold for his premium brand in Kerala on the proposition that hair fall and hair loss cuts across demographic lines and hence the price should not matter. A 100 ml bottle of Indulekha Bringha Oil costs Rs 432. By 2012, the company had roped in Carat Media as it expanded to other areas including Maharashtra and the Middle East. In 2014, Fayas brainstormed over possible innovations and introducing a product differentiator. That is when the selfie comb bottle happened.

The bottle with a patented combshaped cap has been popular since its launch in 2014, with sales rising at a 30% pace since then. The company had drawn up plans for expansion to other Indian cities when it caught HUL's attention. When Fayas joined the company, started by AC Moosa and then continued by his son Anwer MP, it had diversified beyond coconut oils and coconut shell powder manufacturing and introduced extra virgin coconut oil into the market.