The Journal of Governance

Volume 16 January 2018

SPECIAL ISSUE ON RURAL DEVELOPMENT

IC Centre for Governance
NEW DELHI

The Journal of Governance
IC Centre for Governance
3, Palam Marg, 3rd Floor, Vasant Vihar, New Delhi-110057

The IC Centre for Governance has been set up in with the objective of collective thinking and acting on important issues of governance. It believes that public governance is too serious a matter to be left entirely to the state and that the involvement of the Civil Society is not only desirable but also essential. The Centre seeks to strengthen the capacity of Civil Society and government for ensuring good governance.

THE JOURNAL OF governance

Vol. 16 January 2018

IC Centre for Governance
New Delhi

The Journal of Governance is printed and published by Mahesh Kapoor on behalf of the IC Centre for Governance, New Delhi-100057

Publication Coordinator - Nandita Sinha

Printed at Rakmo Press Pvt. Ltd. C-59, Okhla Industrial Area, Phase I, New Delhi-110020

Please address all correspondence to IC Centre for Governance at 3, Palam Marg, 3rd Floor, Vasant Vihar, New Delhi - 110057
e-mail:iccfg@yahoo.co.in

CONTENTS

EDITORIAL

Rural development is a strategy designed to improve the economic and social life of a specific group of people -The rural poor.

World Bank

The recent media discourse on rural distress seems to have created a new awareness about the need to strengthen village economy in the third decade of the century. The present government has made a significant declaration of its commitment to double farmers' income in the next five years whether it is a realistically achievable goal or not. It is, therefore, expected that breaking away from the tenor of recent budgets, the budget for 2018-19 would be a predominantly farmer centric budget.

It has been the endeavour of the IC Centre for Governance to identify and underline the areas of concern in public governance and challenge the policymakers and opinion makers to respond. In this context, this issue of the Journal makes an attempt to focus on the strategies of rural development and related matters. We are convinced that those in governments would bring out more ambitious and innovative programmes and schemes to improve the economic and social infrastructure of our villages.

In the changing circumstances and environment when we are being led to think of a New India, the bureaucratic ecosystem has also to play a new role, the role of an agent of the people as compared to the traditional role of an agent of an absentee patron government.

One of the questions the 'poorest of the poor' in the Naxalites affected areas of erstwhile Andhra Pradesh were asked in preparation for the Velugu community mobilization for poverty alleviation Project was 'what did they think about the government'. And the dominant response was that they considered the government as their 'enemy'. The main reason given for their resentment was the attitude of the village level functionaries of several developmental departments. The programme designers, therefore, made special provisions to counter

this perception lest their efforts proved miserably subprime.

Unfortunately, the planners have not taken pains to instill an attitudinal reorientation to public service at every echelon of the rural development bureaucracy.

In my view, it is essential to transmit values of public service, such as integrity and feeling for the less privileged people, through training to minimize personal greed and avarice choking the flow of benefits to the rural poor. We cannot consider rural development in the same way as industrial or urban development as it deals with more innocent and trusting people. In tune with the requirements of responsive administration, attitudes must change towards the public.

Vertical mix of trainees can bridge the gap between the policy makers and the implementing agencies by bringing them in training programmes. At present, such courses are confined to civil servants from district level and above.

A perspective training plan should be prepared in every state for development bureaucracy at various levels of rural development administration. Sponsors of community development saw training as a sine-qua-non for the success of the movement. Pandit Nehru, too, felt that if the community development movements failed in achieving their objective, it was not for lack of money, but for lack of trained personnel.

In most developing countries, bureaucracy should take up the challenge of bringing about social revolutions in fractured and stratified societies. In my view, our civil service can act as a dynamic force which follows the will of the people as well as leads it. Despite the limitations of a Weberian bureaucracy due to its adherence to impersonal rules and procedures, it should be possible to instill special characteristics for rural development programmes.

The vital role of training in rural development has been highlighted by successive studies and reports of expert committees including the Administrative Reforms Commission, B R Mehta Committee, Ashok Mehta Committee and GVK Rao committee. The characteristics required for innovative rural development programmes are ethical values and motivation, communication skills for dealing with people, a

sense of group identity and participative problem solving capacity.

There are replicable models of training being provided by civil society organizations such as the Art of Living and Swami Vivekananda Youth Movement with the objective of equipping young men and women for empowering the rural communities. The Rural development Program of the Art of Living is primarily driven by the youth, drawn from the local villages, who have undergone their Youth Leadership Training Programme. This gives them the skills, motivation and abilities to initiate and lead service projects in their own villages and localities based on their needs.

Similarly, the Swami Vivekananda Youth Movement's young leaders in tribal villages trained to manage rural assets combine the missionary passion of the youth with skills to utilize available village assets for the benefit of the community.

There are several other experiments being conducted by dedicated groups of selfless organizations across the states, but unfortunately none of them has been scaled up to cover an entire state or couple of states.

So the imminent challenge for the rural development bureaucracy in the country is to create its field cadres based on flexibility, freedom and change of traditional forms and techniques when they are found unsuitable; cadres which recognize public service as the highest goal of a democratic government and administration. The old ways of reaching out to the rural poor will no longer work.

Needless to say, we haven't got the time to stop for directions; we are already late.

Prabhat Kumar

Amarjeet Sinha

Creating a Poverty Free India

Hon'ble Prime Minister has given a call for Poverty Quit India on completion of the 75th year of the Quit India Movement 1942. He has also given a call for a societal mission to do so by 2022. Surely the challenge is daunting and would require extraordinary effort, especially in rural areas. Given the multi-dimensionality of poverty, it is only through a convergent, saturation approach that a transformation is possible. Given the fact that nearly 8.85 crore households in rural India reported either a deprivation or were the poorest of the poor who are automatically included, the challenge, in sheer numbers, is a very challenging one. However, the efforts made over the last two and a half years, gives us the confidence that perhaps we are on the right track, when it comes to rural development programmes and tackling rural poverty.

The recent HSBC study pointing out that 69% rural households who own up to 1 hectare of land or are landless do not seem to have faced the rural distress unlike the top 31%, seen in terms of increasing real wages and reducing rural unskilled unemployment, also confirm that initiatives for the rural poor have worked even during a difficult period of drought and falling prices for agricultural commodities. The National Evaluation of the Deendayal Antyodaya National Rural Livelihood Mission (DAY-NRLM) by IRMA (2017) also brings out how incomes were 22% higher in treated area than in control area and how greater investments in productive assets and in education, health and nutrition, was seen wherever women Self Help Groups under DAYNRLM were active. The report is an affirmation that social capital matters and that diversification and development of livelihoods is the only way forward.

The Department of Rural Development is a major source of public programmes (employment, skills, social security, livelihood diversification, road construction, water conservation, solid and liquid resource management, etc.). If convergent action in other related sectors of health, education, nutrition, skills could be made simultaneously, it is possible to improve the well-being of poor households in a short period of time. Poverty free is seen as enabling social opportunities for deprived households to come out of their destitution. Poverty free, therefore, connotes an ability to develop one's fullest human potential through education, health, skills, sanitation, clean drinking water, nutrition, food security, livelihood, housing, gender, and social equality and empowerment, connectivity, electricity, systems of sustainable resource use, waste management, and most of all, sustainable diversified economic activities for higher incomes. The challenge of poverty free Gram Panchayats is about exploring the potential for rural transformation by simultaneous interventions to address the multi-dimensionality of poverty. It is this convergent approach that is the thrust under a State led, Mission Antyodaya, a mission to address the multi-dimensionality of poverty.

What makes a poverty free Gram Panchayat approach relevant? Is it really possible to move in that direction? The provisional data from the Socio-Economic and Caste Census 2011(SECC) offers an opportunity to understand the socio-economic condition of a household from the perspective of multi-dimensional deprivation. A family could be deprived due to lack of assets, low or no wage employment opportunities, lack of education, skills, or health care, gender and social inequality, absence of sustainable livelihoods, lack of proper housing, sanitation and clean water, etc. Disability or absence of male earning members in women headed households or households with no adult members, could throw up specific challenges to becoming poverty free.

The SECC offers an opportunity to plan interventions on the basis of the objective situation of the households. A ranking of Gram Panchayats on where they stand with regard to physical infrastructure, social development and economic well-being will further facilitate

a focused intervention. There is also a realization that societal partnerships with government and non-governmental initiatives will be required as vibrant economic activity needs markets, value chains, standardization, product development, etc.

While the Department of Rural Development has made concerted efforts in partnership with State and Local Governments to improve programme delivery and outcomes, it has also made some transformational interventions over the last two and a half years that have made us move closer to the convergent and saturation approach of Mission Antyodaya outlined above. Most States have also made commendable progress in this regard. The following twelve interventions of the Department stand out -

- **Completing and using the results of the Socio Economic Census (SECC 2011) in identifying the poor households for more focused interventions -** By using different deprivation parameters for generating a list of beneficiaries and subjecting it to community validation through the Gram Sabha, it is possible to generate a list without inclusion errors. By providing for appeal for exclusion errors, it is possible to rectify mistakes if any at a later time. Use of space technology especially for geo tagging the old kutchcha house with kutchcha roof provides a visual confirmation of deprivation. Likewise, by using the percentage of deprived households and percentage of landless manual casual labour as a proportion of the total such households in the country, it is possible to scientifically examine the labour budgets proposed by States under MGNREGS. Under DAY-NRLM and MGNREGS, by using the deprivation filter, it can be ensured that each of these households get wage employment and are members of women SHGs. This universe of the poor cuts across the identities of caste, group of castes, religion, creed, and judges a household's entitlement purely from the perspective of deprivation and multi – dimensional poverty. It is a game changer as it allows monitoring over time the status of households on parameters of deprivation. The Pradhan Mantri Ujwala programme for LPG connection could be rolled out so effectively in a short time as beneficiary selection

was based on SECC deprivation. There is a strong case for developing a system of updating the socio – economic status periodically and the Department of Rural Development is currently engaged in developing appropriate modalities for doing so, along with other Ministries and Departments.

- **Intervening on Scale –** Rural India has a very large number of rural households spread over a million habitations and villages. Clearly the interventions have to be to scale. There has been a very significant increase in the Central Government's allocations and actual spend under the Department of Rural Development. With an allocation of Rs. 1.05 lakh crores in 2017-18, there is a doubling of allocation compared to 2012-13. Add to it the State shares (60-40 in non-Himalayan and 90-10 in Himalayan and NE States). Annual transfers under Fourteenth Finance Commission to Gram Panchayats have also been in the range of Rs. 25,000 crores to Rs. 35,000 crores during this period. Over Rs. 70,000 Crores has been leveraged as Bank loans by Women SHGs in 2015-17 period, a manifold increase compared to the previous years. The thrust on placement skills and self-employment skills have also facilitated larger economic activity in rural areas. The convergence for animal husbandry and livelihood diversification has also added additional incomes for households. NFSA's annual subsidy to make rice and wheat available at cheap prices further adds to the food security of poor households. The resources, if used in convergence, and in a saturation mode and with minimum leakages, have the power to transform the lives of rural households. The dream of one crore beautiful homes for the poor under the Pradhan Mantri Awaas Yojana Gramin, connectivity for all eligible rural habitation with all weather pucca road by March 2019, leveraging over Rs. 60,000 Crores annually as Bank loan for women SHGs (three times the loan in 2014-15) by 2018-19, is possible as resources are available to back the vision.
- **Unprecedented thrust on water conservation and livelihood security –** The hall mark of a prosperous village that has managed to ensure the well-being of the

households is effective water conservation. This is the lesson from Hivre Bazaar to Piplantri. It is for this reason that MGNREGS decided to ensure at least 60% expenditure under the programme is on agriculture and allied activities. With Hon'ble Prime Minister holding meetings with 13 Chief Ministers of drought affected States in May 2015 and urging the Chief Ministers to focus on water conservation, the stage was set for a State led thrust. The Mukhymantri Jal Swavalamban Abhiyan in Rajasthan, Neeru-Chettu in Andhra Pradesh, Mission Kakatiya in Telengana, Jalyukta Shivar and water conservation initiatives in Maharashtra, 'Dobha' farm pond construction in Jharkhand, and a range of State specific water conservation programmes across many States, MGNREGS provided the highest wage employment in 5 years, of more than 235 crore person days/year both in 2015-16 and 2016-17. The total expenditure too in these years have been the highest ever since the inception of MGNREGS. Thrust on individual beneficiary schemes for goat shed, poultry shed, dairy shed, IHHL, 90/95 days' wage labour for housing, over 11 lakh completed farm ponds, all provided an unprecedented opportunity for augmenting incomes and improving the quality of life. The new Mission Water Conservation Guidelines in partnership with Ministry of Water Resources and Department of Land Resources, with a thrust on 2264 water distressed Blocks and with a focus on developing technologically sound and scientifically vetted water conservation plans along with capacity building of frontline workers and engineers, is going a long way in improving the quality of intervention and its impact.

- **Citizen's engagement with programmes to improve accountability-**The Department focused on citizen centric approach to improve accountability. Special efforts were made through Cluster and Panchayat Facilitation Teams in identified backward Blocks. The planning exercise under the Intensive Participatory Planning Exercise in 2569 Backward Blocks using SECC deprivation data and knocking on the doors of every deprived household and planning for its well-

being, also strengthened the partnership with the poorest households. The use of citizen centric apps like the Meri Sadak app to get a feedback on roads and the awaassoft app for uploading pictures of PMAY Gramin houses, also helped in connecting with households. To further the Public Information Campaign, the Department is organizing a Gram Samridhi and Swachchata fortnight from 1-15 October 2017 at every Gram Panchayat. During the period, the Gram Panchayat Office building will display for public scrutiny, all available records of programmes, beneficiaries, etc. A cell – phone based Janata Information System is also being launched whereby every programme in the village concerned can be seen by any villager to improve his/her scrutiny of the programme. Similarly, a cadre of Social Auditors is being developed from among the Women SHGs after proper training and certification on the social auditing standards that have been notified in consultation with the office of the CAG.

- **Transparency through IT/DBT and use of Adhaar-**The Department has been a leader in use of transaction based MIS for IT/DBT transfers straight into Bank/Post Office accounts. 98% wages under MGNREGS and 100% payments under PMAY Gramin are on the IT/DBT platform. Over 5.9 crore MGNREGA labourers already have an Adhaar linked Bank account, with their consent. The availability of the Banking Correspondent or Post Office outlet with micro ATMs at fixed village locations on pre-determined dates, will unlock the power of easy digital transactions on a large scale. It will also ease the hardships for labourers, pensioners, etc. The Women SHG Community Resource Persons have offered to become Banking Correspondents or Bank Sakhis and the experience so far is encouraging.
- **Transparency and effective monitoring through use of space technology-**The power of space technology in promoting transparency can be seen in the relentless efforts made to geo tag nearly 2 crore assets created under

MGNREGS. An even more powerful use is in the final selection of beneficiaries under PMAY Gramin after 100% geo tagging of beneficiaries before their old dwelling and for reporting progress of construction, with latitude/longitude details. All these geotagged assets are available in the public domain for anyone to see. This really facilitates transparency. In PMGSY, space technology has been used for monitoring the alignment of roads, the actual road construction distance, and its success in connecting habitation. It is also being used to check the success of road side plantations through MGNREGS on PMGSY roads. Our challenge is to now universalize this application on roads and to do a 'before, during and after' geo tagging of all MGNREGS assets.

- **Leveraging Bank loans for SHG women for development and diversification of livelihoods –**While the Deen Dayal Antyodaya Yojana – National Rural Livelihood Mission (DAY-NRLM had demonstrated enormous social capital through community mobilization and group formation, the economic activity development and livelihood diversification needed a thrust. Thrust has been given to a detailed monitoring of Bank linkage as ultimately, any poverty reduction effort will require access to institutional credit at reasonable rates for diversified economic activity. Having already reached an annual Bank linkage of over Rs. 43,000 Crores, we are confident of crossing Rs. 60000 Crore lending by 2018-19. By linking skill development integrally to SHGs, preparedness of households to utilize Bank credit effectively is also being augmented.

- **Speeding up pace of construction of PMGSY roads and large scale use of green and innovative technologies –**Road connectivity is transformational in offering new livelihood opportunities to a rural village. Besides easing the access to markets, it also encourages mobility for wage labour. It is for this reason a sincere effort has been made to speed up the PMGSY road construction from 70 kilometres per day in 2011-14 period to 130 kilometres per day in 2016-17. Nearly 80% eligible habitations have already been connected

by all-weather road and our effort is to reach 100% by March 2019. The use of green and innovative technologies like use of waste plastic, fly ash, geo-textiles, cell-filled concrete, cold mix, etc. is also being significantly scaled up to ensure an environmentally appropriate strategy for roads. The successful maintenance system of Madhya Pradesh and the community maintenance experiment of Uttarakhand is also to be emulated in other States.

- **Need based skill upgradation like Barefoot Technicians, Rural Masons, Custom Hiring Centres, Rural Transport Scheme, other DDUGKY and RSETI initiatives -**Skills for placement and self – employment is needed to tackle the large scale under – employment in rural areas. A large number of new rural enterprises in the form of retail business, farmer producer organizations, Custom Hiring Centres, rural transport systems, handicrafts and handlooms, craft, etc. is possible through a planned system of support and convergence. The Rural Development Department has been trying to leverage the core strengths and programmes of concerned Departments like Agriculture, Animal Husbandry, MSME, KVIC, Textiles, etc. to provide scalable opportunities for farm and non-farm employment. Special training programmes for Barefoot Technicians and Rural Masons is to reduce over time, the pool of unskilled wage earning households in the country from the current over 5 Crore. All these programmes are formally vetted by the Sector Skill Councils and provide for assessments and certification. The Department of Rural Development has brought all its placement based and self-employment skills programmes on to the Common Norms of the Ministry of Skills, to enable basic standards and protocols. DDUGKY and RSETIs programmes are being further improved to acquire excellence and even higher placement/settlement rates.
- **Promoting innovations for transformation –** The Department of Rural Development has been very innovative in addressing the priorities of local communities and States. The Soild Resource Management Programme in over 80%

villages of Tamil Nadu, the liquid resource management progamme in Maharashtra, AP and Telengana and now to Bihar and Chhatisgarh through MGNREGS and DAY NRLM convergence, are all examples of innovation. The Aajeevika Grameen Express rural transport scheme, Mission Water Conservation and Rural Road Guidelines, Housing typology studies to develop region specific appropriate technologies and designs for rural housing, the Livelihood in Full Employment (LIFE) initiative under MGNREGS to promote skill development among the MGNREGA workers, are all examples of large scale innovations that have been attempted during this period.

- **Evidence based monitoring, and expert inputs for key themes for evidence based mid-course corrections –** Large scale programmes require systemic approach to monitoring and evaluation for effectiveness. Besides very strong and transparent transaction based MISs, use of geo-tagging to ascertain quality of assets, visit to 600 districts each year by institutional monitoring institutions to look at specific programme implementation, a Common Review Mission to eight States twice a year to look at the quality of implementation, are some of the efforts improving monitoring. Besides these, National level Evaluation of Programmes like the IRMA Study of DAY-NRLM recently published are other efforts to evaluate interventions. Given the diversity of knowledge needs and cutting edge technologies, the Department has set up High Level Expert Groups on Human Resources for Results, Information Technology use and challenges, internal audit, market linkage and value chain, engaging the finest minds from and outside government, to steer the RD programmes effectively.
- **Implementation in convergence mode-** Poverty free is seen as enabling social opportunities for deprived households to come out of their destitution. It is this convergent approach that is seen as Mission Antyodaya, a mission to address the multi-dimensionality of poverty.

***

Vijay Paul Sharma

Policy Options and Strategies for Doubling Farmers' Income

Indian agriculture has made significant progress over time. During the last five decades, since the adoption of green revolution, foodgrains production in the country increased from about 79 million tonnes in triennium ending (TE) 1966-67 to 260 million tonnes in TE2016-17. Milk production increased from 23.2 million tonnes in 1973-74, since the launching of Operation Flood, to 155.5 million tonnes in 2015-16 and egg production increased from about 7.7 billion eggs to about 83 billion eggs during the same period. Horticulture production has also witnessed a significant increase, from about 96.6 million tonnes in 1991-92 to over 305 million tonnes in 2017-18.

Although contribution of agriculture to gross value added (GVA) is about 17-18 percent, it still provides employment to nearly half of the workforce. Agriculture has strong backward and forward linkages with the non-agriculture sectors, thereby creating income and employment opportunities in other sectors. Thus agriculture not only ensures food security and employment to the majority of population but also contributes to overall economic growth of the country.

It is widely agreed that agricultural development strategies in the past were mainly focused on increasing agricultural production to achieve self-sufficiency and improve food security but did not explicitly focus on farm income and farmers' welfare. However, with the Hon'ble Prime Minister's announcement of doubling farmers' income by 2022, the issue of farmers' income and welfare has come to the centre stage and various initiatives have been launched to achieve the objective.

In this paper, we analyse the changing structure of the Indian agriculture, current status of farmers' income and identify the key policy options and strategies to double farmers' income in the country.

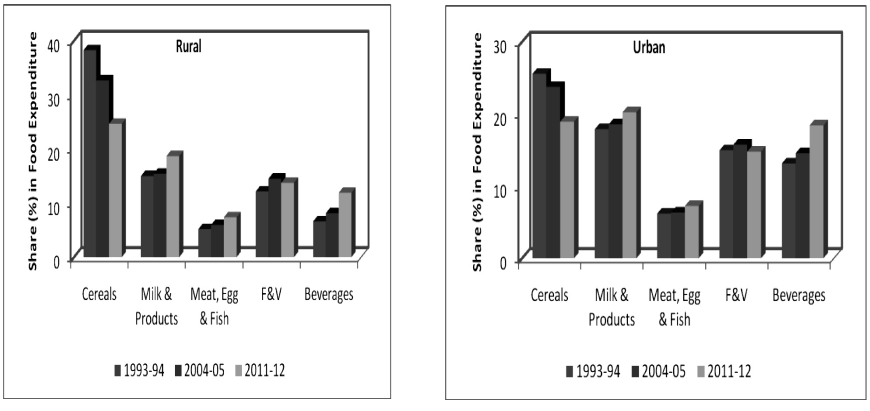
Transformation of Indian Agriculture

The contribution of agricultural sector to national GDP has declined over the years, while that of other sectors, particularly services, has increased. However, decline in the share of agricultural workers in total workforce has been slower compared to decline in the share of agriculture in GDP, leading to low per capita income in agriculture in relation to non-agriculture sector. Although the share of agricultural GDP has declined in almost all States, agriculture is still an important contributor to Gross State Domestic Product (GSDP) in states like Punjab, Madhya Pradesh, Uttar Pradesh, Assam and Bihar. Tamil Nadu (7.2%), Maharashtra (7.4%), Kerala (9.4%) and Uttarakhand (10%) where share of agriculture in GSDP is relatively low, does not underscore importance of agriculture as a large proportion of rural population is still dependent on agriculture for employment and livelihood.

Rising disposable income, increasing urbanization, emerging demographics and changing lifestyles, have led to changes in composition of Indian diet. For example, Indian dietary consumption pattern has shown an expected fall in dominance of cereals and an increased intake of high-value products such as fruits, vegetables, milk and dairy products, meat, eggs, fish, beverages, processed food, etc. The changing food consumption pattern in India is presented in Figure 1. We observe that cereals continue to dominate food expenditure in rural areas, with 24.7 per cent share in total food expenditure, but the share has declined by 13.6 percentage points during 1993-94 and 2011-12 while in urban areas, the share of cereals in food expenditure has declined from 26.5 per cent to 19 per cent during the same period. In contrast, the share of high-value products such as fruits and vegetables, livestock products, beverages and processed foods has increased significantly both in rural and urban areas. Among livestock products, expenditure on milk and dairy products is the highest in both rural (18.7%) and urban (20.3%) areas due to large vegetarian population but the trends are now changing fast. The share of beverages and processed foods has increased from 6.6 percent to 11.9 percent between 1993-94 and 2011-12 in rural areas and from 13.2 percent to 18.4 percent in urban areas during the

same period. These trends clearly show that demand for high-value products is increasing in the country; therefore, Indian agriculture must diversify into high-value crops and take advantage of emerging demand patterns.

Figure 1. Trends in food consumption pattern in India: 1993-94 to 2011-12



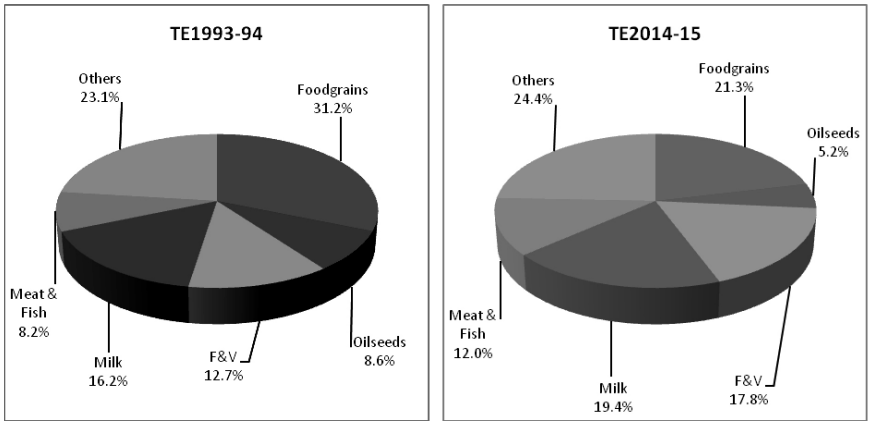
Source: Computed from Key Indicators of Household Consumer Expenditure in India 50th, 60th and 68th Round, National Sample Survey Organization (NSSO)

Increases in consumption of high-value products have expanded the market demand for horticulture and livestock products, and farmers have responded to this changing demand by changing cropping pattern. For example, at the all-India level, the share of foodgrains in the total value of output from agriculture and allied sectors (excluding forestry and logging) has fallen from 31.3 per cent in TE1993-94 to 23.6 per cent in TE2014-15 (Figure 2). There is a clear shift from staple grains towards fruits and vegetables, livestock products, meat and fisheries. The share of fruits and vegetables has increased from 12.7 per cent in TE1993-94 to 17.8 per cent in TE2014-15 while share of livestock and fisheries in the total value of agricultural output has increased from 24.4 per cent to 31.4 per cent during the last two decades. Among livestock products, the contribution of milk has increased at a faster rate compared with meat and fisheries. The above trends clearly indicate that farmers have responded to market demand

and diversified into high-value agriculture under given technological, institutional and infrastructural constraints.

There are large variations among states in agricultural diversification due to various factors such as agro-climatic conditions, availability of technology, differences in the level of infrastructure development particularly post-harvest management and markets, access to institutions, level of policy interventions, etc. It is evident from Table 1 that the share of horticulture sector is high in Himalayan and north-eastern states while share of livestock is high in Tamil Nadu, Telangana, Jammu & Kashmir, Rajasthan, Haryana, Uttarakhand, Bihar, Uttar Pradesh, Punjab and Andhra Pradesh. The share of fisheries is low in majority of states except Goa, Andhra Pradesh, West Bengal, Assam, Tripura and Kerala. It is important to note that most of north-eastern and Himalayan states, which have high share of horticulture sub-sector in value of output, have relatively poor physical and institutional infrastructure. In order to take advantage of rising demand for horticulture products, special efforts are needed to strengthen post-harvest management systems and physical and institutional infrastructure in the region.

Figure 2. Changing share of crop groups/sub-sectors in value of output from agriculture and allied sectors (excluding forestry and logging): TE1993-94 and TE2014-15



Source: Computed from National Accounts Statistics Back Series 2011 and National Accounts Statistics 2017, Central Statistical Organisation (CSO)

Status of Farmers' Income

The estimates of farmers' income are not available from the CSO but NSSO has provided estimates of farmers' income in 'Some Characteristics of Agricultural Households in India January-December 2013 (NSS 70th Round)'. As is evident from Table 2, the average monthly income of agricultural households from all sources of income (cultivation, livestock, wages/salary and non-farm business) was Rs. 6426 in 2012-13. The share of income from crop cultivation increases with an increase in farm size, from 27.3 percent on marginal households to 86.2 percent on large households. However, marginal farmers earn the maximum share of income (48.3%) from wages/salary and 9.7 percent income comes from non-farm business. Large farmers earn sizeable share of income from crop farming and share of non-farm business and wages/salary is low. The trends clearly show that differentiated strategies need to be adopted to double farmers' income as sources of income vary among different categories of farmers.

Table 1. Share (%) of high-value agriculture sub-sectors in value of output from agriculture and allied sectors (excluding forestry & logging) in different States during TE2014-15

Share (%)	Horticulture	Livestock	Fisheries
>30	Mizoram, H.P. , Arunachal Pradesh, Manipur, Meghalaya, Tripura, J&K, Goa, Chhattisgarh	Tamil Nadu, Telangana, J&K, Rajasthan, Haryana, Uttarakhand, Bihar, U.P., Punjab, A.P.	Goa
20-30	Odisha, West Bengal, Nagaland, Uttarakhand, Jharkhand, Sikkim, Bihar, Assam	Kerala, Jharkhand, Mizoram, H.P., Gujarat, Maharashtra, Nagaland, Meghalaya, Karnataka,, West Bengal, Odisha, Manipur	

10-20	Maharashtra, M.P., Tamil Nadu, A.P., Gujarat, Telangana, Kerala, U.P.	M.P., Tripura, Arunachal Pradesh, Chhattisgarh, Assam, Goa, Sikkim	A.P., West Bengal, Assam, Tripura, Kerala
<10	Haryana, Punjab, Rajasthan		Chhattisgarh, Manipur, Odisha, Bihar, Tamil Nadu, Mizoram, Karnataka, Gujarat, Telangana, Jharkhand, J&K, Maharashtra, Meghalaya, Nagaland, Arunachal Pradesh, U.P. Haryana, Punjab, M.P. H.P., Sikkim, Uttarakhand, Rajasthan

Source: Computed from National Accounts Statistics 2017, Central Statistical Organisation (CSO)

Table 2. Average monthly income (Rs) per agricultural household for different size classes in India (July 2012-June 2013)

Farm Size	**Sources of Income**				
	Cultivation	*Livestock*	*Non-farm Business*	*Wages/Salary*	*Total*
Marginal (≤ 1 ha)	1286 (27.3)	694 (14.7)	459 (9.7)	2275 (48.3)	4713
Small (1-2 ha)	4209 (57.3)	818 (11.1)	593 (8.1)	1728 (23.5)	7348
Medium (2-10 ha)	9047 (71.6)	1234 (9.8)	620 (4.9)	1737 (13.7)	12637
Large (>10 ha)	35685 (86.2)	2622 (6.3)	1770 (4.3)	1311 (3.2)	41388
All Size	3081 (47.8)	763 (11.9)	512 (8.0)	2071 (32.2)	6426

Source: Computed from NSS Report No.569: Some Characteristics of Agricultural Households in India, 2012-13; pp. A-1287, National Sample Survey Organisation (NSSO);

Figures in parentheses show share (%) in total income

Policy Options and Strategies for Doubling Farmers' Income

In order to double farmers' income by 2022 a differentiated and multipronged strategy needs to be adopted. For broad-based development of agriculture, there are three strategy options: (i) extensive farming – bringing more area under cultivation; (ii) intensive agriculture – increasing use of production inputs such as labour, fertilizers, irrigation, etc., and (iii) technological change. However, the first two approaches are agro-economically and ecologically unsustainable in the long run and the only sustainable strategy for growth in agriculture is continuous technological change, which shifts the production function upwards and to the right so that it avoids getting trapped into Ricardo's Law of Diminishing Returns to Scale. In order to implement this strategy, four types of policy instruments, namely, technology, institutions, infrastructure and incentives are needed, which are discussed in the later part of this paper. In this section we discuss major drivers of improving farmers' income, which include:

i. Increasing cropping intensity
ii. Improvement in productivity
iii. Reducing cost of cultivation and improving resource use efficiency
iv. Diversification towards high-value crops/commodities/sub-sectors
v. Reducing post-harvest losses and wastages
vi. Promote value-addition and agro-processing
vii. Assured remunerative prices to farmers
viii. Shifting surplus labour from agriculture to non-agriculture sector

Increase Cropping Intensity

The average cropping intensity in the country was 140.8 percent in TE2014-15 and increased from about 131 percent to 141 percent during the last two decades. There are some states such as Punjab (190.8%), Tripura (189.3%), Haryana (185.6%) and West Bengal

(185%) that have higher cropping intensity (Table 3). However, there are large number of states, where cropping intensity is less than all-India average and main reasons for low cropping intensity are lack of irrigation facilities and low water use efficiency. The government emphasis on irrigation development under Pradhan Mantri Krishi Sinchayee Yojna (PMKSY) with focus on extending the coverage of irrigation under 'Har khet ko pani' and improving water use efficiency under 'More crop per drop' will help in increasing cropping intensity. High cropping intensity will lead to higher farm income.

Table 3. Cropping intensity in major states in India: TE2014-15

CI (%)	States
<120	Manipur (100), Mizoram (100), Jharkhand (112.2), Odisha (115.6)
120-140	Meghalaya (120), Telengana (121.5), Karnataka (121.9), Chhattisgarh (122.4), Andhra Pradesh (123.3), Gujarat (124), Tamil Nadu (124), Kerala (128.5), Nagaland (130.3), Arunachal Pradesh (132.8), Maharashtra (135.3), Rajasthan (138.3)
140-160	Assam (144.4), Bihar (145.4), Madhya Pradesh (155.1), Jammu & Kashmir (155.3), Uttar Pradesh (156.7), Uttarakhand (157.5)
160-180	Himachal Pradesh (167), Puducherry (168.3), Sikkim (176)
>180	West Bengal (185), Haryana (185.6), Tripura (189.3), Punjab (190.8)

Source: Computed from Land Use Statistics at a Glance 2005-06 to 2014-15, Ministry of Agriculture & Farmers Welfare: Figures in parentheses show cropping intensity

Improving Crop Productivity

The increase in crop production in India has arisen mainly as a result of improvements in crop yield rather than from expansion in the cultivated area. For example, from TE1966-67 to TE2016-17 there was a 2.6-fold increase in the productivity of rice (from 934 kg/ha to 2447 kg/ha), a 3.5-fold increase in the productivity of wheat (from 876 kg/ha to 3041 kg/ha) and about 3-fold increase in productivity of foodgrains. Over the same period, the total cultivated area under foodgrains increased by only 7 percent from 116.2 million ha to 124.4 million ha (Agricultural Statistics at a Glance 2016). Despite

achievement of increased agricultural production and crop yield per unit area, annual growth rates of crop yields are gradually declining. For example, the average growth rate of foodgrains yield decreased from 3.2 percent in the 1980s to 1.9 percent in the 2010s. Moreover productivity of most of the crops in the country is below world average and much lower than agriculturally advanced countries. There are also large variations in crop yields across different states due to various factors.

The difference between yield potential and the actual yield achieved by farmers, which represents the exploitable yield gap, is high in most of the crops in major producing states. Closing the existing yield gaps between attainable potential and farmers' yields is vital to improve crop yields and farmers' income amid strong competition for limited resources like land and water. A special drive to bridge the yield gap through improved management practices and protection against biotic and abiotic stresses needs to be launched. In addition to bridging the yield gap, there is need to raise yield levels in those crops/states where yields have stagnated.

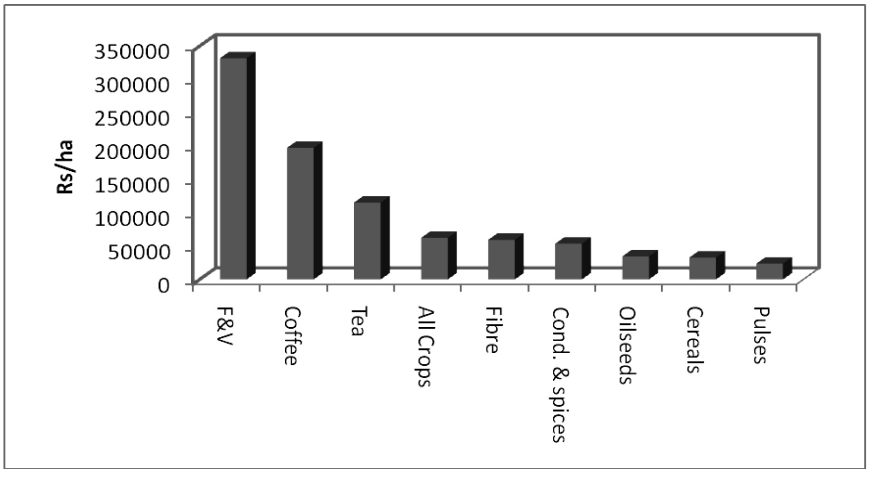
Reducing Cost of Cultivation and Improving Resource Use Efficiency

Agricultural production costs have been rising due to increase in crop input usage as well as key input prices in general and labour costs in particular. Human labour accounts for more than one-third of total cost of cultivation in crops like sugarcane (33.3%), paddy (35.2%), maize (35.4%), cotton (36.1%), bajra (43.8%), ragi (44.2%), copra (46%) and jute (52.3%). There is a need to control costs and being as cost efficient as possible. Therefore, in order to improve farm profitability, input costs such as fertilizer, seed, machinery, human labour etc., would have to be reduced. Government initiatives like Soil Health Cards, Neem Coated Urea, micro-irrigation, farm mechanization, etc. hold promise in containing rising cost of cultivation and improve farm income.

Diversification towards High-Value Crops/Products/Sub-sectors

Diversification of agriculture towards high-value crops and allied sectors such as livestock, fisheries, bee keeping, and agro-forestry could be a key factor in doubling farmers' income. During the TE2015-16, crop sector contributed about 60 percent, followed by livestock sector (27.4%), forestry and logging (7.9%) and fisheries (4.7%) in total value of output from agriculture and allied sectors. The average value of output from high-value crops like fruits and vegetables is more than 10 times higher than cereals (Figure 3). Similarly average productivity of coffee is six times and that of tea about 3.5 times higher compared with cereals. Therefore, diversification of Indian agriculture from staples to high-value crops will significantly increase farmers' income.

Figure 3. Per ha value of output from major crops/crop groups in India: TE2015-16



Source: Computed from National Accounts Statistics 2017, Central Statistical Organisation (CSO) and Land Use Statistics at a Glance 2005-06 to 2014-15, Ministry of Agriculture & Farmers Welfare

The growing demand for livestock products and fisheries driven by economic growth, rising per capita incomes and urbanization also offers scope for boosting farm incomes. However, meeting these new demands requires additional investments and new set of skills

for production, processing, storage, packaging and distribution. Unless technological and institutional innovations enable farmers, particularly small and marginal, to acquire these skills, large number of resource-poor farmers may be excluded from the diversification opportunities created by the demand shift. In order to enable small and marginal farmers to take advantage of diversification, improvement in the access of smallholder producers to technology, inputs, skills, information, markets, and institutions is needed.

Reducing Post-harvest Losses and Wastages

As per the Report on Assessment of Quantitative Harvest and Post-Harvest Losses of Major Crops and Commodities in India by the Indian Council of Agricultural Research (ICAR), average losses for foodgrains are in the range from 4.65 to 5.99 percent in cereals, 6.36 to 8.41 percent in pulses, and 3.08 to 9.96 percent in oilseeds. However, losses are higher in semi-perishables and perishables. For example, for fruits losses ranged to 6.7 to 15.9 percent and vegetables from 4.58 to 12.44 percent. The extent of losses is estimated at 7.19 percent in eggs, 5.23 percent in inland fish, 10.52 percent in marine fish and 6.74 percent in poultry meat. The estimated annual value of losses was about Rs. 92651 crore in 2014. However, it is encouraging to note that average losses reduced significantly between 2005-07 and 2013-14. Reducing post-harvest losses and wastages would contribute to farmers' income and investments to improve infrastructure and technology can bring large gains to producers through reduction in post-harvest losses.

Promote Value-Addition and Agro-Processing

As discussed in the above section, the maximum losses occur in high-value crops/products like horticulture and livestock due to lack of adequate infrastructure, knowledge, and access to post-harvest technologies. Since Indian agriculture is diversifying towards high-value products, special attention is required to develop efficient logistics, supply chains and promote value-addition to increase shelf-life of products.

The emphasis on development of infrastructure for agro-processing clusters, creation of backward and forward linkages and expansion of food processing and preservation capacities to encourage entrepreneurs to set up food processing units based on cluster approach under the new Central Sector Scheme - SAMPADA (Scheme For Agro-Marine Processing And Development Of Agro-Processing Clusters) would give a renewed thrust to the food processing sector in the country and enhance farmers' income.

Shifting Surplus Labour from Agriculture Sector

Many farming households, particularly small and marginal farmers, derive a significant proportion of their income by relying on non-farm sources including wages and salary. Reliance on off-farm income generating activities could be a possible strategy to shift surplus workforce from agriculture to non-agriculture sector and improve per capita income of farmers. The flagship scheme "Pradhan Mantri Kaushal Vikas Yojana (PMKVY)" of the government can play an important role in imparting industry-relevant job-oriented skill training to youth and help them in securing a better livelihood options in non-farm sector.

Policy Instruments for Improving Farmers Income

In order to implement the strategy of doubling farmers' income, four sets of policy instruments, namely, technological, institutional, infrastructure and incentives are needed (Figure 4).

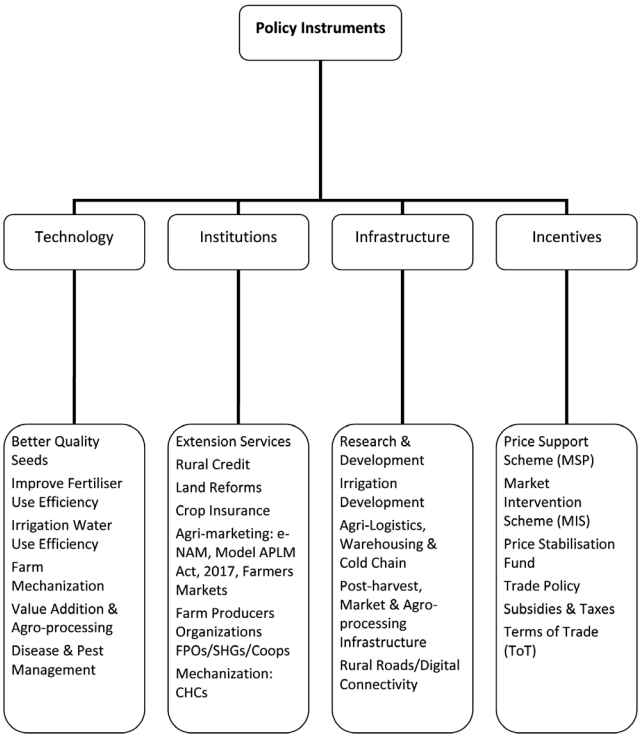
Technological Factors

Agricultural research & development (R&D) has played an important role in the transformation of the Indian agriculture. Since agricultural research is largely a public good and subjected to market failures, the public sector has a key role to play in agricultural R&D, but role of private sector cannot be undermined. Public expenditure in agricultural R&D such as high yielding varieties, more efficient inputs, irrigation development, soil and water conservation, agri-logistics and rural infrastructure, needs to be prioritized. Private sector has to play an important role in post-harvest management, marketing and value-

addition part of the value-chain. Thus a complementary public-private investment strategy will be the key to improve agricultural production, productivity and farmers' income.

The trends in capital formation in agriculture point to a disturbing development of a pervasive slowdown in investment in agriculture. For example, gross capital formation (GCF) in agriculture, forestry and fishing declined from Rs. 273.9 lakh crore in 2011-12 to 265 lakh crore in 2015-16 (at 2011-12 constant prices) while GCF as percentage of Gross Value Added in agriculture declined from 18.2 percent to 16.4 percent during the same period. Public investment in agriculture is not consistent with the contribution of the sector and the targeted growth for the sector. Gross capital formation in agriculture is dominated by household sector (82.9%) while share of public sector is about 14 percent and private corporations contribute only 3 percent. Therefore, concerted efforts are needed to increase the share of private corporations in capital formation in agriculture.

Figure 4. Policy instruments for improving farmers' income



Institutional Arrangements

It is generally agreed that returns to agricultural research could be much higher with a stronger research-extension interface. Therefore, there is a need to create strong research-extension-farm linkages and information and communication technology (ICT) can play a big role in strengthening such linkages. Due to fragmentation of land holdings, the share and absolute number of households operating small and marginal holdings has increased, while agri-input and food industry are fast scaling up and consolidating. Therefore, linking smallholder producers with emerging agri-food chains is inevitable. In order to strengthen these linkages, improve the bargaining power of farmers and reduce transaction costs, it is necessary to organize farmers in groups like farmer producers' organizations (FPOs), cooperatives, producer companies, Self Help Groups, etc. Two important reforms are needed to strengthen these linkages. Since the declining size and fragmentation of operational holdings is a serious problem, there is a need to review the land reforms related to land consolidation and land tenancy. It has been argued that regulatory barriers have constrained investments in the development of agri-logistics and market infrastructure and led to inefficient market institutions. So, functioning of traditional markets (APMCs) needs to be improved to enhance their efficiency and create more competition by allowing active participation of the private sector. The states should be encouraged to adopt the Model APLM Act 2017.

Although there has been an impressive growth in agricultural credit flow (from Rs. 2.54 lakh crore to Rs. 9.60 lakh crore) during the last decade, there are some concerns related to its composition and access to small and marginal farmers in general and east and north-eastern states in particular. Cooperatives, which have a strong presence and reach in rural areas, have lost their share in agricultural credit. The share of term loan in the total agricultural credit disbursed also declined which adversely affected capital formation in agriculture. Therefore, policy interventions are needed to correct these distortions/imbalances. The government has reduced cost of credit to farmers through interest subvention, which is a welcome step but it is important to ensure timely and adequate access to institutional

credit for the small and marginal farmers and other weaker sections to enable them to adopt new technologies and improved agricultural practices as less than half of the farmers have access to institutional credit.

Pradhan Mantri Fasal Bima Yojana (PMFBY) launched in 2016 to provide insurance coverage and financial support to the farmers to stabilise their income is a key step in managing production risk but issues related to assessment of crop losses and timely payment of compensation need to be addressed. Due to shortage and high cost of human labour, farm mechanization need to be promoted among farmers. However, mechanization of small and marginal farms has been a major challenge due to economies of scale, so group ownership and custom hire service provision appear to be the models to follow in the country.

Infrastructure Development

There is a need to strengthen basic agriculture and rural infrastructure like rural roads, ICT, irrigation, power, etc. through public investment to attract private sector investment in agri-logistics, post-harvest management, cold-chain development, agro-processing and marketing. Changing consumer preferences, from staple cereals to perishable high-value foods, have raised the need to attract more private investment in agri-food chains. There is a need to provide agribusiness-friendly policy environment to attract private investment in infrastructure development and engage with millions of small and marginal farmers.

Incentives for Producers

The main purpose of agricultural price policy is to benefit farmers and has significant impact on farm sector growth and farmers' income. Minimum Support Price (MSP) is an important policy instrument to ensure remunerative prices to farmers and has been quite effective in paddy and wheat in states where public procurement system is strong. An effective price support mechanism for other crops to ensure that market prices do not fall below MSP will help in achieving the objective of doubling farmers' income. Effective

participation of states is needed to increase coverage of crops and farmers under MSP operations and improve efficiency in storage, transportation and distribution. Trade policies strongly influence agricultural prices, so there is a need to have a long-term predictable trade policy to promote agricultural exports and appropriate level of tariffs on agricultural products to protect farmers.

***

Sumit Bose*

Performance Based Payments for Rural Development Programmes

Background

At the dawn of independence, India decided to follow the Community Development approach for Rural Development. To get rid of the baggage of colonial administration, a new development geography was envisaged in the form of a territorial unit at the Block level with clear norms of size and population. It was also an attempt to provide integrated and convergent development through mostly general purpose senior staff. The Block Development Officer (BDO) was supra-departmental and extension officers under the BDO covering different sectors like agriculture, animal husbandry, co-operation, education, public health, development of women and children, rural infrastructure and so on.

During this phase of development the Central Government played the lead role in designing the human resource structure, arranging training and even met a substantial portion of their remuneration. Though the budget allocation to Intermediates was relatively low, community participation was high. In this process substantial rural infrastructure was created in the first ten years.

With the launch of a direct attack on poverty in the seventies, the focus shifted to large Centrally Sponsored Schemes implemented by the Ministry of Rural Development (MoRD) to provide for infrastructure, basic services, wage employment, housing, self-employment, pensions for the destitute and placement linked skills

* Based on a report by a Committee headed by Sumit Bose comprising of Jugal Kishore Mohapatra, Dr Jeemol Unni, Dr. Mrs. Asha Mehta Kapoor, Dr Janat Shah, SM Vijayanand, MN Roy, Deoranjan Singh, Radheyshyam Julania, NN Sinha, Sudarshan Sethi, Dr Nagesh Singh

training programmes in rural areas. From the Human Resources (HR) point of view, whatever survived of the greatly watered down old Block system was retained. Over that, at the district level, an autonomous professional organization called District Rural Development Agency (DRDA) was super imposed, with a multi-disciplinary administrative structure. This continued for more than two and a half decades.

The new generation Rural Development (RD) programmes launched in the 21st century started providing for scheme specific staff to deliver these programmes. Management expenditure is provided under each programme for the engagement of functionaries at the State, District, Block and Gram Panchayat levels[1]. The management structures under each programme have evolved over time. The Gram Rozgar Sevak (GRS) is present in almost all the GPs, though the level of supervision and control by GPs is uneven across the States. Technical and IT staff were recruited for MGNREGS mostly on contract, without any clear HR policy or norms. With the launch of National Rural Livelihoods Mission (NRLM) the emphasis shifted to quality HR, based on clear policy. However the administrative structure went down only to the Block level, below which the VOs of the poor and the Community Resource Persons (CRPs) carried out many of the development and administrative functions. The CRPs as frontline workers have managed to promote SHGs in villages in 3500 IPs of the country. Now the restructured housing programme, Pradhan Mantri Aawas Yojana-Gramin (PMAY-G) and the new area development programme called RURBAN, envisage PMU systems. For PMAY-G no earmarked functionary exists at the GP level to continuously engage with PMAY-G beneficiaries. So is the case with National Social Assistance Programme (NSAP), the benefits of which are delivered at the Panchayat level. The number of persons engaged at different levels, their job profile, qualifications, etc., vary across programmes.

The MoRD rolled out major interventions to address rural poverty and deprivation. It may be noted that the PR system which was initially

1 Henceforth, this Report refers to the three tier structure of the panchayat system as DP, IP and the GP.

ushered in on the basis of recommendations of the Balwant Rai Mehta Committee in the late fifties was largely ignored in the planning and implementation of most of the RD programmes mainly because Panchayats lacked capacity. This did not change significantly even after the 73rd Constitutional Amendment. However, the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) 2005 provides a Central role to Panchayati Raj Institutions, especially the GP, in the planning and execution of works under the Act.

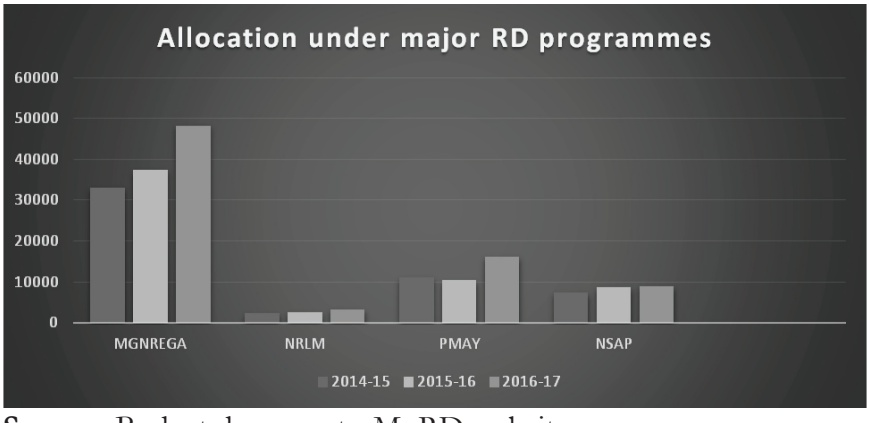
Over time, the role of Panchayats in different Centrally Sponsored Schemes relating to RD like Pradhan Mantri Aawas Yojana-Gramin (PMAY-G), Pradhan Mantri Gram Sadak Yojana (PMGSY), National Social Assistance Programme (NSAP), National Rural Livelihood Mission (NRLM), National Rural Drinking Water Programme (NRDWP), Swachh Bharat Mission-Gramin (SBM-G), Integrated Child Development Scheme (ICDS), etc., is getting increasingly recognized, especially in planning, identification of beneficiaries and monitoring.

The allocations under different programmes of the MoRD have increased significantly in the recent years. The Ministry has a budget allocation of Rs. 1,05,447.88 crore[2] for the year 2017-18. MGNREGA, PMAY-G and PMGSY are amongst the top five Centrally Sponsored Schemes in terms of budget allocation, the other two being Sarva Shiksha Abhiyan (SSA) and National Health Mission (NHM). Even with this increasing budget allocation for RD programmes, except for MGNREGA, field functionaries do not exist at the GP level in any of the other programmes. Other departments / ministries like the Department of Agriculture and Farmer's Welfare; Department of Animal Husbandry; Fisheries and Dairying; Ministry of Social Justice and Empowerment; Ministry of Tribal Affairs; Ministry of Women and Child Development; Ministry of Drinking Water Supply and Sanitation; Ministry of Health and Family Welfare and other Social Sector Ministries also implement programmes at Panchayat level. Figures 1 and 2 below depict the allocations under major RD programmes and key programmes under the Ministry of

2 http://rural.nic.in/sites/default/files/Budget_2017_2018.pdf

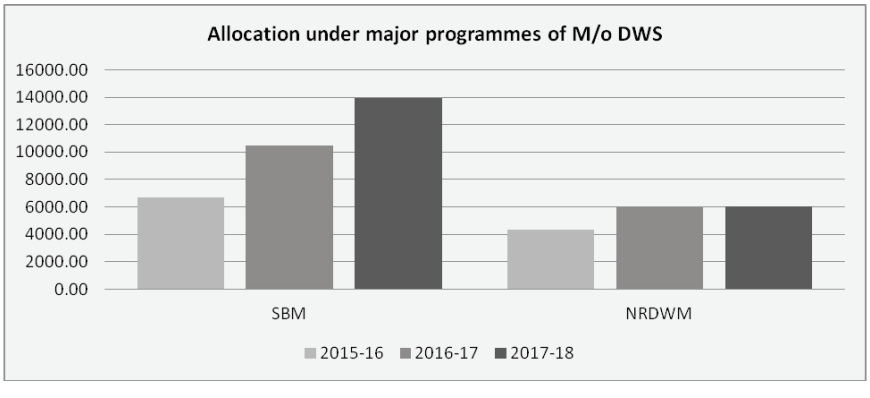
Drinking Water and Sanitation respectively.

Though not a programme, the latest addition is the massive infusion of untied grants to GPs provisioned by the FFC, with over Rs. 2 lakh crore committed for the period 2015-2020, to be spent on basic civic functions of sanitation, water supply, street lighting, connectivity, play grounds, parks and crematorium in rural areas. This has substantially increased the role and responsibility of GP during the current financial year (2017-18) an allocation of Rs. 34596.26 crores[3] has been made for GPs across the 26 States.



Source: Budget documents, MoRD website.

Figure 2: Allocations under MDWS Programmes



Source: Budget document, M/o DWS.

3 Source – MoPR data.

Figure 1: Allocations under Rural Development Programmes

Interestingly, most of the programmes have earmarked a portion of the funds for administrative expenditure. This is 10 percent in the case of FFC grants and 6 percent for MGNREGS. It ranges from 3 to 5 percent for other schemes. However, the management expenses under the programmes are not adequate to support engagement of programme functionaries for every GP. Most programmes that are implemented vertically, have only created positions at Intermediate and District levels for programme delivery, accounting, data entry and other MIS requirements. In the absence of an earmarked functionary for a particular function at the GP level, the activity often gets delayed, while at the Intermediate level, it is quite possible for a functionary handling a similar function in another programme to do that job also. For example, a data entry operator for MGNREGS could also handle data entry requirements of PMAY-G and vice-versa. In the last few years a significant infusion of Information Technology and Space Technology in programme implementation and programme monitoring has taken place with MGNREGS being the leader.

Though staff have been placed for implementation of different schemes, they are scheme-specific. If the functionaries engaged under different programmes have to deliver programme objectives in a coordinated manner, the role of the GP as a coordinating and supervisory agency becomes critical. The GPs, which have emerged as a third tier of government, also lack adequate staff. The Government of India (GoI) has been working with States over the years to transfer functions, functionaries and finances to the GPs. The progress on this account presents a mixed picture. In most States, with few exceptions, even though functions have been transferred to the Panchayats, functionaries and funds to deliver those activities remain under the control of vertical programmes. The Panchayats, which perform both core functions and agency functions under different programmes, also need to be strengthened with adequate human resources. In view of the resource constraints, it is unlikely that States would be able to support an adequate complement of human resources borne outside schematic structures.

The issues related to the existing programme staff include:

i. Multiplicity of cadres that is not warranted by nature of work

and skill sets; no standardized job profiles.

ii. Variance observed between desired and suggested skill sets and actual skill sets.

iii. Wide variation across States in terms of engagement - qualification and mode of recruitment, duration, remuneration, travel allowances and other conditions for similar cadres.

iv. *Ad hoc* engagement, often for discontinuous periods, leading to attrition.

v. Performance outputs are not clearly defined for all and there is no systematic monitoring.

vi. Non-accountability of State cadre and scheme functionaries to Panchayats.

vii. Remuneration not being linked to performance outcomes.

viii. Delayed payment of remuneration and reimbursement of travel cost.

ix. No additional remuneration paid by other departments for additional work.

x. Variation in remuneration leading to migration of employees from one State to another; sometimes between one scheme to another.

xi. Potential risk of demand for regularization.

With the FFC award, the concept of Gram Panchayat Development Plan (GPDP) has been operationalized by all the States having PR. GPDP aims at preparation of participatory development plans, covering all the resources over which GPs have command. Now the MoRDhas introduced the idea of Poverty Free Gram Panchayats covering about 20 percent of GPs as part of Mission Antyodaya in the first stage. Thus, there is a significant shift from scheme based planning and implementation to convergent, outcome based, area focused planning and implementation. The role of Panchayats, especially the GPs, will be critical for convergent planning, participatory implementation and social accountability.

Concerns Related to Human Resources at the GP Level

All programmes implemented by the MoRD and by other ministries need to be planned, managed and monitored for effective outcomes. This can only be possible with the help of adequate number and quality of manpower at the field level. Even where there are human resources /personnel at the GP level for different programmes:

i. They are in most cases not accountable to the GP and the Gram Sabha (GS), although they deliver crucial services like education, health and livelihood generation at that level.

ii. Their capabilities are not built over a period of time to enable them to assume other responsibilities or multi-task.

iii. Their horizontal integration/convergence of action at the GP level and vertical integration is not ensured because of different departments and schemes under which they are appointed with specific mandates.

iv. There is poor oversight to check if the existing rules are being violated. Dependence on employees is high if elected functionaries in Panchayats, especially GPs, lack administrative experience. In the absence of strong oversight by the State, it is left to the staff to guide the elected functionaries about their mandated duties. This can lead to exploitation of the situation by the staff or collusion between elected functionaries and employees/officials (Sarpanch – Secretary nexus). The collegiate functioning of the GP as a team suffers with resultant concentration of power, lack of transparency, accountability and participation.

The implementation of programmes can be significantly improved if human resources available at the GP, IP and DP level can be organized into horizontal teams that are accountable to Panchayats and systems for their accountability and transparency are established. Capacity building of human resources will be needed at regular intervals, especially on aspects like participatory planning and budgeting with the GS and GP, implementation and monitoring of programmes, behavioral change, gender balance, environmental protection, conflict resolution, protection of child rights, community mobilization for

collective action etc. This will go a long way in achieving the intended outcomes of development programmes.

The Committee

It has often been noted by the NITI Aayog and other agencies that the field-level outputs and outcomes are often not commensurate with the massive investment of resources. This once again highlights the importance of programme delivery. A critical appraisal of the human resource requirement at the cutting edge level is needed. In view of its lead position as an implementer of the key programmes and the substantial fund provider, the MoRD set up a ***Committee on Performance Based Payments for better outcomes in Rural Development programmes*** to look into the issues holistically.

The key rationale behind setting up of the committee was that implementation of RD programmes can be significantly improved if human resources at the GP, IP and DP level are organized in such a way as to become accountable to Panchayats and available to support individual beneficiaries, Self Help Groups (SHGs) and VOs.

Approach

The Committee's observed that

- GPs are very critical in the planning and implementation of programmes related to RD because of their proximity to the people. This calls for greater accountability.
- Almost all RD programmes implemented by MoRD and programmes of other ministries implemented in the rural areas correspond to the subjects listed in the 11th Schedule of the Constitution based on which State PR Acts have been revised to transfer those subjects to the PRIs. Hence, it is imperative to build the capacity of the Panchayat in terms of human and financial resources so that they are able to plan, implement and monitor development programmes themselves.
- The Committee was strongly of the view that apart from RD interventions carried out by MoRD, drinking water supply and sanitation also constitute the core functions of the GP. The health and environmental impact of these sectors is

high. In view of their importance for achieving the SDGs, the Committee considered it important to review the HR and Management related aspects of these sectors.

- Due to their local Government status, GPs have been performing some traditional and core functions related to governance, that are not linked to specific schemes. These include civic services delivery, welfare and local development. These could be called the "core functions" and are often mandated by law or sanctified by historical practice. Over the years, State and Central governments have been entrusting schemes to GPs as agencies performing one or more roles like planning, selection of beneficiaries, execution of works, broad oversight and so on. In such roles, the autonomy of the GP as a local government is restricted by the scheme guidelines. But the focus of support to GPs, is on performance of the entrusted roles and not on the core functions and responsibilities. Unless the GP as an organization is strengthened and made efficient in carrying out its core functions, it will not be able to perform the so-called "agency" functions (Box 1).
- If programme efficiency is expected, there has to be organizational efficiency. This would shift the attention to strengthening the availability of human resources at the level of the GPs.
- The area and population of GPs vary substantially across the country. This has implications for assignment of functions and provision of human resources. A viable size is required from several points of view – performance of service delivery functions, mobilization of own revenue, co-terminus jurisdiction of service delivery institutions, preparation of meaningful development plans and effective oversight and monitoring of the performance of GPs.
- In view of the special social, geographical and environmental features of Tribal areas, a special dispensation with appropriate relaxations will be required in areas under PESA. A similar approach is advocated for local governance structures in the

Sixth Schedule and other non-Panchayati Raj areas.

- Convergence of resources and services, both horizontal and vertical, across Panchayats and Departments is very important in achieving efficiency and impact.
- The Committee believes that the use of technology, especially Information and Communication Technology (ICT), can to a great extent augment the capacities of the Panchayats and empower them and make programme delivery more efficient and transparent.
- There has to be a more systematic policy based approach to human resources with clear norms for staffing, recruitment, remuneration, career advancement and so on. Obviously this cannot be achieved overnight but a time bound plan of action is needed.
- Strengthening of HR should be seen holistically and not merely in terms of recruitment of additional staff which should be taken up only as a last resort. Sufficient attention has to be paid for competency based capacity building for existing staff, simplification of processes, procedures and systems, widespread introduction of e-governance, adoption of norms-based outsourcing, etc. Also, in the new context, the old Gandhian concept of multipurpose village worker assumes relevance.
- Autonomy to take decisions within the overall framework of implementation but keeping in mind local priorities, bottom up flow of feedback and suggestions, room for innovation, incentivizing/rewarding good performers and hand holding and encouraging the not so good performers – all contributes towards improved performance by the grass root level staff.
- Human resources are of paramount importance in achieving the desired impact of various development projects on a sustainable basis. However, there is very little data/information available at the State level related to human resources. Hence, it becomes difficult to arrive at a comprehensive policy.

Box 1: Core Functions and Agency Functions of the Gram Panchayat

The GP is a local government as per the Constitution of India. The State governments are to devolve specific functions on the GP, preferably through legislation. The Panchayat Acts of the States assign certain functions to the GPs, though the nature and extent of the same varies widely across States. The core of such assigned functions is carrying out basic civic services, which no other tiers of government generally provide. Core functions of the GP include, inter alia, functions related to basic public sanitation, drinking water, internal connectivity, street lighting, maintenance of playgrounds, parks and aother commons, local taxation and generating own sources of revenue. The accountability of the GP towards the citizen is very clear in such cases. The responsibility for staffing the GP for carrying out these core functions lies with the respective State government.

The other broad category of activities of the GPs emanate from policies and programmes of the Union and the State governments, which ultimately remain responsible although the GPs remain engaged in implementation of the programmes at the local level. In such cases, the GPs are asked to carry out certain functions with little autonomy and ownership, as an agent of the higher tier of government. The accountability towards the people or the higher tier of government in most such cases is quite diffused.

No regular staff is provided to the GP for carrying out various activities related to the agency functions. The underlined presumption seems to be that just providing extra funds in the form of administrative expenses will take care of the human resources needed at the GP level. Also Panchayat being a State subject, creation of regular positions in the GP is thought to be the responsibility of the State government. The State governments have also not come forward to make adequate provision of human resources since the programmes are controlled by the Union government with no assurance of fund support in the long run. However, the fact is that over time the GPs are spending substantially larger amounts as an agent of the higher government with meagre or no staff support in most cases. In practice, the GPs pay more attention to the agency functions, which are large programmes and well funded, than in carrying out their own functions. This leads to neglect of the GP as an institution of local governance.

Given that the GP will continue to perform many agency functions in future, the GP has to be strengthened as an institution. Without strengthening the core capacity of the GP, its performance in carrying out agency function will not improve. Therefore, the solution lies in providing essential manpower on a regular basis, so that they continue to work and are incentivised to acquire additional skills, to carry out both core and agency functions efficiently.

Therefore, the State Governments and the concerned Central Ministries could collect and analyse as much as data possible and place this issue before the Fifteenth Finance Commission.

- This approach calls for core, general and technical staff, for all GPs with supplementary staff and higher order support at the cluster, intermediate and district levels.
- Since implementation of PR is uneven across the States, there is a need for State specific plans of action.
- Though human resources of Panchayats are the State's responsibility, in the larger interest of equitable development, GoI may have to take a proactive role in motivating States to have a suitable HR Policy. This could be incentivized by pooling of funds available under existing schemes.

The overall assessment of the Committee is that unless the core functions of the GP as an Institution of Local Self Government are strengthened there is a strong possibility that agency functions of the GPs will not be adequately implemented and hence delivery of both services and programmes will not be effective at that level.

Sustainable Development Goals and Panchayat Raj System

The 17 Sustainable Development Goals (SDGs) and their 169 targets were adopted by member States of the United Nations in September 2015. Local governments have a crucial role to play in achieving the SDGs. While the goals are universal, the implications and intervention possibilities are local.

The twin objectives of the PR system as envisaged by the Indian

Constitution are to ensure local economic development and social justice. India with about 2,50,000 Rural Local Bodies (Panchayats) holds enormous opportunities in localizing the SDGs and meeting the goals. Panchayats are expected to play an effective role in the planning and implementation of functions related to 29 subjects enlisted in the Eleventh Schedule of the Constitution. Many SDG targets are within the purview of these subjects.

The Ministry of Panchayat Raj along with the Kerala Institute of Local Administration (KILA) and the United Nations Development Programme (UNDP) has identified 10 out of the 17 SDGs[4] which are of direct relevance to the GP and where the GPs need to play a pro-active role in meeting the goals. Since GPs across the country are preparing Gram Panchayat Development Plans (GPDP), this presents an opportunity for the GPs to synchronize their plans with SDGs. Hence, resources from various Central and State sponsored schemes need to be leveraged and converged at the GP level. It is important to set GP-level targets with measurable indicators that will have vertical and horizontal linkages, convergence possibilities, resource mobilization potential and feasible action by the GPs. However, for the plan to get implemented and monitored, GPs need to be well resourced with appropriate human resources possessing the right skills, competence and sensitivities which would enable the GPs to implement the GPDP and contribute towards meeting the SDGs.

The Human Resource required to support the GPs in achieving the various SDGs are indicated in a handbook - 'Sustainable Development Goals and Gram Panchayats – The Future We Want'[5] published by UNDP. The handbook lists the various programmes from which human resources can be drawn and made available to the GPs in order to move towards achieving the goals.

Situation Analysis

Powers and functions of Panchayats, particularly GPs, vary vastly across the country. Since the Constitution has left it to the State

4 Sustainable Development Goals and Gram Panchayats – Handbook for Trainers and Gram Panchayats.

5 file:///C:/Users/Dell/Downloads/Gram%20Panchayat%20Brochure.pdf

Governments to decide the extent of devolution to Panchayats, such differences are only natural. In the macro situation, it is seen that the variation is the maximum at the level of the GPs. The issue is further complicated by the huge differences in population size of the GPs across states (Table 1). The functions to be entrusted to the GPs and the staff to perform them would naturally be influenced by the population size of the GP.

Table 1: Number of Gram Panchayats Corresponding to Population Size in a Few States

	Size of Population			
States	**< 2000**	**2001 - 5000**	**5001 - 10000**	**> 10001**
Andhra Pradesh	4309	5558	2197	679
Kerala	03	06	29	683
Goa	29	93	27	1
Chhattisgarh	7601	2903	108	03
Bihar	76	160	2141	5912
Tripura	41	196	195	79
Arunachal Pradesh	1042	11	01	00
UP	26177	27853	3810	569
J & K	1156	1635	449	89
Haryana	2788	2279	636	161

Source: Ministry of Panchayat Raj, March 2017.

Core Staffing

GPs have traditional core functions which are historic as well as those added on after the 73rd Amendment. Typically, a GP performs functions related to basic public sanitation, drinking water, internal connectivity, street lighting, and maintenance of play grounds, parks and other commons. Certain monitoring and supervisory functions in relation to education, health and nutrition are also entrusted to them, even though there isn't sufficient clarity in the assignment or discharge of such functions. To enable them to perform the core functions, GPs are provided resources based on the recommendations of the State Finance Commissions. They also raise resources locally such as through taxes, especially on property. Here again there are significant differences among the States. The 14th

Finance Commission has supplemented the resources for provision of basic services significantly.

GPs in Kerala have reasonably good human resources as the Gram Panchayat Secretary and Assistant Engineer are Gazetted Officers. Karnataka and West Bengal have also provided adequate staff to the GPs. Rajasthan has recently created position of two Lower Division Clerks at each GP. Maharashtra has linked the staff to the population of the GP. However, staff support is sub-optimal in most States, with GPs not even having a full time Secretary in many States.

The mode of recruitment also varies across States. Whereas recruitment is through the State Public Service Commissions in some states, appointments are made by the GPs themselves in several other states. In most States the career path of the staff does not seem to be well-defined and there is an increasing tendency to appoint contractual staff particularly in relation to functions like accounts and data entry.

Analysis of the data shows that, there is no clear human resource policy for Panchayats in most of the States, barring a few notable exceptions. The staff strength was fixed long ago and ad-hoc accretions have happened over the years. A thorough work study has not been done in the recent past. Of late, the work load in respect of engineering, accounting and data entry has increased, but no commensurate strengthening of the human resources has taken place.

Scheme Based Staffing

Centrally Sponsored Schemes have delineated clear roles for GPs. This is both comprehensive and statutory in the case of MGNREGS. In the case of PMAY-G also the role of GPs is quite significant and includes selection of beneficiaries and supervision of construction of houses. The existing staff at the GP are utilized under PMAY-G in most States. Under NSAP the focus is on identification of beneficiaries. Under NRLM, the role of Panchayats is to build a partnership with the Self Help Groups, particularly with the VOs.

The HR needs of NRLM are met by professionals at the District and Intermediate levels and by Community Resource Persons (CRPs)

from amongst the poor at the level of the village. Under MGNREGS almost all the States have staff at the GP level mostly as GRS and computer operators. Almost all of them are on contract.

In order to provide technical support to a cluster of GPs under MGNREGS, the MoRD has initiated the system of Cluster Facilitation Team (CFT) in selected Intermediates consisting of professionals provided by a reputed non-governmental organization. This experiment, which started in 18 IPs was scaled up to 250 IPs across the country. This, is an interesting initiative that provides the much needed professional HR support to GPs to help them fully

Box. 2: Barefoot Technician

BFT is a Standard 10 qualified adult person identified from among the local MGNREGS workers or from the households that depend on manual labour for their livelihood. Once a person is identified, she/he will be trained in basic civil engineering subjects especially in taking measurements of works, construction technology, estimation of works, watershed concepts, permissible works and on key features of the programme, using a customized training module. This helps the BFT to acquire the required skills for identification and estimation of simple works, giving lay out for works in the field and to record measurements of the work done in the measurement book. Initially all 2,500 IPs which are selected for IPPE would be eligible for positioning BFTs in addition to the technical assistant, if the State Government, after due assessment, feels the need for an additional person for improving technical support in backward areas.

Role of BFT – On successful completion of training and certification, the candidate shall be designated as BFT in the GPs from where they are drafted by the Programme Officer. MoRD has issued guidelines to book expenditure on salaries / honoraria of BFTs from the additional 1 percent provided for this purpose under MGNREGS.

He / She shall carry out tasks like identification of proposed works, assist the JE/TA in conducting technical surveys, in preparation of estimates and assist in the planning process. BFTs shall be authorized to give lay out for works as per requirements, supervise execution of works and also record measurement in the M-Books under MGNREGS. These measurements shall, however be checked-measured by a TA/JE. BFTs will perform

these functions under the supervision and guidance of qualified TA/JE/AE. BFT will also guide the mate / masons in executing the works under MGNREGS.

Source: Barefoot Technicians in Mahatma Gandhi National Rural Employment Guarantee Scheme, MoRD – ILO publication.

utilize the potential of MGNREGS. Another recent innovation is to develop barefoot technicians (Box 2.) This can address the shortage of technical staff in a cost-effective manner even while providing employment to the local youths, from poor families.

District Rural Development Agencies (DRDAs)

DRDAs were created to provide high quality professional support at the District level to coordinate the implementation of different RD programmes. This was universalized in the 1980s and funded from the administrative costs of different schemes. It was converted into a programme in 1998. It was stipulated that DRDA should have the following wings:

a. Self-employment Wing
b. Women's Wing
c. Wage Employment Wing
d. Engineering Wing
e. Accounts Wing
f. Monitoring and Evaluation Wing
g. General Administration Wing

The administrative cost of the DRDAs was fixed as follows:

- Category A district (<6 Intermediates) – Rs.46 lakhs
- Category B districts (6-10 Intermediates) – Rs.57 lakhs
- Category C districts (11-15 Intermediates) – Rs.65 lakhs
- Category D districts (>15 Intermediates) – Rs.67 lakhs

With the rationalization of several Centrally Sponsored Schemes,

this scheme has been subsumed under NRLM and funded on 60:40 basis. Though meant to be a professional unit for all RD schemes, over the years, the key RD programmes have moved out of the ambit of DRDA, with separate professional staff being provided scheme-wise. This is particularly true of MGNREGS, NRLM and PMGSY. It may also be noted that in a large number of States it is no longer a multi-disciplinary professional team of experts and most of the positions are held by officers from the Rural Development Department on deputation basis.

The States which have merged DRDA with the DPs (Zila Parishads) are – Karnataka, Madhya Pradesh, Chhattisgarh, West Bengal, Rajasthan and Kerala.

In 2010, the MoRD set up a high level committee headed by Shri V. Ramachandran, for submitting recommendations on restructuring of DRDA. It is clear that the relevance and existence of DRDA needs to be looked into afresh in the context of the new generation programmes of RD and the strengthening of PR. The FFC has provided a huge sum of Rs.2,00,292.20 crore over a period of five years from 2015-16 to 2019-20 to the 2.48 lakh GPs in the country for discharging their traditional core functions. This supplements the own resources of the GPs. This single act has increased the work load of the GPs manifold in most of the States. This infusion of additional resources is likely to be sustained by the future Finance Commissions as well.

The GoI has issued guidelines which provide for using up to 10 percent of the FFC funds available in each GP for administrative purposes. This includes staffing support including the hiring of services of professionals like Accountants, Data Entry Operators, Engineers, etc., on contract or piece rate basis at the level of the GPs or a cluster of GPs. In the case of a cluster, the expenditure has to be shared by the GPs as per the norms to be fixed by the State Government. The funds could also be used for meeting the cost of professionals who are engaged for quality check of civil works and for conduct of social audit. Most States are in the early stages of using this facility, which provides an amount of more than Rs. 20,000 crore over five years.

Staffing for Core functions of Water and Sanitation

GPs have a historic role in sanitation and water supply. The importance of these traditional functions has been reiterated by the FFC while deciding the devolution to the GPs. It is also worth mentioning that access to water and sanitation are important SDG goals. The National Rural Drinking Water Supply (NRDWS) programme has assigned a special role to the Panchayats in ensuring drinking water security at the village level. It is clearly envisaged that at least the operation and maintenance should be fully entrusted to the Panchayats. As a support mechanism, the scheme envisages District Water Supply Missions, Intermediate Resource Centres and Village Water and Sanitation Committees at the level of the GP. While the District and Intermediate level set ups are outside the PR system in almost all the States, the reverse is true in the case of Village Water and Sanitation Committees which either act as Functional committees of GPs or institutions in which the GPs have a clear role.

Operation and maintenance (O&M) functions are carried out by grass-root level functionaries who perform multiple functions – they are pump operators or mechanics. There are nearly two lakh such functionaries in the country with different nomenclatures. In most States these personnel are engaged by the GPs and paid directly. In some States the work is outsourced to individuals as a means of self-employment. Some other States like Gujarat have successfully experimented with the model of O & M being carried out by community cadres.

It has been estimated that there are around fifty lakh hand pumps and 4.7 lakh single village piped water supply projects. The hand pumps are invariably operated by local persons while in the case of single and multi-village piped water supply schemes, the employees are largely from the Public Health Engineering Department.

In most States, where the O & M of the water supply has been formally entrusted to the GPs, the field situation is far from satisfactory. The responsibility has been transferred without matching resources, either human or financial. Water supply schemes require different types of professionals for their maintenance. Hydrologists are needed for source sustainability, mechanics for operation of

pumps, plumbers for maintenance of the distribution system and personnel for water quality monitoring. Since running of water supply schemes invites continuous public scrutiny, especially during summer, GPs are forced to take bulk of the blame for problems with water supply. Even the substantial funds provided by the FFC may not improve the situation unless there is clarity regarding the human resources which the Panchayat can rely on for O & M. The recent decision of GoI to take away the weightage given in the devolution index for allotment of funds under NRDWP and to remove the earmarking of 15 percent for O & M may complicate the matter further, putting the GPs to greater difficulty.

The country has embarked on a massive and time-bound mission to eliminate open defecation. To achieve this within the targeted date and, more so, to ensure sustainability, GPs have a critical role to play - in extension, supervision of work, prevention of slipping back to the old ways in areas declared Open Defecation Free, maintenance of public facilities etc. The administrative funds under Swachh Bharat Mission can be used for meeting the costs of additional human resources to ensure sustainability of the programme.

In the case of solid and liquid waste management, particularly in cleaning of streets, the function is performed by the GPs, using mostly contract staff. Outsourcing to self-help groups is a new development and is being done in a big way in Tamil Nadu and Andhra Pradesh. Tamil Nadu and Meghalaya have some interesting models in which there is integration with MGNREGS in implementation of SWM (Boxes 3 and 4).

Issues

Despite lack of State-wise data pertaining to categories of staff, their qualifications, mode of recruitment, terms and conditions and career path, the issues affecting HR in Panchayats are quite clear. These are:

i. There is no HR policy in majority of the States. This is particularly true of GPs. For historical reasons, the IP and DPs seem to be better staffed.

ii. The Centrally Sponsored Schemes have assigned specific

responsibilities to the Panchayats especially at the Village level. This is particularly true for MGNREGS, PMAY-G, NSAP, SBM-Gand NRDWP. The schemes provide generously for administrative costs. But here again there is no standard staffing support to GPs.

iii. The scheme-related staff are mostly on contract. Though they have the advantage of being local people, the qualifications are minimal, the remuneration is not standardised and their capacity is inadequate. Interestingly, the vacancy position in contractual staff is relatively low compared to regular staff because such positions are usually easier to fill.

iv. Since the services of such contractual staff have been used for several years in some of the programmes, and more than a decade in the case of MGNREGS, there are reports of demands for permanence and the threat of their approaching

Box 3: The Tamil Nadu State Model of Solid Waste Management

The State Government took a lead in 2013 to evolve community based mechanisms for solid waste management in its efforts to create clear and environmentally sound villages. The success has spurred the State to expend the project to 9000 villages from 2016. The project involves the following steps –

1. Waste stored by households in separate containers are collected by workers appointed by SHGs and transported to a site identified by the GP.
2. Waste is segregated into biodegradable, inert, recyclable and is weighed before being disposed in pits / sheds. All this is supervised by women's federations.
3. The GP sells the recyclables and hazardous waste to buyers and the compost is either sold to villagers or used in agro forestry programmes. Funds thus collected become an own source of revenue for the GP.

The Model is a unique example of a partnership between the Government and the People. Under MGNREGS, the Government constructs sheds for storing waste and pays wages of workers and supervisors. Under SBM, it purchases equipment for waste collection and transport and equipment for protection of workers. The Panchayat provides land for shed, compost pits and landfills. It also handles sale of compost and recyclables. The Women SHGs and Federation identify workers and supervisors, handle their payments and monitor the quality of work, processing of waste collected and sale of produce.

Learning from the Tamil Nadu experience –

According to a study conducted by DAY-NRLM the project is given considerable importance and District Collectors are monitoring the work on a frequent basis. Data from Tiruvannamalai district during the period August 2015 to March 2016 shows that in the 86 villages where the project was implemented, 1.2 tonnes of compost was sold and 1.8 tonnes of plastic and metal was collected. The shredding machine sold around 1 tonne of plastic for road construction. The Panchayats earned around 60 lakh from compost (@ Rs. 5 per kg) and 36 lakh from recyclables (@ Rs. 2 per kg) in a year. Each village earned around 1.11 lakh.

he primary aim of the project is clean and healthy villages and efficient recycling of waste. Introduction of user charges can make it an economically viable activity. Panchayats can earn more through vermicomposting, charging for littering and by selling plastic to the higher bidder.

The State Government also admits that around 10 percent of the villages have not succeeded in managing their waste for reasons ranging from ineffective Panchayats to villages being very close to urban areas.

Source: *Promoting Solid and Waste Management in Rural India, MoRD, Oct. 2016.*

the courts.

v. Since the staff are scheme related, they are controlled by the officials at the Intermediate and District levels. The role of the GPs in their supervision is quite vague.

vi. The scheme level staff normally perform only functions related to the scheme for which they have been appointed.

Multi-tasking is generally not encouraged.

vii. Though the work turnout appears to be satisfactory, the motivational levels are rather low mainly due to relatively low wages and uncertainty of career.

viii. A common feature seen in contract staff is that those who are more proficient among them get selected for better jobs, leaving the less talented in the existing positions.

ix. The contractual nature of the jobs and fixed remuneration (in most States) seem to have reduced the incentive to improve performance.

x. Even with the meagre staff strength there are a large number of vacancies and the situation is disconcerting .

xi. It is interesting to note that GoI, even while providing substantial funds for administrative expenses, has a narrow scheme focus. Since the funds are scheme-linked there is an implicit assumption by States that funds may not be available over the longer term. This has prevented a rational approach to staffing Panchayats.

HR Related Issues at the Implementation Level

The findings of a study by UNICEF in 35 districts in the States of Uttar Pradesh, Bihar, Jharkhand, Odisha, Madhya Pradesh, Chhattisgarh and Rajasthan during the period 2008 to 2012 as part of GoI-UN Joint Program on Convergence are extracted below:

Vacancy

Among the 7 States, the overall highest vacancy was reported in the States of Jharkhand (25%) and Rajasthan (21%). At the District level UP recorded the highest vacancy percentage at 24%. Jharkhand had the highest percentage of vacancies at the Intermediate Level (34%) and also at the GP level (22%). Rajasthan has the highest vacancy at the Cluster Level (22%) amongst all the 7 States. In a comparison between vacancies in Regular position and Contractual positions, there were more vacancies in the Regular positions (22%), with Jharkhand (30%) and Rajasthan (29%) having the highest percentage

of vacancies in the Regular positions amongst the 7 States. Vacancy in the Contractual positions (13%) was considerably lower than the Regular position, with the highest percentage of vacancies in the contractual positions being reported from Jharkhand (20%).

Tenure

2.25 *44* percent *of the district level officers had less than 1 year of service tenure. Only 13* percent *had more than 3 years' tenure.*

Training and Development

2.26 *Training and capacity building processes have not been institutionalized across the departments in all States. Training Need Assessment is carried out only in 5 States, with no TNA done in Jharkhand and UP. The average TNA conducted in all the 7 States is a mere 26* percent. *Less than 50* percent *of the departments are preparing the Annual Training Plan (48%) across the 7 States. Training inventory and feedback is not managed properly for all the training programmes. The status of conducting Training Impact Assessment is abysmally low at 13* percent. *No impact assessment is being carried out in the States of UP & Jharkhand, only 8* percent *of the departments are conducting the same in Rajasthan. There is more emphasis on programmatic technical training. Motivational, leadership and management training is less and mostly conventional mode of training is used like class room lectures and discussions.*

Employee Awareness of Roles and Responsibilities

2.27 *Very low level of employee awareness about roles and responsibilities is found across all departments in all the States. Awareness about roles & responsibilities is very low, below 50* percent *across all States. The awareness shows a declining as we move from the District level downwards to the Intermediate and GP level. The reason for the same can be attributed to the fact that only 46* percent *of the District level functionaries have received a written job description across all the States and only 34* percent *district level functionaries have received any formal induction. Receiving a written job description is even lower at the Intermediate Level (29%) and the GP level (22%). Less than 50* percent *of the GP level functionaries (47%) have received any formal induction at the time of joining.*

Employee Satisfaction

Overall employee satisfaction levels are the lowest at the GP level owing mainly to the lack of access to general HR development benefits and delay in the receipt of salaries and reimbursements, with only 41 percent *of the GP level functionaries claiming to have received salaries on time. Only 29* percent *of all level functionaries receive their reimbursements on time. On an average across all districts the GP level functionaries like Anganwadi Workers, ASHA's were receiving their salaries after a delay of 30-45 days; the GP level functionaries are also highly dissatisfied with the work environment (infrastructure, team work, feedback from senior). The GP level functionaries are also dissatisfied with the salaries being received vis-à-vis their workload. The level of satisfaction with HR policies & processes is also low across all levels. The main fact being noted is that the levels of employee satisfaction generally show a declining trend from the district to the Intermediate and GP level across all States.*

These findings empirically validate the issues regarding HR management at the GP level that have been highlighted by the Committee.

***

Mahila Kisan Sashaktikarn Pariyojana (MKSP)

*An Assessment**

Acknowledgement

The assessment process has been an enriching journey in capturing women's voices and their lived realities. Several people have been responsible for ensuring that we could meet almost all stakeholders at various levels and we would like to acknowledge their efforts.

The first meeting at Shroffs Foundation Trust block office with Maganbhai and his team helped us to understand the entire structure of the organization as well as the MKSP strategies. This helped us to transcend from understanding through secondary literature into the experiences of direct engagement of the staff of SFT. The commitment and dedication of the staff was very much apparent as much as the spirit of innovation and iteration. The enthusiastic sharing of all block level staff on the last day was such a revealing understanding of the socio cultural context of the lives of the tribal people and the shifts that are happening in the current realities.

We would like to make a special mention of Ms. Shruti Shroff, managing trustee, SFT who despite her ill health spent a considerable time with us to share her experiences. We would also like to thank Mr. Vikas Vaze Mr. M. A. Makwana, Mr. Shriprakashsingh Rajput, Ms.Prabha Palasgaonkar for their valuable insights.

Finally, we would like to convey our deepest appreciation to all women and CRPs in the program area who have showered their love and affection on us. Talking to them, eating with them, listening to their songs and their life experiences is something which we will take with us beyond this report.

---

* Based on a Report by Tata Institute of Social Sciences on Shrof Foundation Trust's engagement with MKSP. Dr. Swati Banerjee, Dr. Shewli Kumar and Mr. Shaikh Wase Khalid Md Shakil, Ms. Choden Dukpa, Ms. Nikita Rai and Mr. Hembrom Mrinal were associated.

Executive Summary

In rural India, a large number of women are engaged in the agricultural sector. However, there remains a wide gender gap in access to resources, participation in decision making and income and wages for agricultural labour work. Within this context, it is the tribal women who are particularly deprived and marginalized even though they play a critical role in agricultural and allied activities. This leaves tribal women and men with differential marginalities and vulnerabilities within the context of existing rural poverty and deprivation.

In an effort towards addressing such marginalities, Shroffs Foundation Trust (SFT) is working towards holistic and sustainable development of the poor and marginalized communities of Vadodara in Kutch and Chhotaudepur district of Gujarat.The present study is an assessment of the Mahila Kisan Sashaktikaran Pariyojana (MKSP) as implemented by Shroffs Foundation Trust (SFT) in Gujarat. MKSP, a sub component of the National Rural Livelihood Mission (NRLM), a Government of India initiative was initiated with a vision to improve the status and entrenched patriarchal gender roles of rural women, particularly women involved in various agricultural activities in the year 2010 - 11. MKSP thus aims for inclusion of these women by creating various opportunities for them including livelihoods promotion and empowerment. MKSP in Gujarat is being implemented through a public-private model and within this Shroffs Foundation Trust (SFT) is implementing the program in two tribal blocks in Gujarat. The program is located in 61villages in Chhotaudepur and 30 villages in Jetpur-Pavi. SFT works with a holistic and convergence approach towards this goal based on the MKSP guidelines and framework.

The villages in these two blocks are in very remote locations with scarce infrastructure and transportation facilities leading to both spatial and social marginalization. SFT began intervention in these areas almost two decades back with intensive interaction and mobilization of the people in these communities. Increased interaction with State functionaries and Institutions to remove discriminatory attitudes and behavior towards the tribal people in

this region led the foundation for developmental work in the area. Over the years, a holistic and sustainable development program was conceptualized and implemented. MKSP has been a building block on this foundational work done by SFT.

Social change and empowerment is a gradual process. However, the insights drawn from the field and the analysis show a process of transformation at various levels. With respect to the implementation of MKSP, a key outcome is a gradual acknowledgement of the women by other members of the community as productive individuals having their own agency. Capacity building and training forms an important component of the program, which helps in local leadership and entrepreneurship development, and also expansion of women's agency from coping and survival towards a pathway of free and creative agency.

While MKSP in this area has been able to achieve certain level of agricultural rejuvenation and sustainable practices, improvement of livelihoods and empowerment of women; SFT needs to continue and deepen its work with investment in gendering the strategies and additional innovations.

The assessment has revealed that the strategies of MKSP need to be continued as the grassroots cadres including the CRPs needs further support and nurturing. Empowerment is a process which requires sustained strategic intervention and involvement. Therefore withdrawal of MKSP at this stage will hinder the process and leave the women without any further solutions to their existing practical and strategic livelihood needs.

Overview and Methodology

Introduction

The present study is an assessment of the Mahila Kisan Sashaktikaran Pariyojana (MKSP) as implemented by Shroffs Foundation (SFT) in Gujarat. MKSP, a sub component of the National Rural Livelihood Mission (NRLM), a Government of India initiative was initiated with a vision to improve the status and entrenched patriarchal gender roles of rural women, particularly women involved in various

agricultural activities in the year 2010 - 11. More than 80 percent of rural women are engaged in agricultural activities ... agriculture support system in India strengthens the exclusion of women from their entitlements as agriculture workers and cultivators (http:// www.mksp.in) The program thus aims for inclusion of these women by creating various opportunities for them including livelihoods promotion and empowerment. MKSP has been initiated by Shroffs Foundation Trust (SFT) in two tribal blocks of Gujarat specifically in 61villages in Chhotaudepur and 30 villages in Jetpur-Pavi. SFT works with a holistic and convergence approach towards this goal based on the MKSP guidelines and framework. The key components of the program as implemented by SFT include the following (Fig. 1).

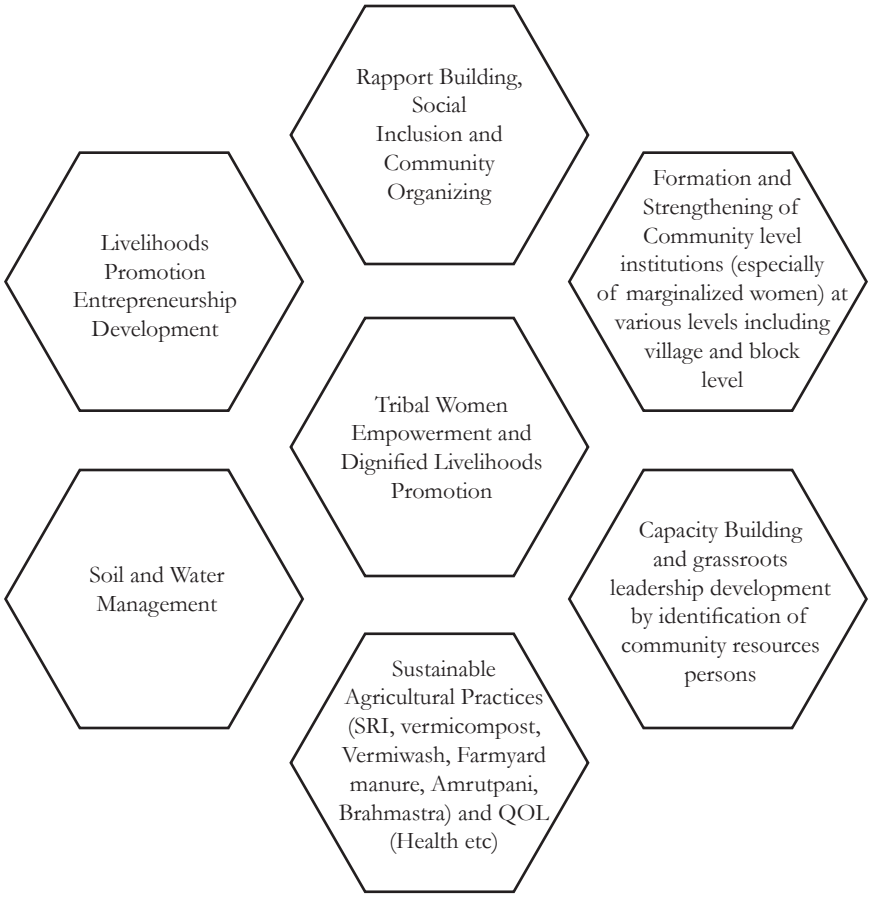


Fig: 1 Key components of MKSP as implemented by SFT

Genesis and History of Shroffs Foundation Trust (SFT)

Shroffs Foundation Trust believes in the power of the community and the belief within each individual of the community to change circumstances of poverty and difficulty. The vision and mission of the organisation is:

"*To assist the village population in improving their productivity, efficiency and creativity through services and goodwill, with support of industries, academic institutions, voluntary and government agencies and with the guidance of competent and committed experts by knowledge, inputs and effective management of available resources viz. land, water, energy, livestock and people. To upgrade the quality of lives of everyone in the villages: the children, the youth, women, men and the aged, mainly through their own involvement, interest and initiative.*"

Keeping the above mission in mind SFT has been led by visionary and charismatic leadership of Ms. Shruti Shroff, managing trustee and her team members to ensure a just society and sustainable livelihoods. The approach of the organisation in working in these remote areas of Chhotaudepur and Kutch in Gujarat has been to focus on the women of the community. The initial efforts were tough as the tribal people of these areas were suspicious and also branded as thieves and robbers by the State. Regular visits, meetings and discussions with women, men and other stakeholders in the community built trust and partnerships. The first few interventions were on improving the health and livelihood status of the communities. Collectivising the artisans to improve quality of products that they already were skilled in and also enabling entrepreneurial skills on the one hand and on the other mobilising women into Mahila Swasthya Sangathanas were some of the many strategies adopted to begin work in the area. All these required considerable innovation and interface with the State as well as corporate sector stakeholders, which SFT was able to do because of their own corporate linkages and entity. Shroffs Foundation Trust (SFT) now is a regional non-governmental organization primarily working in Vadodara district and a part of Kutch district in Gujarat, India. It was established in the year 1980 under the Bombay Public Trust act 1950 as a result of philanthropic endeavour of the Shroff family, leading industrialists from Gujarat. Its core philosophy is captured in the slogan 'Seva, Sadbhav and Vikas'. This is used to

focus on working towards a poverty free society, which is fair and just. It aims at holistic and sustainable development of the poor and marginalized communities of Vadodara Kutch and Chhotaudepur district of Gujarat.

With a strong foundation built over almost 20 years, the MKSP was initiated in the specific tribal locations of Chhotaudepur and Jetpur-Pavi, to deepen women's engagement in agriculture and allied work to enhance their livelihoods and reduce poverty. The clear slogan and aim of SFT being to create a society that is:

- Garibi Mukt (Poverty free)
- Nyay Yukt (Fair Justice)
- Shoshan Mukt (Exploitation free)
- Poshan Yukt (Healthy and Nutritious)
- Pradushan Mukt (Pollution free)

Keeping this approach, SFT has been implementing the State program of Mahila Kisan Sashaktikaran Pariyojana (MKSP).

Key Perspective Adopted for the Assessment

The key theoretical perspective underlying the assessment has been an understanding of people cantered social innovation in gender and livelihoods. Social Innovation today is emerging as an alternate pathway in development perspective and practice and gives an insight into the strategies and solutions for complex social realities and problems. BEPA (2011)[1] defines social innovation as, 'innovations that are social in both their ends and means'. According to Murray et al (2010)[2], social innovation is understood as new ideas and action that address unmet social needs. Implicit within this understanding is the potential of social innovation as a process of social change. As mentioned by Moulaert et al (2014)[3]; 'Socially innovative actions, strategies, practices and processes arise whenever problems of poverty, exclusion, segregation and deprivation or opportunities for improving living conditions cannot find satisfactory solutions in the 'institutionalized field' of public or private action.

In the context of the present assessment, 'Social Innovation' has been understood as:

- A new combination of practices/strategies
- Implemented by certain actors or constellations of actors;
- Social change (different dimensions) with the goal of better coping with needs and problems than is possible by use of existing practices.

Based on the above understanding and a gendered perspective, the key dimensions that has been primarily focussed during the assessment includes (as mentioned in Fig 1): Desirability- Desirability has been understood as fulfilment of practical and strategic needs with respect to the objectives of the program and contextual realities of people and spaces in the implementation area. This has been understood from the perspective of the primary stakeholders.

a) Feasibility – Feasibility has been looked at from an understanding of availability, use and access of local knowledge, appropriate technology etc.

b) Viability – Viability of the program has been looked at from an understanding of economic sustainability.

c) Diffusion and Scalability - This has been looked at from an understanding of effective implementation of participatory processes including participatory grassroots governance mechanisms and simultaneously, organizational structure and culture of work with reference to community engagement.

1. BEPA (Bureau of European Policy Advisors) 2011. Empowering People, driving change: Social Innovation in the European Union. Luxemburg: Office of the European Union.

2. Murray R., Caulier- Grice, J., & Mulgan, G. (2010). The open Book of Social Innovation, Social innovator Series: Ways to design, develop and grow Social Innovation. The Young Foundation: London.

2. Moulaert, F., MacCallum, D., Mehmood, A., & Hamdouch, A. (2014). The International handbook on Social Innovation. Collective Action, Social Learning and Trans-disciplinary Research. Cheltanham: Elgar

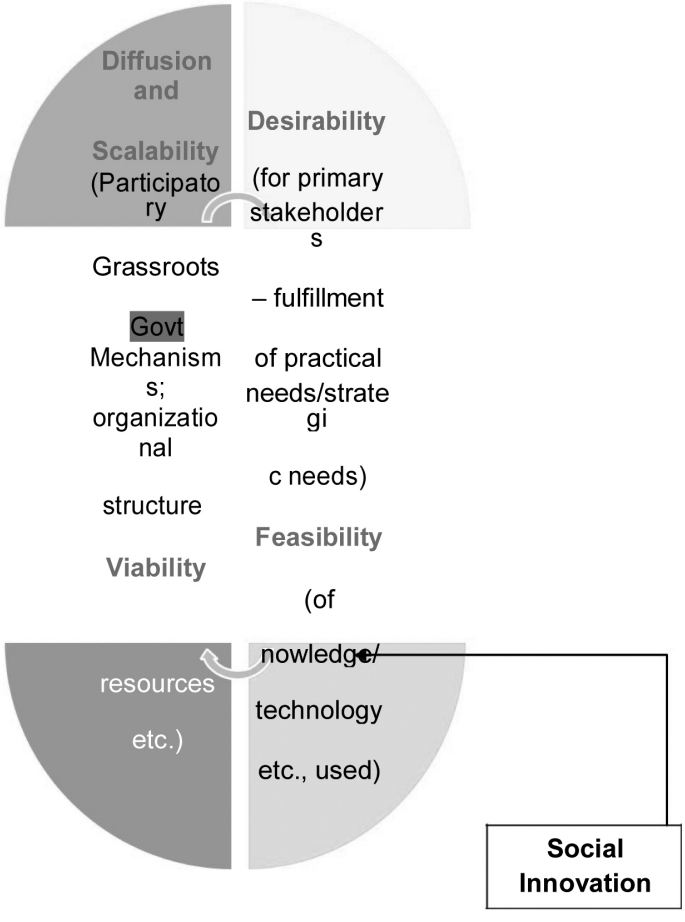


Fig: 2 Social Innovations in MKSP

The gendered understanding and analysis helped in understanding the differential experiences and needs of women and men, especially with a focus on practical and strategic needs. 'Gender analysis focuses on understanding and documenting the differences in gender roles, activities, needs, and opportunities in a given context. It highlights the different roles and learned behaviour of men and women based on gender attributes. These vary across cultures, class, ethnicity, income, education, and time; thus, gender analysis does not treat women as a homogeneous group or gender

attributes as immutable.' http://siteresources.worldbank.org/EXTSOCIALDEV/Resources/3177394116794079446 3/ParticipationSourcebookMethodsAnnex.pdf Caroline O.N. Moser and Caren Levy (1986) defines strategic and practical gender needs/ interests as, 'Strategic gender interests then are derived from the analysis of women's subordination and deriving out of this the identification and formulation of an alternative, more equal and satisfactory organisation of society in terms of the structure and nature of relationships between men and women to those which exist at present… In contrast, practical gender interests arise from the concrete conditions of women's positioning by virtue of their gender within the division of labour'.

Methodology of Assessment

To ensure that all aspects of the MKSP could be covered in a short duration and details of not just the program but also people's experiences could be captured, the following process was adopted:

Table: 1 Assessment Process for MKSP Evaluation

Sl. No.	Assessment Component	Key Activities
1.	Program Description	Secondary Literature/Document Review
2.	Understanding Field and Organizational Context	Field Visit, Engaging with Various Stakeholders and Field Interactions, Focus Group Discussions (TISS faculty and students)
3.	Implementation and Innovation	Gathering Understanding, Information and feedback
4.	SWOT Analysis and Way Forward	Analysis, lessons learnt and sharing of information

Sources of Data Collection

Secondary data was gathered through review of secondary literature/ relevant documents.

Primary data was gathered through informal and formal interactions with different stakeholders at the organizational and community level.

Some of the methods used for the same included group interviews, in depth interviews using interview guide, oral histories, case studies and participatory methods including village meetings, workshops etc. also used participatory gendered tools like daily clock to understand women's work profile.

For organizational level primary data, key stakeholders interacted with included trustees, specific program staff, field level staff etc. For gathering of community level primary data, stakeholders interacted with included specific target groups (vies-a-vies the program) and other community members and key informants.

Context of Assessment
A Situational Analysis

Organizational Context

SFT has worked on multiple dimensions of community development for the past 37 years including various developmental programs related to water and soil conservation, agriculture improvement, health, education, literacy, handicraft development, animal husbandry and various income generation activities in about 1058 villages in Vadodara district and Banni area in Kutch district in Gujarat. To achieve its goal of providing self-supporting development benefits in the tribal areas, the trust operates out of four centres, Rangpur and Jetpur-Pavi in Chhotaudepur, Ekalbara in Padra in Vadodara district and Banni in Kutch district of Gujarat with its headquarters at Kalali, Vadodara. The trust believes in community based institution building of the poor and marginalized communities and cooperative development.

A key feature of SFT is its direct hands on work with the local communities. These communities were spatially marginalized from access to resources and socially marginalized because of their societal exclusion. Further, gender discrimination within and outside the communities overlapped with such social and spatial marginalization creating multiple layers. In the initial years of its establishment, the organization and especially its founder worked relentlessly to build rapport with people and to organize them. It was not an

easy task, essentially when people had lost trust in the so-called 'mainstream'. Such deficiency of trust was the result of people being at the 'crossroads of development' where their traditional knowledge/culture was not accepted and they were often exploited. Simultaneously, they were denied access and opportunities of a better quality of life. Caught between both ends, it was a life of continuous struggle for the people. At this juncture, the commitment of people at SFT helped them to establish trust and rapport with people which further helped them to identify peoples' needs from their perspective and this led to a series of programs and programs being implemented and diffused today by SFT.

Contextual Understanding of the program Implementation Site

The organisation works with the Scheduled Tribes of Gujarat state. This region is also called the 'eastern belt' of tribes in Gujarat has been recently declared as a separate district consisting of six Tribal Blocks of Vadodara District in Gujarat, is located on the border of Gujarat and Madhya Pradesh. The area is of one of the most backward areas comprising predominantly of tribal population living in abject poverty. Main occupation of local population was farming, collecting and selling raw forest produce and migrating in search of labour work in lean periods. The area is inhabited mainly by tribal communities like Rathwas, Bhils, Nayakas, Dhanaka and Harijans, majority of them living below the poverty line. Being remote and most neglected area, people have lived in poverty and deprivation for years. Illiteracy, shortage of water and lack of infrastructure added to their woes. There was chronic water shortage in-spite of 850-900 mm rainfall per year. Other problems related to agriculture are soil erosion due to massive deforestation and no knowledge about methods of soil and water conservation; dependency on monsoon for agriculture leading to forced migration in lean seasons. In addition, lack of knowledge about methods and techniques of farming, selection of crops conducive to soil, absence of market linkages and so on led them to a vicious circle of money lenders, debt and further poverty[1].

1Detailed programme Report of MKSP, Shroffs Foundation Trust, Oct 2014

The lack of means for alternate livelihoods was compounded by the fact that literacy rate was very low, especially among women and girls. Ill-equipped schools, non-attendance of teachers and parents' apathy towards education accounted for a high rate of school dropouts. In terms of health related issues, one could barely find a healthy individual above the age of 50 years in this area. Lack of awareness about health services and illiteracy made them seek treatment from '*bhuvas*' and un-trained traditional birth attendants rather than mostly non-functional PHCs. National Health Programs had minimum achievement in this area. The population description of the area is given in the table below:

Table 2: Demographic Details of Chhotaudepur and Jetpur Pavi

Details	**Chhotaudepur**	**Jetpur Pavi**
Total Villages	142 villages	210 villages
Total Households	41830 HH	41621 HH
Average Family Size	5.7 persons	6 persons
Total Population	241377	225894
Male	121337	116158
Female	120040	109736
Total ST Population	211506 (87.62 %)	175183 (78%)
Male	106064	89810
Female	105442	85373
Total SC Population	7861 (3.25 %)	5463 (0.2%)
Male	4060	2562
Female	3795	2668
Literacy Rate	36 %	9.58 %
Male	42.55 %	4.41 %
Female	29.38 %	9.35 %
Total Area	76,144.72 hectors	80,563.16 hectares
Total Forest Area	23345.18 hectors	9247.57 hectares
Total Irrigated area	6250.90 hectors	17854.48 hectares
Total Non Irrigated area	29904.16 hectors	34318.74 hectares
Non cultivable area	8106.76 hectors	5100.57 hectares

Source: Census 2011

As can be seen from the table above both Chhotaudepur and Jetpur-Pavi blocks are inhabited by largely by Scheduled Tribes and Scheduled Castes and the literacy rates are very low more specifically among the women.

Due to the agro-ecology conditions of the area agriculture in this part is mostly rain fed. Per capita income of people living in this part is much lower in comparison to the State average. As a result, other indicators of human development like literacy rate, women literacy rate are poor and IMR, MMR are also high. Due to high variability of monsoon rains, low moisture holding capacity of soils, absence of developed aquifers due to the hard rock substrate and high run-off due to the undulating terrain, agriculture has been fraught with high risks. The average landholdings are 1.04 hectare with very little irrigation facilities, thus a majority of the landed population can be categorized as small or marginal farmers. A typical farmer would have his land distributed in small parcels across the catchments, thus each piece of land would have its different challenges and assurances. In agriculture, Maize, paddy, Cotton and Pigeon pea are the major crops. Productivity of all the crops is in the range of two-third to half the national average. Even in years of "normal monsoons" with overall rainfall around the long-term average, farmers are often faced with the specter of total crop failure due to long dry spells at critical junctures in the crop cycle during the wet season when almost 90% of the crops are cultivated. Most of these families are not able to produce enough food from their own land, due to issues such as lack of knowledge or skills, low quality of land and water resources, lack of access to capital and other inputs, or their inability to plan systematically due to the uncertainties. Thus farm related livelihood was supplemented by agricultural wage-labor or with seasonal migration to nearby districts and livestock rearing, which mainly serves as a buffer.

People migrated during Rabi and summer season to different parts of the state like Surat, Ahmedabad, Vadodara, Bhuj, Ankelshwar and Saurashtra as daily wagers, agricultural labors and construction workers. As soon as Kharif season ends most of people would migrate to different places in search of employment. Children and

women are most affected as parents migrate, children are taken along them and their education is affected while in case of women, their health is badly affected due to drudgeries of work and lack of health facilities around.

Based on the baseline survey[2] before MKSP was initiated it was found that women in these communities were active in agricultural work, but had very little knowledge about new agricultural practices. They faced quite a lot of gender discrimination despite extreme drudgery and continuous engagement in household work. This had negative consequences on their health and nutritional conditions. Manual activities such as transplanting of seedling, weeding, harvesting, transporting the harvest, threshing, drying of hay, etc. are mainly done by women. Everyday schedules of women comprises of waking up at around 5 am to finish cooking, cleaning and feeding of children before going to work by 7.30 am. They are able to go to bed only at around 10 pm. Despite the fact that women are major producers of food in terms of their time spent in agriculture and allied activities and the value they add to the overall activity, they remain less visible as farmers, in comparison to men. In majority of cases, women did not have any role in decision-making in the household, or pertaining to agricultural sector and even in important family matters. At times, men considered it disgraceful to accept the decisions of women. In majority of cases restricted mobility of women due to cultural taboos and their lack of time due to the heavy workload were identified as causes for low exposure of women to specialized farming techniques.

Programmatic Analysis –Understanding Key Dimensions of Social Innovation

General overview of the MKSP program as implemented by SFT

The Mahila Kisan Shashaktikaran Program has been conceptualised as part of the National Rural Livelihood Mission (NRLM) of the Government of India in 2011. The program is to be implemented

2 Baseline Report for MKSP Jan-2014

by the State Rural Livelihood Mission (SRLM) of identified states in India. The SRLM is expected to identify interested and capable NGOs which have the capacity to train and implement the program in different parts of the state either directly or through other NGOs.

SFT is the PIA in Gujarat and implements the program directly in the two mentioned districts.

Under MKSP the PIA is expected to follow the below mentioned strategy:

a) Use of locally adopted, resource conserving, knowledge-centric, farmer-led and environment-friendly technologies;

b) Coordinated action by communities and community based institutions such as the women self-help groups, their federations, NGOs and farmer groups, farm schools, farmer field schools and others;

c) Inculcating community mobilization skills among women in agriculture thereby demonstrating and articulating the benefits of the sustainable agricultural methods to them;

d) The MKSP will enhance the skill base of the women in Agriculture to enable them to pursue their livelihoods on a sustainable basis. Capacity building of women and skill up gradation through handholding, formal and vocational courses will be emphasized;

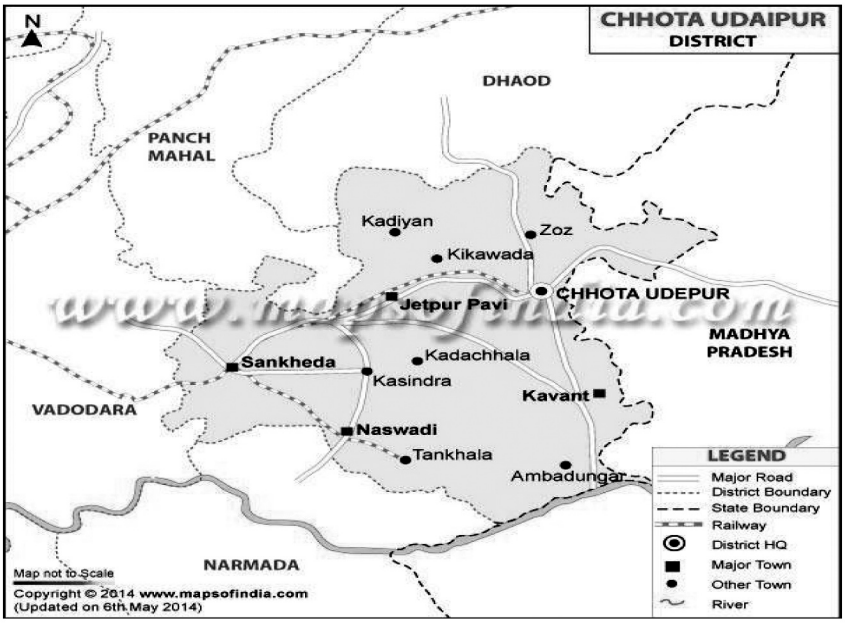
e) The MKSP will strategize in a manner to target the Poorest of the Poor and most vulnerable women such as SC/ST, minorities, landless and the Primitive Tribal Groups;

f) While identifying the target group, priority should be given to women-headed households (single women), resource poor households, and women groups engaged in Agriculture and allied activities (promotion, production, processing and marketing);

g) Participatory approaches and bottom up planning will constitute the core values of the MKSP.

Keeping this mandate spelt out in the NRLM, the MKSP program of SFT is being implemented in 61 villages of Tribal Block and

30 villages of Jetpur Pavi Tribal Block. MKSP comprises of 7320 women farmers who are organized through 644 women SHGs from both the blocks.



The major objective of the MKSP is to ensure that:

- Families have sustained agricultural income.
- There is increased food and nutritional security in the community
- There is an increase in the area under cultivation & cropping intensity
- Improvement of skills and performance by women in agriculture
- Increasing access to land, inputs, credit, technology and information;
- Increasing market access and information for better returns
- Improving soil health and fertility for sustained agricultural livelihoods

- Greater visibility of women in agriculture as an interest group
- And drudgery reduction of women and their work through improved tools/technologies

The program has been built upon the extensive work that SFT had done since its inception and work in the area and hence the strategies for MKSP focused on a holistic community based approach with women as the key stakeholders in the entire process. Some of the main strategies adopted for MKSP are:

a) Institution Building

Formation and development of village level and cluster level Women Farmers federations; federate the cluster level federations with block level apex body/ federation. According to the geographic situation 91 village level organizations and 12 cluster level federations were formed and further linked with the existing apex body named Shardadevi Gramudyog Society. At the same time SFT developed and established systems and procedures related to administration, accounts, human resource, development of business plans and its implementation, statutory compliance and overall institution building.

b) Cadre development

In form of Community Resource Persons (CRP) and building their capacities – Progressive women farmers were identified by intensive community exercises. These Community Resource Persons were capacitated through intensive trainings along with exposure visits with a vision to strengthen their agriculture practices and enhance their capabilities as a community trainer for enhancement of sustainable agriculture practices. 120 CRPs were trained and equipped with skills to scale up the impact of the program.

c) Promotion of Sustainable Agriculture practices

72 Farm Schools were established and equipped with training and education material, soil sample collection facilities for soil-testing, demonstrations were held of drudgery reduction

tools, Vermi-Compost, FYM and bio pesticides. The women farmers got knowledge and exposure at village level.

- Training and Education on sustainable agriculture practices is a focused area of intervention. Land and Water Management, Integrated Nutrient Management, Integrated Pest Management, General Problem Management related to agriculture continues to be the key aspects of these interventions.
- SMS based extension services for women farmers to access information on weather, cropping practices and market rates etc.
- Soil testing, analysis and recommendations to women farmers to improve their agricultural practices.
- A Seed Security program to promote local seed preservation practices and their propagation in agriculture
- Vermi-compost and Farm Yard Manure – Promotion of balance between organic and inorganic agricultural inputs
- Farmers Diary - (Khedut Pothi) Technical guidance to the farmers.
- Agriculture based livelihood interventions such as – trial and demonstration of good agriculture practices, replacement of varieties, use of bio-fertilizer, crop spacing, kitchen vegetable garden etc.

d) Demonstration on Bio Pesticides and other technical inputs

Demonstrations were done to prepare and use bio pesticide and growth material by using local material like animal dung to popularize it and reduce use of chemical materials, also to clean the village of 'Ukardas'. Various demonstrations continue to be conducted to promote Integrated Crop Management (ICM), inter cropping, and bio pesticides, ultimately to promote the low cost and sustainable agriculture practices.

e) Soil Health Management

Soil testing has been conducted for about 70% of targeted women farmers for scientific guidance to improve soil health. Vermi-compost and Farm Yard Manure units provided to all targeted women farmers as demonstration units.

f) Appropriate People Centric Technology for Drudgery Reduction

A set of small machines like mini maize Sheller, mini rice mill, mini paddy thresher and small hand tools were made available for demonstration and livelihood at cluster level to create awareness among the women farmers.

g) Operational Fund of Producer Federations

The support covers operation cost for three years and other costs related to business development planning etc.

h) Social Audit

A joint team of community people, program authorities and experts conduct social audit to measure the success and impact of the program.

i) Public information disclosure

Public display of program information is made through wall writings, transparency boards, leaflets etc. Sharing of information related to program at government authorities and Gram Sabha is also done on a regular basis. Since the work of SFT in the two blocks is very old, sustained and regular the foundation for implementing MKSP the foundation had already been laid.

j) Water conservation techniques for Agriculture

As the area is heavily dependent on rainwater for farming, many farmers face water scarcity in the other seasons. SFT along with other organisations like Rotary Club, Gujarat Green Revolution Co. Ltd and Gujarat CSR Authority has carried out various activities like building of check dams, gully plugging, nala plug, land levelling, deepening of ponds, lift irrigation and developing wells to sustain and conserve water

for farming.

Key Innovation Solution

The core idea of the program is empowerment and capacity building of the women farmers in the Jetpur-Pavi and tribal blocks of Gujarat focussing on overall development, sustainability and empowerment of the tribal communities in these blocks.

Key Concerns Addressed by the program in Agricultural Practices and Output

- Use of large amounts of chemical inputs and hybrid seeds
- Soil Degradation
- Lack of knowledge on climate resistant farming
- High cost of credit
- Less bargaining power of women farmers in the market
- Unsustainable agricultural practices

SFT introduced sustainable agriculture practices, which are holistic and ensure regular livelihoods and incomes for the communities through the year. Some of the key practices are:

a) Vermi-Compost:

Vermicomposting is basically a managed process of worms digesting organic matter to transform the material into a beneficial soil amendment. Vermi-compost are defined as organic matter of plant and/or animal origin consisting mainly of finely-divided earthworm castings, produced non-thermophilicaly with bio-oxidation and stabilization of the organic material, due to interactions between aerobic microorganism and earthworms, as the materials pass through the earthworm gut. There are several benefits of Vermi-Compost since it's produced by using earthworms and it is hundred percent organic. There are no harmful chemical needed to make Vermi-Compost.[3] Vermi-Compost improves soil aeration and enriches soil with micro-organism. It also attracts earthworms already present in the soil. Earthworms restore and improve soil fertility and increase

[3] Source: TISS Student report of SFT (Batch2015–17)

crop productivity by the use of the excretory products Vermi-Compost. It also enhances germination, plant growth and crop yield. Vermi-Compost has the biggest advantage of great social economic significance is that the food produced is complete organic, safe and chemical free. It enhances size, color, smell, taste, flavor and keeping quality of the flowers, fruit, and vegetable and food grains. Vermi-Compost gives 30% to 40% additional yields of crops over chemical fertilizers. Vermi-Compost has greater water holding capacity due to humus contents and reduces the requirement of water for irrigation by thirty to forty percent.

b) Farm Yard Manure (FYM):

FYM refers to the decomposed mixture of dung and urine of the farm animals along with the litter and left over material from roughages or fodder fed to the cattle.

c) System Rice Intensification:

The concept of System of Rice Intensification (SRI) focuses on managing the soil, water, plants and nutrients in a balanced relationship, enabling maximum growth of rice plants. SRI increases rice production and raises productivity of land labor, water and capital through different practices of management (Dhakal, 2005).

d) Bio Fertilizers (Amrutpani) and Pesticides (Brahmastra):

Bio fertilizers are the products containing carrier based (solid or liquid) living micro-organisms which are agriculturally useful in terms of nitrogen fixation, phosphorus solubilization or nutrient mobilization, and to increase the productivity of the soil and/or crop (National Center of Organic Farming, 1985). Bio fertilizers are low cost renewable sources of plant nutrients, which supplement the need of plant nutrition and reduce the use of chemical fertilizers. These can be used from seed treatment to soil application. Bio fertilizers generate plants nutrients like nitrogen and phosphors through their activity in the soil in a gradual manner.

e) Mixed Cropping:

Mixed cropping is also known as intercropping and crop rotation. It is the growing of two or more crops at the same time on the same field. Planting more than one crop will allow the crops to grow and

work together on the same piece of land. Multiple cropping helps to improve soil fertility and it also increases crop yield. In this type of farming the products and the wastes that are from one crop plant helps in the growth of the other crop. As general practice small duration crop (Pulses) and long duration crops (Cotton) are grown together, the pulses crop fixes nitrogen in the root, which benefits the other crop, Also the harvesting of short duration crop completes before long crop reaches at flowering stage; it avoids competition and supplements each other. Mixed cropping is the cultivation of two or more crops simultaneously on the same field. Utilizes the farm area more efficiently. Mixed cropping results in potential increase for total production and farm profitability than when the same crops are grown separately

f) Multiple Vegetable Cropping:

Vegetable cropping is important for small farmers because it creates a regular source of income and to best avoid the risk of crop failure multiple cropping is promoted. Vegetable cropping enhances the nutrients in the farmers' diet. Multiple cropping means two or more crops are grown in succession on the same land every year.

> The program has been successful in addressing most of the problems related to farming by educating the women farmers about sustainable agriculture and also encouraging them to practise the same. With these practices, the rate of chemical inputs had decreased considerably, which also led to the decrease in the expenditure on farming, the fertility of the soil has increased and the production has also considerably increased.

Key concerns in the status of women in the region before the initiation of the program–

- Women were largely engaged in labour work in agriculture/ animal husbandry.
- Limited knowledge about agriculture.
- No or very less decision making power in both public and private spheres.

- Nutrition issues in women and children.
- Women's contribution in the family was not recognized.
- No involvement in Gram Sabhas.
- Lack of skills and capacities of women

Changes in the Lives of Women

While women continue to practice farming and animal husbandry the shift is in the reduction of drudgery of the work in their lives. With new improved and natural farming practices the yield of the crops have increased and thereby their incomes. Some of them have used the additional income to but cattle and goats and supplement the incomes from farming and selling the produce. With introduction of nutritive crops the nutritional levels of the families have also improved especially of the children.

Their recognition as productive members of the households has worked toward improving their self-esteem and decision-making capabilities. This has in turn enabled them to run their own Farm schools with SFT support and community level visibility as leaders in the farming sector.

Voices of the MKSP Women Farmers

- **"Pehle 20 mann makka hota tha, ab 40 mann hota hai"** exclaims Gauriben (CRP of Dholivav). The use of chemical fertilizers earlier had led to the degradation of soil, but after the use of bio-fertilisers and natural pesticides the quality of soil has also improved. The number of times that was irrigation required for a crop has also reduced. Earlier 8-9 times the field had to be irrigated, which has now reduced to 5-6 times per field. The moisture holding capacity of the Vermicompost used in the field has been a major reason in reduction in the number of times irrigation required.
- Rathwa Kokilaben says,**"Gaon me paani kam hone se kheti me pareshaani hoti thi. Par ab vermicompost daalne se paani ki zarurat kam ho gyi hai".** The increase in production being visible, had led to the other villagers

> who are not part of MKSP to follow these techniques. It has also increased the women's role in decision making especially with regard to farming. Earlier, women used to work just as workers under the instruction of their husbands, but now they have a say in techniques used in farming.

With the initiatives taken through the MKSP programme, women's knowledge regarding sustainable agricultural practices is being appreciated and recognized by their families and the community as a whole. They have more decision making power.

Grassroots Innovation and Institutionalization of Community Based Institutions

The program offers the establishment of women led institutions like farm schools where women are provided knowledge and technologies for sustainable agriculture practices so that there is enhancement of income, more visibility among the women farmers. These Farm schools work with the existing Self Help Groups formed by SFT in its early work to ensure outreach and spread of knowledge and practice of agricultural practices.

New Knowledge and Training for women farmers

While working with the women farmers, SFT realised that while training programs both off-site and on-site helped them to adopt new practices and also generate confidence, there was still a need to prepare appropriate written material which they could use as ready reference as well as training for other women in the community. SFT undertook an intensive exercise to therefore develop such relevant material. Most of these have been disseminated in the form of booklets, posters and picture books and also used in the Farm Schools by the CRPs. A quick glance at all the materials shows that they are related to the new agricultural practices like crop cycle, natural farming methods and related training material which promote sustainable agriculture.

Role of Appropriate and Women Centric Technology

Technology has played a major role in the program with the use

of sustainable farming techniques such as Soil Testing, SRI, Inter-cropping, Soil and plant nutrient management, Vermiculture etc. The program has been successful in increasing the productivity of crops, fertility of the soil and income generation among the farmers. Use of mini tools like rice mills and maize Shellers for drudgery reduction has also reduced burden of work on the women.

Key Innovative Approaches of SFT that led to development of MKSP as a context specific innovation solution

SFT's approach in the implementation of MKSP has been innovative specifically with its convergence of programs from different government and business stakeholders and more significantly ensuring the participation of the beneficiaries of the program that is women farmers at the grassroots levels. Some of major findings in the assessment are as follows.

SFT believes in peoples' participation and local knowledge systems of the people. The idea of linking farm produce to markets beyond the villages for commercial purposes was based on the hard work and output of the women's farmers and their demands for the same. The success in farming and increase in productivity, therefore led to the development of the Shardadevi Gramudyog Utpadak Society (SGS)- a cooperative, which now also undertakes food processing and selling of the same to big firms. The production process is managed by the CRPs.

Some Case Illustrations

Community Resource Persons Voices:

Kapilaben is a CRP in village Devaliya. She has studied till 9th standard. She is also the ASHA worker. Her SHG has 9 group members. Her husband had received tractor in subsidy from the SFT. The second CRP Leelaben is a graduate and she has 21 group members. Both Kapilaben and Leelaben have been CRPs since three years. MKSP has helped them to learn vermicoposting as well as prepare fertilizer Amrutpani and pesticide Bhramastra. They have installed biogas in their houses, which is used for cooking purpose. Both felt that while MKSP has enhanced their livelihoods the village should have better road

connectivity, there should be more water facilities, schools should function in a better way, there should be an ambulance for emergencies and alcoholism should be (banned) in the village because it had caused problems in the community.

SHG Members' Voices

Tinaben was one of the members of the SHG. She couldn't continue the practice of Vermicompost because of water scarcity and the wild pigs used to destroy the vermibed every time but she did make FYM which was organic and also effective. She bought Vermiwash, Vermicompost etc from the CRPs. She said that there was a huge difference in the production of crops by using organic fertilizers and it was healthy too. She also said that they were taught to take samples of soil for soil testing in the laboratory, which was in SFT office. She grows various vegetables, rice and maze in the farm

Rekhaben is the 'mantri' of the SHG named 'Khori' there were 13 members in her group. She had studied till12th standard. The group was special because it had got recognition from the government that it was one of the better working groups because they worked in a continuous process, which is why the group was told to take the responsibility of the sanitation scheme by MGNREGA which was done by the Gram Panchayat in other villages. The members had access to bank where they went in a group. The relationship among the group members was good so they helped each other when in need. She makes Vermicompost and gives vermi- compost to her group members in free of cost while she received some other products from them

The nature of the innovation is that of 'Grassroots Innovation

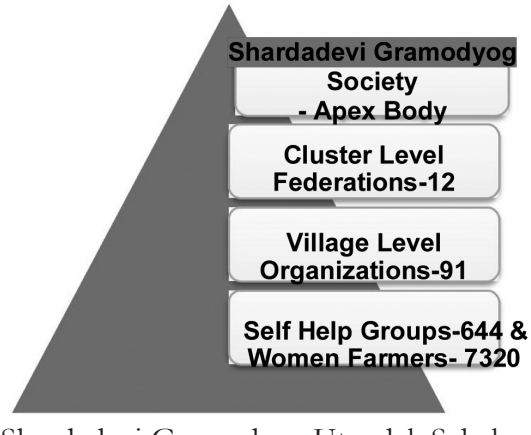


Fig 3 Shardadevi Gramudyog Utpadak Sahakari Mandali

and Institution Building' facilitated by external actors (SFT). The continuous capacity building, meetings and participation of the women stakeholders with the CRPs and organisation mentors have worked towards this institution building (see Fig 3).

SFT's participatory approaches as well as efforts to address connected problems emerging from the field have supported the implementation of MKSP. The entire region of Chhotaudepur and Jetpur-Pavi is water scarce and hence the agricultural practices introduced by SFT were based on production of such crops like maize, which consume less water. Many women farmers had stopped the practice of Vermicomposting due to lack of water and space. The MGNREGA was leveraged to create water bodies and tanks to ensure regular water supply. With increase in incomes several women bought milch cattle which further adds to their monthly income and nutritional needs.

In village Oliamba using different concept of MKSP program the production of crops has been doubled. There is greater unity among the women of the village and hence which also led to the awareness of their rights. The women now have a say in the way of farming, and the decisions are made by both male and female. Women's participation in Panchayat has been increasing and they are able to keep their demands in front of the Gram Sabha. The women have been actively participating in building toilets for their houses. Most of the women hold bank accounts and now are able to do signatures.

As the CRP Kokilaben states,

"Pehle jo ugaye, vo khaya. Abhi zayada upjav hone se, use bechkar ham gaai bhains lete hai aur uska duudh dairy m bechte hai"

As the production of crops have increased, now the villagers sell off their surplus and that money is invested for other purpose. In many cases the villagers buy cattle and sell of the milk in the nearby village dairy. Hence there has been an increase in income generation. The program had also led to environmental benefits. With the use of Vermi-Compost, the soil has been rejuvenated and hence there has been an increase in the fertility of soil.Also, in some villages milk cooperatives have been formed with the women farmers selling the produce to Anand Dairy Cooperative.

The SHGs of the Chhotaudepur and Jetpur-Pavi have been linked with SGS to avail the benefits of micro credit and various livelihood activities. The SGS products are well established and named as **VIVEKA**

Implementation Strategies

- **Formation of women's farmers groups and cooperatives**

  Formation of grassroots institutions and capability development of women formed a key organizing principle and strategy. The main activities undertaken in these groups include awareness generation about the program, role of SHGs and program team, concept building of co-operative societies and participatory identification of CRPs and women farmers etc.

- **Planning and implementation of agriculture based livelihood plan**

  Participatory and action oriented value chain based identification of gaps in agricultural methods and making plans for interventions. With selection of CRPs and training those with sustainable methods of agriculture who in turn facilitate the learning of women farmers in farm schools.

- **Program Implementation Plan and Flow**

  Creating an internal program management structure for implementations follows. Program Manager: A program managers responsible for the overall work in both the blocks. He is experienced in rural development, agriculture and mobilising community based organizations.

*Cluster Coordinators***:** For each block, two professional staff has been appointed as "Cluster Coordinators with a skill mix of community organization and agronomist. Thus a total of four professional staffs have been appointed. A program Executive based in the block is in-charge of the team leaders and supervises and monitors their work.

Project Supervisors: For each block two professional staff has been

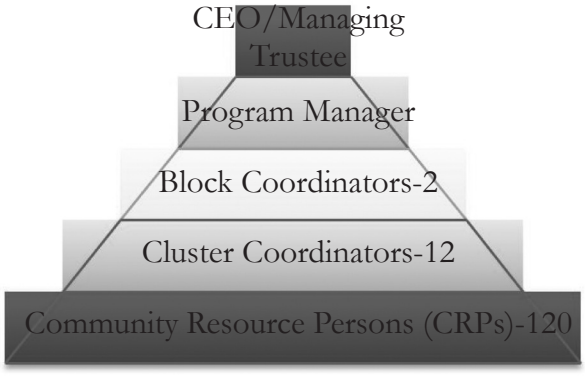


Fig 4: The MKSP at SFT Organisation Structure[4]

appointed with the skill mix of agronomist and development studies/ sociology. A team of 120 CRP have been selected and trained for village level activities.

MKSP structure and personnel worked in tandem and coordination with the other SFT programmatic interventions and staff and it was executed (3rd year implementation currently hold due to scarcity of funds) three phases over a period of three years. The documentation, human support structure, monitoring and evaluation mechanisms are well outlined which is an enabling factor in the implementation of the program. A blueprint of the program implementation manual was prepared by the organization with details of activities, targets and important milestones, resource planning, documentation and MIS systems. This worked as a guideline for the MKSP team (Please find annexed some of the details in Annex 2).

The holistic approach towards sustainable agricultural practices and strategies for institution building has led to not only increase in agricultural production but also it has started a process of greater visibility and empowerment amongst women. Also a process of dignified livelihoods promotion for the poor and marginalized community in the region.

Gaining Momentum in the Innovation strategy: Barriers and Key Drivers

The initial barriers that SFT faced were the social and spatial

marginalization of people where lack of positive development by itself created mistrust amongst the tribal people of outsiders. They had also faced considerable violence from the mainstream society specifically the police as well as people who branded them as thieves and robbers. SFT's committed approach and pro-tribal principle ensure that the distrust was overcome and initial work was started with addressing local problems of health and livelihoods.

SFT had conducted a baseline study before implementation of the MKSP and the problems identified as barriers were the prevalence of high cost input in farming and low output of farm produce, water scarcity and the need for other sources of income. The factors that facilitated the innovation strategy was development of new sustainable farming techniques, which was introduced to the women farmers through the CRPs and establishment of local village level Farm Schools. The CRPs were trained by SFT and mentored by field mentors in their villages. The presence of the Farm Schools led by local women farmers as CRPs has been an excellent strategy for MKSP. The easy accessibility to information, grassroots training and consistent availability of local resource persons have enabled the spread of knowledge, adoption of the sustainable agricultural practices as well as enhanced incomes of the women farmers. The result has been a massive adoption of these techniques by women farmers and it has given positive results.

The key drivers include:

i. The organisation and women together were the drivers including the support provided by the Government through various schemes.

ii. The establishment of the farm schools, capacity development of women, leadership development and their becoming 'CRPs', greater visibility and recognition of women

   farmers are some of the key markers of innovative strategies and the progress and impact of the work towards implementation of MKSP by SFT.

iii. Training and development of a cadre of grassroots animal veterinary helpers called

'pashu sakhis' who are also women from the community. Training was conducted by

NDDB (National Dairy Development Board) Department.

iv. Some of the other success factors include high yield and increase in agricultural production and adoption of sustainable agricultural practices by majority of the members in the community.

v. Reduction of forced migration from the region is other important success factors.

vi. Presence of charismatic leadership

vii. Ms. Shruti Shroff is a charismatic leader of SFT and her commitment is also an important factor, which helped to keep the community together and motivated within the context of their daily struggles. The leadership was also instrumental in motivating people in the organization and keeping their morale high for people centric work.

Role of SFT-Government Departments Convergence of Programs

SFT has utilised several government programs at its program site for holistic support and community development through MKSP. Table 3 gives the detailed map of these programs.

Table 3: Convergence Map of Programs of Government Departments & MKSP

Sr. No.	Activity	Total achievements		Department Program/Scheme
		No. of Families	(Rs. In Lakhs)	
1	Soil and water conservation	2250	122.82	MGNREGA
2	Widow pension	14		Samaj Suraksha
3	Old age pension	25		Samaj Suraksha
4	Manav Garima – Tool kits	20		Jilla Udyog Kendra
5	Aadhar Cards	375		
6	Jan Dhan Yojna- Bank account opening	75		Lead Banks

7	Vegetable seed kits	10	0.2	ATMA
8	Nursery of drum stick	40000	9.78	Donors
9	Mini Rice Mill	14	9.78	Corporate CSR
10	Potato Farming	34	11.42	TDD- VKVY
11	Compost Fertilizer	272	2.39	Department of Horticulture
12	Milch Animals	248	112.82	Tribal development dept.
13	Chaff cutter	47	0.71	
14	Travis	17	0.94	Dept of Animal Husbandry
15	Cattle shed	56	12.32	
16	Household Biogas	149	29.8	Gujarat Agro
17	Model village - Katarvant-	74	53.97	Rotary Club of Baroda Metro
18	Bilwant- Safe drinking water program	280	7.13	
19	Certified Seeds	557	12	Gujarat Seed Corporation
20	Livelihood Activities – Earnings	38	5.89	SGS
TOTAL			269.15	

`Besides these programs SFT has also leveraged the ICDS, Asha and ANMs at village levels to support the health needs of the women, men and children which have impacted the overall well being of the people. As and when required subsidies for cattle, tractor and other equipment has resulted in more income, and with better nutrition through MKSP there has been a reduction in poverty. As the MKSP program was being implemented, water scarcity was very evident; hence one innovation was to build Group Wells per 5-6 houses simultaneously. Similarly complementary innovations like watershed development along with implementation of MKSP in the Chhotaudepur and Jetpur-Pavi blocks played an important role in the innovation solution especially livelihood promotion activities in the area.

These responsive need based measures along with leveraging of various government programs provided a holistic platform for the

MKSP to thrive and flourish and women became active members of both the households and communities.

Impact of the Innovation program

The ambition of the key actors is to bring forward the women farmers of the villages and build their entrepreneurship skills and move towards a process of empowerment, so that they can be self-sufficient and their status in the society becomes recognizable.

Fig.5 gives the major dimensions in which women's lives get impacted through MKSP and the resulting social value creation.

Fig.5 Social, Economic and Environmental Impact of MKSP

SOCIAL	• Recognition of women farmers in the community. • Participation in decision-making, Panchayat meetings. • Increase in self-confidence
ECONOMIC	• Increase in the production of crops. • Reduction in the cost of production. • Better income generation. • Better access to credit.
ENVIRONMENTAL	• Presevation of the fertility of the soil • Decrease in soil erosion • Raise in the ground water level

Relevance of Empowerment and Capacity building for the primary actors and its role in the Innovation program

Empowerment can be considered as the process to acquire "power" individually and collectively. (Among individuals or a community, it designates first and foremost the ability to act independently, but also the means needed and the process of being able to act and make one's own decisions regarding life and society). If we use this as the framework for empowerment and analyses the MKSP implemented by SFT we find that the program has been able to begin the process of empowerment with the women farmers. At the same time the focus and the strategies have been on economic empowerment and not so much on social and gender empowerment. MKSP has

laid the foundation for the empowerment process and there is an opportunity to take this forward with the CRPs as well as the SHG women.Empowerment training and capacity building is the most important factors that improve women's status.

So far MKSP's training and capacity building has been towards technical skills and livelihoods enhancement. SFT needs to build upon this with collective mobilisation of women, gender training, knowledge building, increasing women farmers' engagement with local governance and developing skills of marketing and entrepreneurship. However, it is important to also work with them to not only sensitize them for recognizing the role of women in their families and their lives, but also to take equal share in the household chores and agricultural activities. This will lead to reduction of double and triple burden for women and would pave the way for true gender transformation. There is a need to continue to build upon the work that SFT is doing through the MKSP and strengthen it with ancillary activities to improve men's participation in livelihoods, household and daily living activities.

***

S. Sivakumar

ITC's Rural Livelihoods Creation Projects

Where are the Jobs?

Job creation at a fast clip and sustainable scale is clearly the biggest development challenge facing the nation today. It has moved from being a preoccupation of policy makers, economists and think tanks into public consciousness, evident from the columns devoted to it in newspapers and magazines. In recent times, in fact, the message is almost alarmist in the wake of announcements of job cuts in the IT sector, feeding fears of large-scale job grabs by automation premised on AI technologies. Such concerns for the future of employment are not without merit – the pace of job creation had declined to a six-year low by 2015-16 as per the latest NSSO quinquennial survey of employment and unemployment.

A recent report by the McKinsey Global Institute (MGI) provides the only counter-narrative to this all-pervasive gloom fuelled by falling labour participation rates. It highlights a structural shift in employment from agriculture to the non-farm sector, which per se, according to the report, leads to 'gainful' employment. While MGI may have spotted a vital trend, the report also acknowledges that 86% of the labour force is absorbed by the non-formal sector and therefore leaves open the question of quality of employment and social security, for which little data exists. Unfortunately, employment associated with such a movement has not necessarily led to poverty alleviation. Most rural migrants fall in the category of the 'working poor' who are employed but are barely able to earn a fraction of what is regarded as the minimum necessary to overcome poverty. Many of the migrants thus end up earning little and leading miserable lives in urban areas because they lack education, technical skills and knowledge.

From the policy prescriptions that are being advanced, three main strands are discernible:

1. Introduction of an employment policy, being mulled by the Union Labour & Employment Ministry, with focus mainly on effecting a transition from informal to formal sector jobs;
2. Re-training and skilling on a mission mode to enable creation of a talent pool ready for the jobs of tomorrow; and
3. Acknowledgement that both of the above would be meaningless in the absence of high economic growth, which is currently being targeted at between 8-10% to enable creation of employment on a scale to make a dent in the working age cohort entering the labour market annually.

To succeed, these proposals need time to play out and yield results. This paper argues that, even as the government looks at non-farm alternatives, in the near to medium term, diversification may not readily address the issue of rural multitudes seeking quality livelihoods. Instead we must find ways and means of maximizing gainful employment within agriculture since rural India remains home to more than two-third of the total households. How this could be achieved forms the core of the discussion in the rest of the paper. Based on ITC's engagement of the last two decades with rural India, the paper outlines the approach that could result in the above objective being realised through an agri-centric focus.

Challenges - Cycle of Endemic Poverty

More than 70% of India's 1.3 billion plus population earn their livelihoods through agriculture and allied activities and resource-poor smallholder farmers constitute the largest proportion of these communities. Such farmers are among the most marginalised and vulnerable sections of India's population. They are also important stakeholders in ITC's agri-supply chains.

The multiple challenges confronting them broadly include:

- Ownership of marginally productive landholdings, which leaves such households with little choice but to practice rain-fed agriculture, making them highly vulnerable to seasonality.

The unpredictability of the monsoons is exacerbated by the adverse effects of climate change which are likely to intensify.

- Steady erosion in their resilience to seasonal shocks as a result of increasing water stress, falling groundwater tables, heavy top-soil run-off, depleting biomass cover, substantial shrinkage in common pasture lands, low organic carbon content in soil, loss of floral and faunal species, etc., all of which combine to pose a serious threat to water availability, eco-system services and soil health, and therefore to crop productivity.

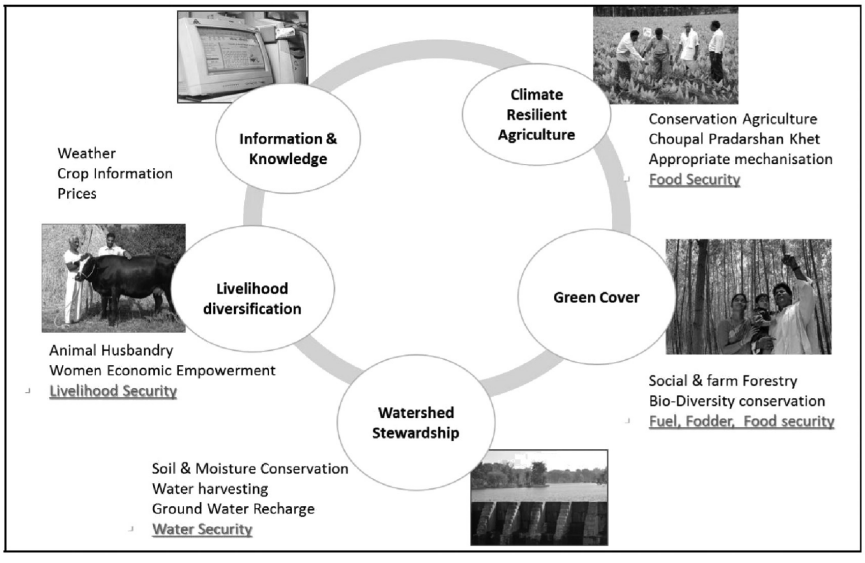
Such circumstances compel small farmers to operate at the margins of subsistence, barely producing enough for themselves or to break even, let alone to make a reasonable profit. With virtually no alternative means of livelihoods available, and unable to generate financial surpluses to make investments necessary to raise crop productivity, these households become trapped in a punishing cycle of endemic poverty. Their plight is worsened by other macro factors such as poor infrastructure, inadequate marketing channels and the inability to access modern knowledge and technology or credit from formal channels. As a result, they are often forced to migrate to towns and cities, mainly to find work as casual labour to earn enough to make ends meet.

These changes pose potential threats to ITC arising from disrupted agri-supply chains. In addition to being one of India's largest agri-businesses, several consumer facing products of ITC are also dependent on agriculture for raw material. The competitiveness of these businesses is therefore inextricably linked to that of the agricultural communities that form a major part of its value chains. It is logical therefore for ITC, a company committed to measuring performance on triple bottom line dimensions, to promote a green and inclusive supply chain to ensure growth of rural economies.

Responses – Strengthen the Core & Seek out Diversification Opportunities

Despite its precarious state, it is estimated that rain-fed agriculture

currently supports approximately 40% of India's food grain production. But food grain yields vary from 1 – 2 tonnes/ha in rain-fed regions compared to attainable yields of more than 4 tonnes/ ha. The large yield gaps between farmers with access to improved technologies and those without suggests that the scope for enhancing overall productivity of rain-fed crops is anywhere between 50 to 70% in the near term provided that technology, resources, infrastructure and institutional gaps are addressed timely and adequately. ITC's programme seeks to address these gaps by attempting to provide end-to-end solutions.



For ITC, the challenge was to develop a solution that would deliver tangible economic gains by creating and nurturing local eco-systems to enable the foundation of a more stable agricultural regime. Adopting a bottom-up participatory approach with these communities as the key decision-makers in all aspects, ITC has put in place a mosaic of mutually reinforcing interventions that address the multiple challenges faced by these communities. These interventions promote climate-smart rural development by broad-basing farm and off-farm livelihood portfolios of agricultural communities, especially important for small and marginal farmers, the main target group. The eco-system of rural services that ITC has created is captured

in the accompanying diagram, the interconnectedness of each piece becoming clear as we proceed.

The rest of the paper elaborates on the eco-system that has been created in the three sections that follow. We will begin by examining how the Company attempted to raise farm and non-farm incomes by:

- Strengthening the extant agri-production system;
- Exploring alternative land-use systems to diversify farm portfolios;
- Identifying other rural assets with the potential to emerge as significant sources of rural livelihoods; and
- Leveraging existing agri-value chains to create additional diversification opportunities.

This will be followed by a section on processes that were followed to make the outcomes sustainable. We will end by summarising the essential elements of the model with a view to replication and scale-up.

Strengthening agri-production systems

Although rain-fed agriculture is practiced across approximately 68% of India's net sown area, it has suffered gross neglect in terms of policy, focused research and real action on the ground. Smallholder farmers in rain-fed areas must therefore contend with a precarious water situation as well as a host of other debilitating factors that keep them trapped in endemic poverty:

- Long-term secular decline in productivity per hectare due to a variety of factors including soil erosion, overuse of chemical fertilisers and inappropriate land management practices;
- Fragmentation of landholdings and depleted soils which are pushing up cultivation costs, thereby jeopardising the future of these holdings as viable farming units;
- Year-on-year lowering of the water column indicating poor groundwater recharge;
- Dwindling bio-mass, creating pressure on fodder and energy needs of rural households;

- Lack of access to modern scientific agricultural practices to improve productivity;
- Lack of timely availability of quality agri-inputs and institutional credit; and
- Inadequate public investment, lack of infrastructure and inefficient marketing channels.

These factors combine to create a vicious cycle of environmental degradation, low agricultural productivity and poverty – a situation fraught with grave implications for livelihood sustainability and food security for such smallholder communities. Among the most vulnerable sections of the population, these communities account for a major portion of ITC's stakeholders and the Company believes that without building their competitiveness and economic resilience, India cannot look towards sustainable and inclusive socio-economic development. Accordingly, the Company has put in place the following mutually reinforcing initiatives:

- Knowledge empowerment through e-Choupals, a network of village internet kiosks providing farmers with online information and services, to raise productivity and enhance their competitiveness, supplemented by rural hypermarts-cum-service hubs (Choupal Saagars), to enable higher realisations from market transactions.
- Natural Resource Management (Integrated Watershed Development and Improved Agriculture Practices) to create stable agricultural production regimes and empower rural communities to manage local natural resources sustainably.

Knowledge empowerment

Computers with internet access in villages enable even small and marginal farmers to access information in local languages through ITC's specially designed site. eChoupals provide access to real-time price and weather information as well as know-how on best practices and latest agronomic techniques. Information is customised to local requirements and made available in local languages. These 'internet kiosks' are managed by lead farmers (*sanchalaks*) who are trained to

help their fellow farmers to access information and services provided through the site. The network of e-Choupals has evolved into an effective two-way multi-dimensional channel for goods and services in and out of rural India comprising insurance, consumer goods, health, etc. This digital network of eChoupals is supplemented with physical infrastructure – Choupal Saagars (rural hypermarts). These multi-service hubs function as ITC's procurement centres, facilitation centres for farm-related services (soil testing, product quality certification, etc.), and shopping centres that offer rural consumers a range of products comparable to urban levels of choice.

Typically serving a cluster of an average of 600 farmers in 10 villages within a radius of approximately 5 kilometres, today there were 6,100 kiosks serving 4 million farmers in 35,000 villages, making e-Choupal the largest rural digital infrastructure in the world. There are 24 operational Choupal Saagars in three states. The single largest IT-based intervention in rural India by a corporate entity, e-Choupal is a unique business model that delivers large societal value by co-creating markets with local communities.

Restoring common pool resources

ITC's Integrated Natural Resource Management Programme aims to achieve three critical objectives: (i) soil and water conservation and water resource augmentation; (ii) optimisation of the benefits of water resources through alignment with improved agriculture practices and demand side management of water resources; and (iii) formation of robust community institutions and building their capacity so that they can maintain structures/ measures put in place through the project and take the activities forward.

ITC's Integrated Watershed Development programme tackles the most basic needs of these communities by enabling them to conserve and manage local water and land resources to raise productivity through participatory, community-based projects. The programme promotes the development and local management of water resources by facilitating village-based participation in planning and executing watershed projects. The focus is on implementing soil and moisture conservation measures and building, reviving and maintaining water-

harvesting structures to reverse land degradation, extend critical irrigation and raise agricultural productivity. Groups are also trained to formulate regulations and fix water user charges which go towards creating a fund used to maintain existing structures, build new ones and tap government schemes.

Commencing in 2001, ITC's watershed programme is currently operational in 1,182 villages across 45 districts in 12 states. Coverage extends to over 3,14,000 hectares and benefits over 2,51,000 households. There are 2,190 WUGs, which have built over 10,099 water harvesting structures creating a freshwater storage capacity of about 30.08 million CuM (net of siltation). The WUGs have accumulated a Maintenance Fund of nearly Rs. 108 lakhs. The rise in agricultural activities and civil work has generated over 5.55 million person-days of employment, especially benefitting the landless and helping to stem seasonal out-migration.

These benefits have been amplified by the promotion of best practices and modern agronomic techniques through ITC's Improved Agriculture Practices programme and Choupal Pradarshan Khets. The two key focus areas in both these initiatives are the promotion of (i) Conservation agriculture to improve soil health through modern agronomic practices, crop diversification, better seed varieties, scientific land-use models and other productivity enhancing measures through demonstration plots, farmer field schools and classroom training. Farmers are motivated to form Agri-Business Centres so that they can pool resources for timely access to quality agri-inputs, farm implements and mechanisation equipment as well as institutional credit; and (ii) Water-saving technologies to optimise usage of water by building capacities of farmers to employ water conservation strategies on the demand side.

By 2016-17, the Improved Agriculture Practices Programme had covered over 61,000 hectares under different crops benefitting nearly 116,000 households. Over 34,700 compost pits had been constructed, over 832 group irrigation wells had been built and more than 3,600 sprinkler and drip sets were in operation. Demonstration plots under Choupal Pradarshan Khets covered around 64,000 hectares benefitting over 60,000 farmers.

Impacts

Social and environmental data on impacts for each project is maintained separately. Given the heterogeneity of the agro-climatic zones in which these projects have been implemented and the diversity of social challenges, aggregation of data from individual projects would not serve any useful purpose. However, it is possible to draw broad conclusions from the data available from these projects, the authenticity of which can be corroborated through examples from case studies of specific projects.

Poverty & Living Standards:

- Empowered with relevant information, farmers are better equipped to time sales and manage risks. Clustered into virtual producers' co-operatives, they are able to aggregate demand for quality farm inputs. By creating a direct channel for disseminating know-how and best practices, farmers are able to raise quality and productivity as well as to diversify their portfolio in line with market demands. As a direct marketing channel, e-Choupal eliminates wasteful intermediation and multiple handling – benefiting farmers through higher farm gate prices and a premium for quality. It has also demonstrated the enormous potential of IT in catalysing rural transformation by changing rural markets and enabling efficiencies and low-cost distribution that make the system profitable and sustainable.
- Across project areas it has been observed that together, these rural services have led to an appreciable increase in soil in-situ moisture and well recharge. The increased availability of water, in turn, has supported critical irrigation requirements. The combination of these measures has had a direct impact on the stability of production by helping to protect farmers from the vicissitudes of seasonality, especially erratic rains. There has been a 10-20% rise in yields across project areas, resulting in higher returns from agriculture, thereby increasing family incomes.
- Increased availability of water for longer durations has enabled

crop diversification towards commercial varieties, expansion of area under agriculture during the Kharif season and led to a multiple-cropping regime with the introduction of Rabi crops, which had not been possible earlier. Together these have a direct, tangible and significant impact on household incomes.

- Both developments discussed above have equally profound consequences for landless households. With more land under cultivation for a longer period, there is greater availability of agricultural work for those dependent on farm labour to earn their livelihood. Not only was work available for longer periods, but in most cases it was observed that higher demand for labour also firmed up farm wages.
- Social Dimensions
- Notable impact was observed among the landless, small and marginal households. Prior to the projects, members of this group had little choice but to migrate, along with children, post the Kharif harvest due to lack of work opportunities in the village. Being away from the village for 5-6 months lead to neglect of their homes and had a negative impact on the health and education status of their children. In all ITC NRM project areas, data shows a significant reduction in the number of day spent in migration away from the village and an increasingly diminishing importance of migration income as a proportion of total household income. The drop in seasonal out-migration had significantly positive consequences on the HDIs of such households.
- ITC's projects are largely located in some of the most moisture-stressed districts in the country, which, apart from other challenges, also has serious implications for the livestock economy. This is especially so in years of drought, when distress selling of milch animals is an unfortunate but common occurrence. As a result of well recharge and availability of surface water in the water- harvesting structures, water is available in project villages even during the summer months, providing access to life-saving water for cattle even during

the driest periods, thus reducing the incidence of distress-selling.

These multiple environmental positives have contributed in raising agricultural productivity and incomes and are aimed at securing and sustaining agriculture in the long-term, especially for smallholders by helping to cushion them from extreme climate episodes. Such measures are, however, only one aspect of a mosaic of solutions to meet the core objective of building sustainable livelihoods. Most of ITC's NRM projects are located in areas where it has an agri-business presence and where its e-Choupal initiative operates. This supports backward and forward linkages and enables beneficiaries to benefit from accessing e-Choupal services, including an efficient agri- commodity procurement channel. The creation of a more stable agricultural regime secures the long-term competitiveness of both farmers and ITC, which also gains by being able to source better quality products.

Diversifying land-use

While interventions in crop production have the potential to increase rural incomes and livelihoods significantly, ITC has given equal priority to appropriate diversification of land-use by farmers through the promotion of tree-based farming. Such a model not only promotes food security but also gives access to fuel and fodder. But above all, periodic harvest of wood enables farmers to earn lump sum monies to make productive investments. ITC's Social & Farm Forestry programme provide a commercially viable land-use option for owners of low productivity lands and simultaneously addresses the acute needs of resource-poor tribal and smallholders.

Social Forestry is targeted towards marginal/tribal smallholders. The most critical constraint for these households is their inability to invest in raising the productivity of their poor quality landholdings. ITC's Programme overcomes this hurdle by providing them with long-term interest-free loans and a package of silvicultural practices and other technical support to maximise per hectare productivity.

A key factor in the commercial viability of the plantations is the

clonal stock developed by ITC's in-house R&D. Adapted to harsh local conditions, the clones were put through extensive multi-location trials under different agro-climatic conditions. This enabled ITC to develop and supply clones suited to specific soil types – a first for Indian Forestry development programmes. Their proven survival rate and productivity, and perhaps most importantly, considerably shorter harvesting cycles of 4 years, instead of 7, have made the Programme exceptionally effective. ITC provides a buy-back guarantee at prevailing market prices but plantation owners are free to sell to any buyer of their choice.

The agro-forestry model has expanded the efficacy of the Programme as a strategy for ensuring food, fuel, wood and fodder security for resource-poor households wherein field crops and pulpwood saplings are cultivated simultaneously in the same plot in a 75% to 25% ratio. Developed in collaboration with CRIDA and the Professor Jayashankar Telangana State Agricultural University, it allows farmers to earn from field crops right from the first year onwards, with lump sum incomes from pulpwood crops every 4 years, raising benefits and impacts for marginal farmers. The novelty of the model is that it not only promotes diversification, improves farm productivity and profitability, but incomes from sales of pulpwood hedges risks arising from crop failure.

Initiated in 2001-02, ITC's Social Forestry Programme currently covers over 103,400 hectares across 4,809 villages in 19 districts across 6 states benefitting over 96,500 small/marginal farmers. Together with Farm Forestry the coverage extends to over 250,900 hectares. The proven productivity of Bhadrachalam clones combined with ITC's extension services and buy-back guarantee makes the Social & Farm Forestry programme a relatively risk-free and economically attractive proposition for both target beneficiary groups.

Impacts:

For over 96,500 marginal and tribal households who have taken up plantation and farming activities under ITC's model, the change has been transformational.

- **Economic**
  - Pulpwood generates lump-sum incomes of over Rs 1,00,000/ hectare on harvest every 4 years – a life-changing proposition for these resource-starved households and one that is sufficient to pull them out of the poverty trap.
  - With ITC's agro-forestry model, which has emerged as the preferred option, they are able to earn yearly incomes from intercrops thereby maximising returns from their land. An independent study conducted in 2016 shows that average annual net returns/hectare from agro-forestry plantations was Rs. 36,000/- compared to Rs. 25,000/- from pure block plantations and Rs. 21,000/- from only field crops.
  - The tangible economic benefits from these plots have led to greater demand for land as more community members become interested in adopting the model – pushing up land prices and lease rates which have gone up from nil to approximately Rs. 20,000 per acre – adding significant value to a previously unproductive asset.

- **Social**
  - Once daily wage labourers forced to work on other people's lands or migrate to eke out an existence, many such households are now employers themselves, with plantation activities on their lands providing work for others, especially the landless in their village. As a result, across project villages there has been a reduction in distress/seasonal migration with positive consequences on the HDI status of these disadvantaged households.
  - Studies have shown that whereas farming incomes accounted for 11% of annual household incomes previously, post taking up Social Forestry, these plots account for 40-60% of annual household incomes – a financial base that enables these households to plan for the future and to invest in better housing and nutrition, health services and their children's education; land improvement and irrigation or expand their plantations; open bank accounts and be eligible for institutional loans – all leading to higher living standards.

This is a unique example of shared value creation wherein the Company's business value-chain has been leveraged to create wealth and sustainable livelihoods for resource-poor marginal/tribal smallholders who are among India's most vulnerable communities. The incomes from these plantations are a substantial increase over their previous subsistence earnings and usually enough to enable them to step out of the poverty trap. Social Forestry has thus achieved significant success in providing marginal smallholders with the means to turn their unproductive landholdings into a sustainable livelihood opportunity.

Broad-basing income portfolios

Land-based interventions are obviously essential and crucial to energise the rural economy. But given the intense pressure on land, there is equal need to widen income portfolios to reduce the burden currently being imposed on arable land. In most parts of India, livestock is the second most important economic asset with rural households. Indeed, India tops the global league in terms of livestock population, with 55% and 16% of the world's buffalo and cattle respectively. It may also be the world leader in milk production. However, productivity per animal is abysmally low – 987 kg as compared to the world average of 2,038 kg per lactation. There is therefore a huge potential for raising farm incomes significantly by increasing productivity per animal. The impact, in fact, would be higher than envisaged if we take into consideration that an estimated 70% of rural households, mainly small/marginal farmers and the landless, own cattle. Animal husbandry is often their only means of sustained livelihood contributing, between 15-40% of rural household incomes.

ITC's Livestock Development Programme (LDP) is integrated into ITC's Watershed Development programme since the rise in water availability leads to intensification of land use and therefore greater availability of fodder and crop residue, supporting an increase in dairying activity. The programme provides breed improvement and comprehensive animal husbandry services which can be easily accessed even in remote areas. Cross-bred progeny are 6-9 times

more productive than their mothers, providing milk surpluses for sale. They also have a significant wealth creation potential, since crossbred progeny command a very high premium in comparison to indigenous cattle. By enabling these households to convert a traditionally low-yielding asset into a profitable new livelihood, it provides them with the opportunity for an additional source of income that is not dependent on land ownership and yet within the periphery of accustomed rural occupations. It also paves the way for dairying to emerge as a viable livelihood option – a key measure in deflecting pressure off arable land.

The Cattle Development Centres (CDCs) are manned by local youth trained as technicians and equipped to provide a complete package of services right at the cattle owner's doorstep. Apart from artificial insemination, this includes healthcare, vaccination, nutrition, pre- and post-natal care, as well as fodder resource development and other best practices. It may be noted that ITC is perhaps the only agency that provides the full range of services required by a cattle farmer. Others are largely focused on Artificial Insemination. The CDCs are intended to become financially self-sustaining in 3 years and technicians are encouraged to take them over as a franchisee, thereby promoting entrepreneurship and simultaneously filling a vital infrastructure and service gap.

Initiated in 2003, today there are 223 Cattle Development Centres spread over 25 districts in 7 states. 54 of these Centres are now financially viable and are operating independently. Animal husbandry services have been provided to nearly 15.14 lakh cattle and 20.19 lakh artificial inseminations have been performed resulting in the birth of over 6.72 lakh cross-bred calves.

Impacts:

- Significant improvement in feeding practices is noted in all project areas with most households feeding green fodder and nutrient mixture supplements to their cattle.
- Better feeding and management practices leads to significantly higher yields: when compared to farmers who follow traditional practices, milk yields obtained by ITC beneficiary

farmers were found to be 75-300% higher for both cows and buffaloes. Compared to pre-intervention production, therefore, milk yields increased by 35% in the dry season and 31% in the flush season.

- While total milk consumption of ITC beneficiary households saw an increase of nearly 30% in the dry and flush seasons compared to pre-intervention levels, there was also significant increase in market sales. Sales by ITC beneficiary farmers increased by about 36% in the dry and flush seasons during the intervention period. Moreover, ITC beneficiary farmers predominantly sell their milk to milk cooperatives: over 80% of ITC beneficiaries sold to milk cooperatives as compared to one-third farmers practicing natural breeding.

All of the above improvements should have ultimately improved household incomes, which indeed is the case. An independent study in Madhya Pradesh showed that income of ITC beneficiary farmers increased by 68% during the livestock program intervention period. This was found to be the highest increase among their peers.

Leveraging value chains for diversification

It must have become evident by now that ITC constantly explores additional opportunities to create sustainable livelihoods for its target group by leveraging its value chains. All the instances provided above illustrate the multiplier impacts of such a strategy. There are, however, several other ways in which this has been achieved, albeit not on the same scale as described above, but which may be worth noting since they illustrate the diversity of gainful employment that is possible if one is sufficiently innovative.

In order to promote local employment, ITC mobilised the Social Forestry beneficiaries into Mutually Aided Co-operative Societies (MACS) to manage felling and transportation of wood. Consisting of representatives of Sanghas from project districts, MACS are currently in operation in 4 project districts of Andhra Pradesh and Telengana. In 2016-17, they sold over 14,000 tonnes of pulpwood worth Rs. 5.96 crores and were able to pass on financial benefits to their sangha members.

Moreover, in order to meet the increasing demand for planting stock from the Social Forestry programme, ITC promoted women managed nurseries in Tripura, Telangana and Andhra Pradesh, which have the highest concentration of its Social Forestry projects. The ready market and the fact that it could be leveraged to benefit BPL women (largely Scheduled Caste and Scheduled Tribe) in the area who were working as casual labour – mainly agricultural – was a key trigger for the choice of activity.

These women are mobilised to form groups, receive technical training in raising saplings and their capacities built to enable them to function as autonomous profit-making enterprises in the future. Currently there are 8 such women owned and managed nurseries, all of which have received MACS registration. Comprising 200 women, they provided 58 lakh saplings for the Social Forestry Programme worth Rs. 88 lakhs in 2016-17 – making these nurseries the primary livelihood source for them. Despite being just about 2 years in operation, all nurseries have shown remarkable promise. One nursery in Khammam district – Sri Siridi Sai Mahila Jeevanopadula Sanghama – recorded a turnover of Rs 38 lakhs and registered a profit of Rs. 13 lakhs in 2016-17. The women in all nurseries are planning suitable diversification activities to augment incomes and have started undertaking marketing activities – demonstrating their commitment and enterprise.

It should however be noted that these nurseries are also a part of a larger intervention by ITC – the 'Improve India's Agricultural Landscape through Women Entrepreneurs' initiative. This adds a new dimension to the Company's Women's Economic Empowerment Programme aimed at economically disadvantaged women across India to make agriculture more inclusive by enabling them to play a more primary role in agriculture. Towards this end, ITC has established 26 women-led custom hiring centres (CHCs) in several states. The objective of these centres is to reduce the cost of cultivation and drudgery, and enable timely completion of agri- operations in variable climatic conditions through improved technology. These CHCs act as hubs for information related to sustainable agricultural practices and mechanization with the aim of empowering women

farmers for sustainable livelihood options in agriculture. Examples of information available to the farmers through the CHCs are on improved technologies such as direct-seeded rice (DSR), machine transplanter, harvester, seed bank of improved varieties and weed management practices. They are also working on sustainable agricultural practices on wheat and other crops.

Over 6,800 women farmers have registered themselves as members for sustainable agriculture practices. It is worth noting that the total turnover of the CHC is Rs 3.82 lakhs till 2016-17. Through this innovative CHC platform, women farmers act as channels to extend better farm management information to communities that are otherwise disconnected from these services. These women-led CHCs in the area not only serve to validate the success of improved technology and practices, it equally speaks about the confidence of the women in having established themselves as successful progressive farmers and entrepreneurs, providing vital agri-services to farming households.

ITC's experience from promoting such rural enterprises provides several pointers about their successful scale-up under diverse circumstances. The trigger inevitably comes when the undertaking promises to add value to a prevailing economic activity in the form of new goods & services, ease of availability, competitive rates, etc. Equally important is the consequence of integration with a value chain: (a) it promotes the emergence of an eco-system that feeds and perpetuates each constituent of the organism, thus ensuring durability; and (b) it fosters a culture of enterprise & financial sustainability thus eschewing easy access to subsidy or grants to keep the enterprise going.

These however merely provide the enabling conditions for an enterprise's launch. Its eventual success or failure depends crucially on the continuing commitment and engagement of its principal promoters and beneficiaries. Our experience shows that high ownership, and therefore commitment, endures through a process of co-creation when needs & responses emerge organically from the bottom up. Active engagement results from the prompt and efficient realisation of value through transparent and accountable

processes.

Sustainable & enduring

While alignment with ITC's value chains has resulted in scale and deep engagement, which otherwise would not have been possible, the long-term success of these interventions also rest on two central pillars – creation of empowered grass-roots institutions and constant inflow of knowledge on best practices.

Grass-roots empowerment

The Programme is anchored in the formation of empowered village institutions (VIs) which carry out the governance of the project on behalf of the community, with NGO partners and ITC playing facilitating and coordinating roles. The participatory approach ensures that the beneficiaries are key decision-makers and active participants at all stages – from planning and execution to monitoring and maintenance. Carefully planned social mapping processes ensures that disadvantaged/marginal community members and women become an integral part of the consultations and are adequately represented in the VIs. The members' traditional wisdom and local knowledge is an important input not only in planning and execution of activities but, more importantly, in formulating rules, regulations and user charges and managing community funds. Members are also required to make cash contributions towards projects and pay user charges, creating a direct financial stake that is also a vital factor in creating high ownership levels.

In short, VIs plan, monitor and supervise all physical activities and financial transactions to ensure operational transparency and generate high ownership levels, fundamental to the long-term sustainability of the projects.

Multi-stakeholder partnerships

Given the magnitude and complexity of the challenges, ITC has always been wedded to an approach that stimulates multi-stakeholder partnerships. Apart from communities and the Company, they involve NGOs, professional agencies, and relevant Government bodies at all

levels. By leveraging these diverse competencies, ITC has created an eco-system of productive partnerships at all stages of the projects to co-create appropriate and relevant solutions.

All projects under ITC's Social Investments Programme are implemented in partnership with NGOs selected on the basis of their in-depth knowledge of the project area and appropriate technical expertise after a process of due diligence. In ITC's PPPs, respective State Governments or NABARD (National Bank for Agriculture and Rural Development) provide the bulk of funding and the three-way project implementation partnership is extended to include PRIs and other local government bodies. Other players include appropriate technical/ professional/ financial/academic agencies brought on board or consulted as and when required.

Since government resources are primarily delivered through PRIs in these projects, targeted capacity building exercises are a vital component in project activities to ensure efficient planning, co-ordination and utilisation of resources. Strengthening PRIs has also worked towards enhancing fund utilisation, improving efficient convergence with other government schemes (MGNREGS, health, sanitation, literacy, etc.) and building a robust institutional base to carry forward project activities and develop strategies for strengthening local livelihoods and economies collectively with their communities.

Way Forward

The main conclusions that can be drawn from the above discussion, which also provide clues to the action required going forward, could be summarised as follows:

- For all the challenges confronting Indian agriculture, it could still be the short to medium term answer for improving rural livelihoods through a combination of crop development, crop diversification through effective land-use, and knowledge and technology transfer premised on a production mix that is responsive to market signals. The government has clearly recognised this potential, evident from its drive to double farm incomes by 2020.

- Given the small holdings that dominate Indian agriculture, promotion of integrated farming systems could be a promising option since it creates an optimum mix of agriculture, horticulture and animal husbandry. Such an approach would strengthen the existing production base and provide alternative sources of incomes, helping to minimise dependence of these farmers only on rain-fed crops for economic survival and build their resilience in facing the adverse effects of climate change.
- Examples from ITC's interventions also demonstrate that improvement in the livelihoods and living conditions of rural poor women could be achieved by leveraging the potential of entrepreneurial options within agriculture. Indeed, such initiatives have a high potential for impact acceleration, given the needs of millions of smallholders yet to be covered. In the process, these interventions would fill several institutional voids that exist and provide solutions for the country's agricultural problems in the areas of technology and support services.
- The above experience provides a vital and timely reminder about the job creating potential of food processing, a huge prospective market given that an estimated two-thirds of agri-production is lost during pre-harvest in the fields or post-harvest supply chains. It also happens to be a sector which is very labour intensive. It is therefore very encouraging to note the launch of SAMPADA by the Government to give a timely boost to the food processing sector.

In combination, these interventions should expand rural employment significantly (a) within agriculture due to cropping intensity; (b) directly in food processing; and (c) because of increase in demand for ancillary and specialist services associated with expansion of agriculture and food processing.

But for these ideas to work and be scaled up significantly, equal emphasis has to be given to creating and nurturing the architecture to ensure sustainable amplification of such interventions. A framework,

once again based on our experience at ITC, is being suggested for further debate and suggestions:

- Leveraging IT: In today's context, given the multiplicity and variety of data sources, and its large volume, it is not possible to synthesise or discover patterns without leveraging IT. Neither is scale-up easy without IT platforms.
- Building Capabilities of the Ecosystem: Prior experience of successful execution of appropriate interventions should enable the co-creation of a tool kit by all concerned stakeholders designed with the objective of building the capabilities of all the players in the eco-system, particularly in enhancing their model-customisation abilities. All scale-up beyond current projects could take place through such capacity building. In addition to training on project management skills, equal focus on fund leverage from other organisations, including the government, would enable resourcing for scale-up. It may also be advisable to identify specialised training institutions.
- Creating champions: Level of engagement for demonstrating the PoC matters in the context of scaling. It would therefore be useful to make assessments on who to target for different interventions and plan accordingly to create champions who will replicate the model being promoted at different levels. Thus a BDO, if motivated has the authority and resources to replicate in all the villages under her block, while a DM could drive it across all the blocks in her district, and so on.

***

Harekrishna Misra and Pramod K Singh

Understanding Strategic Role of NRLM

Launched in 2011, the *Deendayal Antyodaya Yojana*-National Rural Livelihoods Mission (DAY-NRLM) aims at eliminating rural poverty by enhancing self-employment and skilled-wage employment opportunities for the rural poor, in a phased manner. Towards this end, the Mission seeks to strengthen and diversify the livelihood assets of the poor and improve their incomes and quality of life. This paper draws from the findings of national level 'Independent Assessment of Design, Strategies and Impacts of DAY-NRLM' conducted by IRMA. At the outset, the paper offers key features of DAY-NRLM. The paper builds on a framework supported by well-founded dual systems theory in which it is argued that sustainable enterprises for livelihood promotion would be possible with active support of well-planned funding, establishing competent network of agents to mobilize and nurture collective enterprises with long-term engagements with poor women. DAY-NRLM strategy are described in three dimensions— structural, institutional, and networks. In order to understand the intent, adoption plan, and DAY-NRLM implementation process these three dimensions are assigned to the assessment of 'strategic fit' and 'strategic coherence'. The research adopts multiple methods: qualitative, quantitative and fuzzy cognitive mapping.

This hierarchical and formalized structural orientation strategy provided the desired support to local poor households to unite to address their livelihood concerns. The structural and institutional fitness between NRLPS, SRLM and DMMU is quite remarkable leaving BMMU to organize in a better way. In terms of networking, all actors have shown a relatively lower fit, leaving room for adopting strategy to transform all intervention strategies with market orientation.

SHGs are better fit across structural and institutional dimensions, while having scope to get networked with banks, NGOs and other intervening agents. VOs and CLFs need to show more fitness since these entities lack in all dimensions of fitness as compared to SHGs. However, strategic implementation needs course correction in terms of capacity building of the entities created, the creation of networks of these entities and their preparation to undertake market oriented activities with adequate convergence plans.

Introduction

The *Swarnjayanti Gram Swarojgar Yojana* (SGSY) of the Ministry of Rural Development (MoRD), started in 1999 aimed at providing self-employment to below poverty line (BPL) households through the establishment of self-help groups (SHGs) in order to bring them out of poverty. Evaluation of the SGSY by several institutions showed mixed results. Out of estimated 25 million households organized into SHGs until 2010, only 22% succeeded in accessing bank credit [1]. Under SGSY, often, the capital investment was provided up-front as a subsidy, without adequate investment in social mobilization, institution and capacity building. Moreover, uneven geographical spread of SHGs, high attrition rates among members of SHGs, and lack of adequate banking sector response impeded the program performance. There was a considerable mismatch between program capacity and program requirements. Absence of collective institutions in the form of SHG federations precluded the poor from accessing higher order support services for productivity enhancement, marketing linkages or risk management. It is in this context that the Government of India constituted Radhakrishna Committee on credit related issues under the SGSY to examine various aspects of the scheme implementation. The Committee recommended adoption of 'Livelihoods Approach' to rural poverty elimination. The recommendation of the Radhakrishna Committee and restructuring SGSY into National Rural Livelihoods Mission (NRLM) in FY 2010-11 to provide a sharper and greater focus as well as momentum for poverty elimination.

DAY-NRLM is a centrally sponsored programme aims at eliminating

rural poverty through promotion of multiple livelihoods of each rural poor household. It seeks to reach out to all rural poor households and impact their livelihoods significantly by 2024–25. This is sought to be achieved through universal social mobilization, *inter alia*, organizing one woman member from each rural poor household into SHGs, their training and capacity building, facilitating their micro-livelihoods plans, and enabling them to implement their livelihoods plans through accessing financial resources from their own institutions and banks. The community institutions are expected to enable the poor to overcome three types of exclusion responsible for perpetuating poverty *viz.,* social, financial, and economic. The four key components of the Mission *viz.,* social mobilization and institution building; financial inclusion; livelihoods promotion, and convergence; and social development are designed to address these exclusions of the rural poor, eliminate their poverty and bring them into the mainstream. Achievement of the Mission as of March 2017 is illustrated in Figure 1. As the Mission has expanded to all States and has made significant progress, it is important to understand the effectiveness of the design and strategies to enable the programme achieve desired outcome.

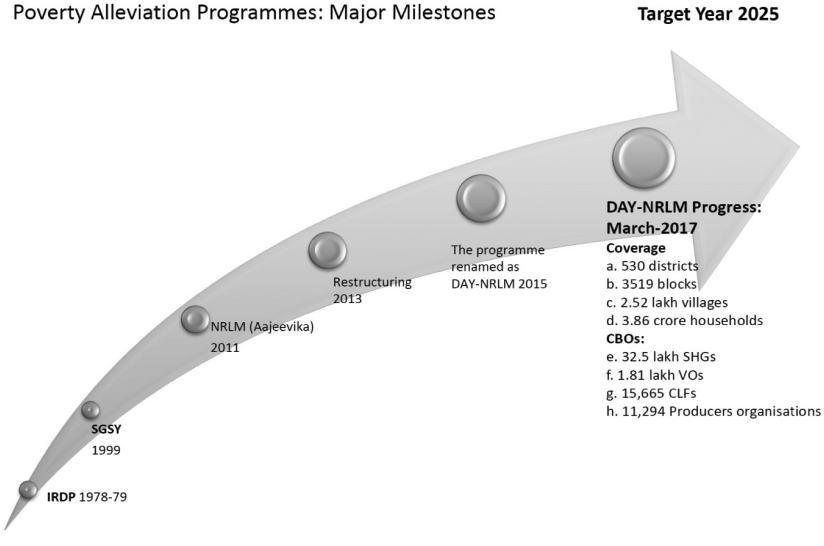


Figure 1: Achievement of DAY- NRLM

Strategically DAY-NRLM has envisaged the interventions in a sequence. The first in the sequence is to encourage women of the rural households to expose themselves for intensive application of resources, both financial and human, for mobilizing the poor into functionally effective institutions, promote their financial inclusion and diversify and strengthen their livelihoods. This 'phased strategy' involved piloting followed by scale up at national level. The second in the sequence is to ensure implementation of 'intensive block strategy'. Under this dedicated implementation support structures have been set-up at all levels right up to the block. The third in the sequence is to implement 'livelihood' strategy through entrepreneurial activities by establishing institutional infrastructure and ecosystem with by a) enhancing and expanding existing livelihoods options of the poor, b) building skills for the job market outside; and c) nurturing collective enterprises.

The NMMU is the mission management unit that is meant to lead the programme at the national level. SMMUs are set up to spearhead implementation at the state level. The DMMUs and BMMUs are the professional implementation units at the district and block levels. Sub-block units are informal entities led by cluster coordinators. Professionals largely hired from the market, lead the thematic units in the SMMU and DMMUs, under the overall technical support and guidance from the NMMU. The BMMUs lead Mission implementation from the front-end, with the support of community resource persons and other types of social capital. The strategy of creating sensitive support structures at different levels of Mission has provided the much-needed professional support for catalysing the Mission activities.

The process design is also well articulated with phased approach for implementation. Given the constraints of financial resources and social capital, the Mission has rightly adopted a phased intensive approach, along with a resource block strategy in partnership with NRO states. In addition, the Mission has had several partnerships with NSOs and other livelihoods organizations to strengthen implementation. The 'proof-of-concept' demonstrated through resource blocks and the social capital generated in the resource/

intensive blocks has contributed to the pace of implementation. Notwithstanding these limitations, the Mission has by and large adopted process intensive approach, which has been, to some extent, successful in galvanizing the collective energies of the poor for undertaking livelihood activities.

The key features of the mission[1] are as follows:

- **Universal social mobilization and social inclusion of the poor:** DAY-NRLM envisages that at least one woman member from each identified rural poor household is brought under the SHG network in a time bound manner.
- **Financial inclusion:** DAY-NRLM works on both demand and supply sides of financial inclusion. On the demand side, it promotes financial literacy among the poor and provides catalytic capital to the SHGs and their federations. On the supply side, the Mission coordinates with the financial sector and encourages use of Information and Communication and Technology (ICT) based financial intermediation, business correspondents and community facilitators like *Bank Mitra*.
- **Community funds as resources in perpetuity:** The Mission provides revolving fund (RF) and community investment fund (CIF) as resources in perpetuity to the institutions of the poor, to strengthen their institutional and financial management capacity and build their track record to attract mainstream bank finance.
- **Livelihoods promotion:** It looks at the entire portfolio of livelihoods of each poor household, and work towards stabilizing and enhancing the existing livelihoods and subsequently diversifying their livelihoods.
- **Rural self-employment training institutes (RSETIs)—** The Mission encourages public sector banks to set up RSETIs in all districts of the country to transform unemployed rural youth in the district into confident self-employed entrepreneurs.

1. Based on NRLM Mission Document, Ministry of Rural Development, 2012

- **Convergence, partnerships, and linkages**—DAY-NRLM places high emphasis on convergence with other programmes of the MoRD and other Central Ministries, state governments. Partnerships with NGOs and other CSOs are also part of the overall strategies. Linkages with panchayat raj institutions (PRIs) are felt necessary by NRLM to consciously structure and facilitate a mutually beneficial working relationship between *panchayats* and institutions of the poor.
- **Sensitive Support Structures:** DAY-NRLM's implementation strategies envisage deployment of dedicated human resources to have suitable linkages with Government(s), District Rural Development Agencies (DRDAs), and PRIs.
- **Funding pattern**—DAY-NRLM is a Centrally Sponsored Scheme and the financing of the programme is currently being shared between the Centre and the States in the ratio of 60:40 (90:10 in case of North-East and Himalayan States including Sikkim and Jammu & Kashmir, while the centre meets 100% of the cost in respect of UTs).

Framework for Assessment of Strategies

Processes and strategies of DAY-NRLM were analyzed at three levels: (i) dedicated support structure such as NMMU, SMMU, DMMU, and BMMU; (ii) multi-tiered people's institutions such as SHGs, VOs, CLFs, other federations; and (iii) enterprises and their federations including value chain agents, aggregators and service providers. Not only the implementation structure but also the processes and strategies influence the outcomes/ impacts. Besides, the resulting outcomes/ impacts help design the implementation structure, processes and strategies. In Figure 2 the framework adopted for evaluation is presented. It is argued through this framework that DAY-NRLM extended its learning from previous intervention strategies to make it more effective, long term and sustainable in terms of creating and nurturing entities for livelihood promotion. The assessment framework is presented in Figure 2.

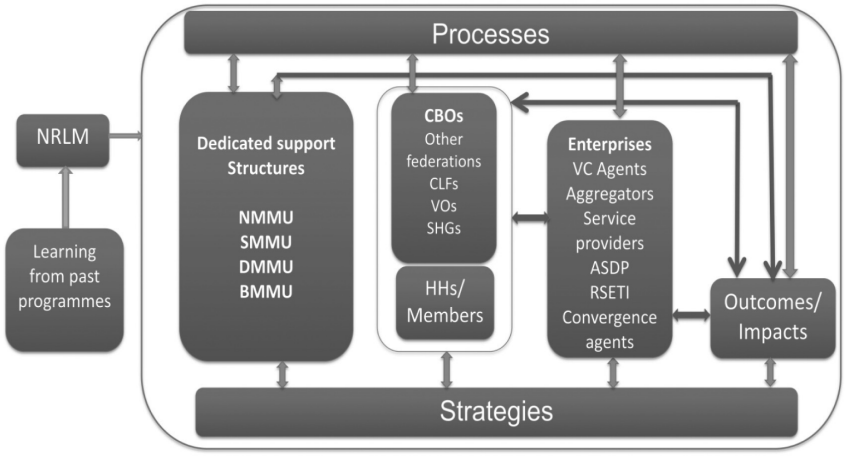


Figure 2: Assessment Framework (Adapted from [2],[5],[7])

The framework is supported by well-founded dual systems theory in which it is argued that sustainable enterprises for livelihood promotion would be possible with active support of well-planned funding, establishing competent network of agents to mobilize and nurture collective enterprises with long term engagements with communities (especially women) [2],[3],[4]. The proposed framework has been used by the evaluation team of the Institution of Rural Management Anand (IRMA) as part of independent evaluation of NRLM programme. [6]. While doing so, framework takes into account the incremental and progressive competency building of the enterprises to sustain themselves in the long-term and paving the way for NMMU and SMMU to withdraw successfully.

It is understood that DAY-NRLM as a programme has shaped up by strategically taking note of the experiential learning from past intervention strategies. Therefore, it is considered appropriate to understand strategy of DAY-NRLM with three dimensions and these are a) structural, b) institutional and c) networks. These three dimensions are mapped to assessment of '**strategic fit**' [7] and '**strategic coherence**' [8], [9] in order to understand the intent, adoption plan and implementation process of DAY-NRLM.

The 'strategic fit' is an attempt to summarize some of the key relations between DAY-NRLM as 'program' and its links between the 'beneficiaries' (rural poor) and the 'organisation' (in this case simplified as SRLM or the State Rural Livelihood Mission). 'Strategic coherence' defines as the internal competencies of the institutions to purse cost leadership, manage market orientation and strive for sustainability while displaying 'core competencies'. Coherence is considered important in the case of DAY-NRLM because it not only sees NRLPS, SRLMs, DMMUs and BMMUs as entities created out of structurally orientated strategy, but also these entities are expected to create and nurture community based organisations (CBOs). In both the cases strategic coherence is necessary for not only inculcating synergy to establish best practices for livelihood systems through CBOs, but also to find suitable mechanism to withdraw [10], [11].

Research Methods

The study adopted multiple methods: (i) Qualitative methods for exploration of design, implementation structures, implementation process and strategies of DAY-NRLM intervention; (ii) fuzzy cognitive mapping (FCM) for assessment of full range of impacts; and (iii) micro-econometric approach for impact evaluation of key outcome variables.

The study was conducted in eight states namely Bihar, Jharkhand, Madhya Pradesh, Maharashtra, Andhra Pradesh, Tamil Nadu, Jammu and Kashmir, and Nagaland. The classification of states using two-dimensional criteria has been adopted for this purpose. Based on the rural poverty ratio, the states were classified into three groups viz., low, medium and high poverty ratio states. Similarly, on the basis of the progress achieved in DAY-NRLM, states were classified into three groups or categories – low, medium and high performing states. Given nature of data availability, the state level progress of DAY-NRLM has been assessed using five parameters viz., coverage of BPL households, spread of intensive blocks, density of cluster federations, and release of funds from the Centre to States.

In-depth assessment of design, implementation structure and processes, and strategies were conducted in 16 districts of the 8

sample states. Two blocks (one each in case of Nagaland and J&K) were randomly selected in the sample states. A minimum of two VOs and four SHGs were randomly selected from each sample blocks. CLFs were also studied wherever they existed in the sample blocks. Besides, SRLM representatives from most of the states participated in a two-day workshop and shared their perspectives on the progress of DAY-NRLM.

For selection of districts, index scores of DAY-NRLM progress was computed based on total RF and CIF disbursement and the number of VOs formed. Deprivation score was computed using SECC data. These indices were computed using standard methods adopted for computing human development index. Composite scores were divided into three quintiles (high, medium, low). One district each was selected from the first two categories by random sampling. A similar method was followed for block selection in the selected districts.

Findings

➢ Assessment of Strategy for Structural Arrangements

Structural arrangements of DAY-NRLM indicate that interventions are based on creating formalized structures. These structures are NRLPS and NMMU, SRLMs, DMMUs, and BMMUs. The basic understanding in this strategic approach is to shift the responsibility and accountability of livelihood based interventions to the states through participation and collaboration with the GoI. While doing so DAY-NRLM understands those structures that aim at formalizing the road map for interventions, shifting emphasis to 'demand driven strategy' from the 'allocation based' strategy. The demand driven strategy also implies that states are required to formulate their own livelihoods-based poverty reduction action plans to meet the demands of the community institutions of the poor. Given the enormity of the task, DAY-NRLM has adopted a strategy that seeks to support the poor households over a period of 6-8 years. Thus, the states are given the flexibility to develop their perspective as well as annual action plans for rural poverty reduction, within the overall allocation for the states based on *inter-se* rural poverty ratios. The element of

the strategy is that the poor are expected to drive the demand-driven strategy through participatory planning and implementation.

Overall DAY-NRLM strategy is strongly linked to its human resources (HR) strategy and has the right people and teams in place. The Mid-Term Appraisal (2015) of DAY-NRLM had indicated that over 7,000 professionals in DAY-NRLM were recruited primarily from the market through a transparent selection process. This approach has by and large been successful in terms of getting quality and committed manpower to work in rural areas. However, there are significant variations across states in terms of remuneration offered and alternate opportunities through CSR or similar government programmes. This has led to attrition especially at the district level which in turn has affected the programme delivery.

A key element of DAY-NRLM's success is the way human resources are managed at all levels. Stability of the CEO/SMD at the state level has been a significant contributing factor to the success of the programme. While NMMU has been able to engage a good number of professionals through various channels, the SRLMs and DMMUs are not able to attract and retain the required number of professional staff. The model HR Manual developed by DAY-NRLM is quite comprehensive and enabling thematic meetings on HR as has happened recently is a welcome step in dealing with recurring HR issues in the states. Having clearer performance assessment systems was a much needed requirement and there has been significant progress through laying out the guidelines for improving work hygiene.

- **Assessment of Strategy for Institutional Arrangements**

Another major shift in strategy in DAY-NRLM interventions is identifying resource blocks, and cadres for accelerating creating and nurturing of CBOs. Resource blocks are carefully chosen based on poverty levels and 'Proof of concept' is tried out in limited blocks intensively for 5 years. A total of 73 resource blocks were envisaged in 5 years in NRLP. External Community Resource Persons (CRPs) were to be drawn from NSOs like OMPLIS/SERP. Each resource block will be capable of producing local 'community heroes' for 20 blocks in 5 years. Social capital from the resource blocks enables

organic scaling - through local community heroes in the rest of the blocks in a phased manner.

The basic shift in strategy started with establishing micro-level mechanisms of PIP (Participatory Identification of Poor) and thereafter adopting SECC based identification followed by preparation of micro-plans, provision of revolving fund, community investment fund, etc. Operationally, however, the process of developing Annual Action Plans (AAPs) is in place and is an important strategic tool for planning and fund allocation. This has been quite robust and involves processes that build-up from each block and gets consolidated at district and state levels. The study team suggests that SRLMs go through a visioning exercise every three years to better plan their activities and enable rethinking of some key assumptions of design and be more responsive to field units.

The primacy of SHGs as key-local institutions also varies due to institutional and socio-cultural differences. In such cases, there needs to be alternate strategic thinking for making DMMU part of the poverty reduction eco-system, where they could partner with local actors. Currently, some strategic thinking is taking place by default at the state and district levels. SRLMs can find ways of instituting learning mechanisms that can lead to more effective strategies. Local level workshops involving many stakeholders could be an effective way of capturing useful ideas.

To set-up quality institutions of the poor, DAY-NRLM initiated an intensive block strategy, under which a team of external CRPs and a Professional Resource Person (PRP) enters a block and complete five rounds of social mobilization and institution building in a year. Each team is expected to ensure adequate social mobilization, create new SHGs and strengthen existing SHGs to comply with the *panchsutras*. CRPs also provide support to promote and strengthen SHG federations, financial inclusion, social inclusion and livelihoods promotion. All the states visited showed a high degree of social inclusion in terms of mobilization of the SC and the ST households.

The DAY-NRLM is premised on the ground that well-developed community institutions can create demand for credit, government

services and public service delivery. We observed that the capacities of community institutions to not only manage their credit requirements but also take charge of monitoring of several local public organizations such as schools and PDS outlets. Investing in community institutions to participate in decision-making process, and management of funds is an on-going process. We endorse this strategy of DAY-NRLM though there are considerable variations across states in this regard.

Another shift in DAY-NRLM strategy is to create and nurture CBOs in various forms with active ownership of members. These forms of CBOs are SHGs, VOs and CLFs. Besides, as part of DAY-NRLM strategy is to create producer companies in farm and non-farm sectors. Structurally this strategy fits well with overall framework as presented in Figure 2.

- **Assessment of Strategy for Networks**

DAY-NRLM recognises that the poor have a portfolio of activities, both farm and non-farm and should be CBO based. DAY-NRLM strategy considers it important to ensure that all the CBOs are well networked internally as per the structural orientation envisaged. In addition to this strategy, it is also planned to create and nurture producer companies in order to manage economies of scale and scope and chart out strategic support for their sustainability. The aim of DAY-NRLM is to strategically plan for withdrawing from the intervention process by the year 2025.

Sector based value chain network strategy are essential for the DAY-NRLM interventions to support CBOs. In this direction DAY-NRLM strategically adopted replications of farm based livelihoods through the application of ideas of Community Managed Sustainable Agriculture (CMSA) that includes Non-Pesticide Management (NPM) and System of Crop Intensification (SCI) and zero budget natural farming, etc. based on successful experiences in Andhra Pradesh, Bihar and other states. There have been successful pilots and scaling up of these initiatives in many states. DAY-NRLM has potential to take credit for rooting agro-ecology amongst the farmers in India at a large-scale even as these systems have received inadequate attention from the mainstream agricultural research centres. Further, the focus

on women and the use of community-based extension are creditable outcomes of livelihood interventions in DAY-NRLM.

Our quantitative assessment reveal that the intervention in the allied sector of agriculture, namely animal husbandry is relatively faster. Given the limited access to cultivable land and lack of property rights of poor women producers, activities like goat-rearing, dairying, poultry, pig rearing etc., have been quite effective at household and village levels.

The design of MKSP allows for greater participation Review of MKSP experiences indicates that there have been both significant partnerships with livelihood professionals and good potential for its scaling-up. Livelihood activities can be enhanced if the basic institutions of the poor are strong. The primary focus of farm livelihoods initiative is scaling-up core livelihoods promotion models on sustainable agriculture, livestock and non-timber forest produce in all intensive blocks.

One of the shortcomings of DAY-NRLM is relatively poor development of micro-enterprises leading to poor networks with value chain agents, aggregators and other network partners.

- **Assessment of Strategic Fit and Strategic Coherence**

Based on our research findings figures 3 to 6 are generated to understand the status of 'Strategic Fit' and 'Strategic Coherence' of the entities created under DAY-NRLM programme [12], [13], [14], and [15]. These figures are generated with the inferential inputs through a scale having range between 1 and 10 (1-lowest and 10-highest). The scores are arrived based on i) discussions with stakeholders; and ii) observations and inputs received through research methods adopted.

In Figure 3 'Strategic Fit' among intervening agents created under DAY-NRLM is assessed. This fitness is absolutely essential since SRLMs need to strategize interventions by identifying local contexts. SRLMs are expected to receive support of NRLPS and guide DMMUs and BMMUs in the process. It is seen that structural and institutional fitness among NRLPS, SRLM and DMMU are quite noteworthy leaving BMMUs to organize in a better way. This

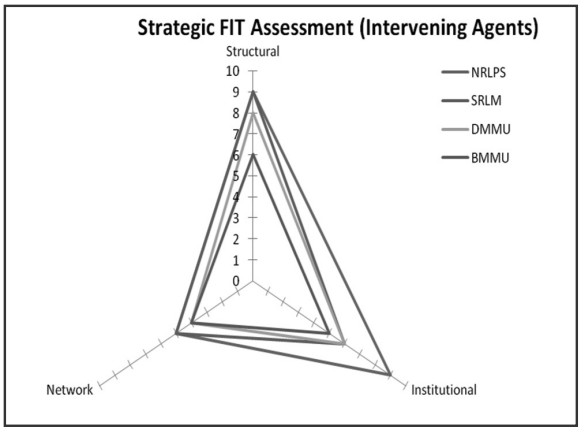


Figure 3: Strategic Fit - Intervening Agents

is happening because of inadequate HR policies, funding policy and autonomy. As regards networking, all the agents have shown relatively lower fit leaving scope for adopting strategy to transform all intervention strategies with market orientation.

Strategic fit among CBOs nurtured under DAY-NRLM has been assessed as presented in Figure 4. It may be seen that SHGs are better fit across structural and institutional dimensions while having scope to get networked with banks, NGOs and other intervening agents. VOs and CLFs need to show more fitness since these entities lack in all dimensions of fitness as compared to SHGs.

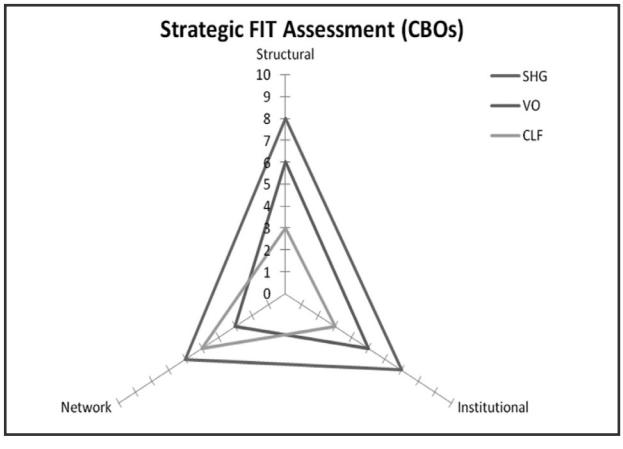


Figure 4: Strategic Fit - CBOs

In Figure 5 strategic coherence is assessed among intervening agents. It may be seen that fitness of NRLPS and SRLMs are better than DMMUs and BMMUs. This is because of interference of district administration and lack of autonomy.

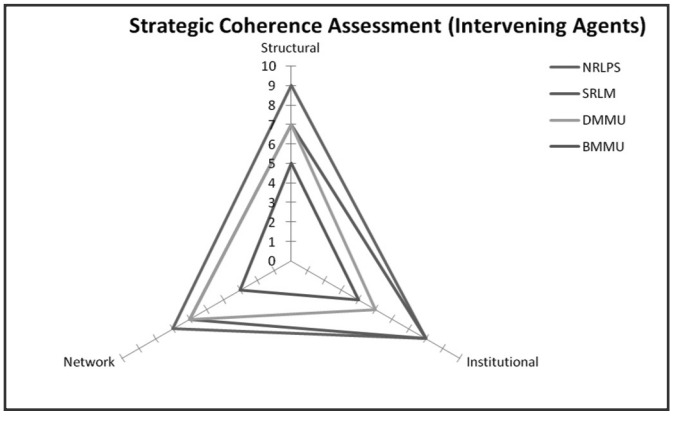


Figure 5: Strategic Coherence- Intervening Agents

In Figure 6, coherence among CBOs nurtured is presented. These entities are showing similar trend as was assessed in strategic fit exercise. Core competencies and networks need absolute care for sustenance.

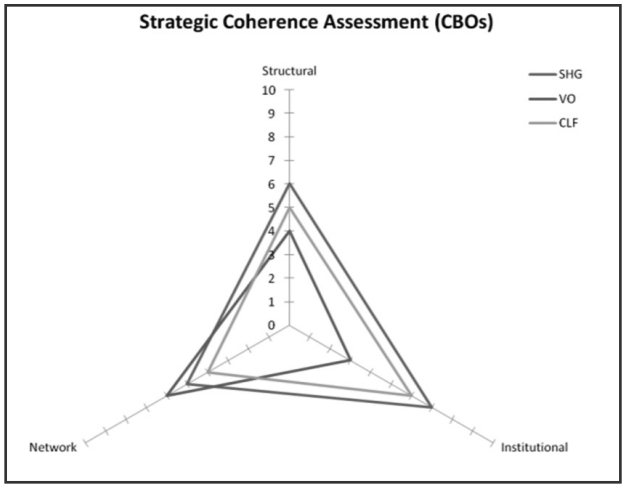


Figure 6: Strategic Coherence- CBOs

Conclusions

DAY-NRLM as a programme has long term plans and has been able to bring all states together with central assistance by setting up well defined structures up to the levels of SRLMs, DMMUs and BMMUs. This hierarchical and formalized structural orientation strategy provided the desired support to the local poor households to join together to address their livelihood concerns. Progress of DAY-NRLM as is evident from the evaluation study has been seen in terms of nurturing of SHGs, VOs and CLFs. DAY-NRLM has strategically emerged as a model programme of poverty alleviation with creation of collectives. As indicated earlier the study team believes that there is significant scope for investment in strategic planning at the district and block levels and the leadership therein.

Strategic intent to implement the long term programme like DAY-NRLM has been quite valid. Its phased implementation strategy of identifying intensive and resource blocks, with the support of NROs, eCRPs and PRPs have strategic 'fit' and 'coherence' in executing the plans. Strategic adoption of the programme has been quite evident in the form of formalizing the SRLMs up to the levels of BMMUs that are led by suitably deployed human resources for progressive creation and nurturing of SHGs, VOs and CLFs. Strategic implementation however, needs course correction in terms of capacity building of entities created, networking these entities and preparing them for taking up market oriented activities with suitable convergence plans. Strategy for withdrawing from the planned interventions needs formalization with course correction mechanism.

Acknowledgements

The paper is based on the report of the study 'Independent Assessment of Design, Strategies and Impacts of Deendayal Antyodaya Yojana-National Rural Livelihood Mission' [6] funded by the Ministry of Rural Development, Government of India. We thank members of the study team Vivek Pandey, HS Shylendra, Rakesh Arrawatia, C Shambu Prasad, RM Vikas, Mukul Kumar, and Sankar Datta especially for their contributions in in the fieldwork as this paper draws a lot from their field narratives.

References

1. Planning Commission (2011) Report of the Working Group on Rural Poverty Alleviation for 10th Five Year Plan (2002-07), Planning Commission, December 2001
2. Michael King, Niels Keijzer, Eunike Spierings, Alan Matthews (2012) Measuring Policy Coherence for Development, European Centre for Development Policy Management (ECDPM), Maastricht and Institute for International Integration Studies, Trinity College Dublin
3. Mason, David E. (1984) Voluntary non-profit enterprise management, Non-profit management and finance Mathematical Concepts and Methods in Science and Engineering, Plenum Press, ISBN: 0306415828, 9780306415821
4. Hicks Norman, and Paul Streeten (1979) Indicators of development: The search for a basic needs yardstick, World Development, Elsevier, Volume 7, Issue 6, June 1979, Pages 567–580
5. Schumpeter, Joseph Alois (1961) The Theory of Economic Development, An Inquiry into Profits, Capital, Credit, Interest and the Business Cycle, Oxford University Press.
6. IRMA (2017) 'Independent Assessment of Design, Strategies and Impacts of *Deendayal Antyodaya Yojana*-National Rural Livelihood Mission' Institute of Rural Management Anand
7. Zajac, E.J., Kraatz, M.S. and Bresser, R.K.F. (2000) Modeling the dynamics of strategic fit: a normative approach to strategic change. Strategic Management Journal, 21 (4), 429–453, April.
8. Xu, S., Cavusgil, S.T. and White, J.C. (2006) The impact of strategic fit among strategy, structure, and processes on multinational corporation performance: a multi method assessment. Journal of International Marketing, 14 (2), 1–31
9. Venkatraman, N. and Camillus, J.C. (1984) Exploring the concept of 'fit' in strategic management. Academy of Management Review, 9 (3), 513–525
9. Richard A. Hunt (2015) Contagion Entrepreneurship: Institutional Support, Strategic Incoherence, and the Social Costs of Over-

Entry, Journal of Small Business Management, 2015, 53, 5

10. Gresov, C. (1989) Exploring fit and misfit with multiple contingencies. Administrative Science Quarterly, 34,431–453.
11. Dobni, C.B. and Luffman, G. (2000) Market orientation and market strategy profiling: an empirical test of environment-behaviour-action coalignment and its performance implications. Management Decision, 38(8), 503–519.
12. Carlo Bagnoli, Marco Vedovato (2014) The impact of knowledge management and strategy configuration coherence on SME performance, Journal of Management & Governance, 2014, 18, 2, 615
13. David, Fred R, (2011) Strategic management: concepts and cases, 13th ed, Prentice Hall,ISBN-13: 978-0-13-612098-8
14. Galbraith, J.R. and Nathanson, D.A. (1978) Strategy Implementation: The Role of Structure and Process, West, New York, NY.

***

Rekha Jain, G Raghuram & Sebastian Morris*

Pradhan Mantri Gram Sadak Yojana (PMGSY)

Outcome Monitoring Study

Background

With the perspective that rural roads are a critical infrastructure to improve rural livelihood, and alleviate poverty, the World Bank has partnered with the GoI for supporting the Pradhan Mantri Gram Sadak Yojana (PMGSY). In the first phase, the Bank's Rural Road Project I (RRP was implemented in select districts of Jharkhand, Himachal Pradesh, Rajasthan and Uttar Pradesh. RRP I was approved for 2004-2012 with an outlay of $400 million. The second phase RRP II (2010-2015) focused on providing all-weather roads to villages in eight states. These include the low-income states of Bihar, Jharkhand, Rajasthan and Uttar Pradesh, and the special category upland states of Himachal Pradesh, Meghalaya, Uttarakhand and Punjab (http://www.worldbank.org/en/country/india/brief/rural-roads, accessed on July 28, 2016) as per the PMGSY guidelines.

The current study focuses on the eight RRP II states.

Objectives

The objectives of the study were:

i. To develop a simple and practical, yet robust standardized outcome monitoring system for PMGSY which could be used regularly and is capable of being scaled up.

ii. To test this system in selected states through the conduct of limited period surveys to ascertain the impact of the program in these states.

iii. To embed this monitoring system within a broader framework

* Based on a study conducted by the Indian Institute of Management, Ahmedabad

for poverty alleviation as part of the GoI's 12th Five Year Plan (2012-17).

iv. In specific context of poverty alleviation to study the impact on agriculture.*

v. To design the monitoring system in a way that it enables the user to develop recommendations that could be used to modify the program suitably.

*We made this a part of main study, rather than as an additional study based on our discussions with NRRDA held on June 24, 2016 at New Delhi.

Design of the Study

In order to formulate the outcomes/goals and accordingly develop a list of possible indicators that could be used to monitor the outcomes of the program along the economic, employment and social dimensions, we followed a multi stage process. The analysis from prior studies was taken into account. Based on this, we had FGD (Focus Group Discussion) in all the study states with officials of the WB, NRRDA, selected SRRDAs, villagers, opinion leaders, women, specified groups such as women and SC/ST.

The data collection methodology to assess the socio-economic benefits of roads was a survey. Two kinds of instruments were used: (i) Household (HH) individual rural citizens and key opinion makers in the habitations and (ii) Habitation level.

Based on the above approach, we tested the data collection methodology in selected states in mutual consultation with the Bank, and supervised collection of data in these states through limited period surveys. A different consulting firm under our guidance and supervision carried out the collection of data.

Findings from the impact evaluation exercise in these states would be fed into a Monitoring and Evaluation (M&E) database in MS Excel, to provide inputs to revise the outcome monitoring system.

Sampling Framework

A multistage sampling process was adopted. The samples for the

Habitations questionnaire was based roughly on the number of Habitations in the state and the HH sample was roughly proportional to the population with due increase when the population of the Habitation is diverse across caste groups. In taking up the Habitations within a state, further stratification based on agro-climate and geography, distance to large urban centers, and the characteristics of the embedding road network (one way all weather, two or multiple all weather connectivity) was considered once the pilot study was carried out. The modus operandi was to randomly select the HHs once the Habitation was selected. Opinion leaders, key personnel (such as school teachers) were interviewed to build the habitation/gram panchayat level data. We covered 282 Habitations and 3177 HH.

Summary of Approach to the Study

The objectives of the study identified above were fulfilled by taking the following measures:

i. We focused on the primary variables of Speed of Travel Gains (hitherto Speed Gains) and Time Saved1 for types of services/ access needs. Since we wanted to capture the influence of PMGSY road, our study has examined both these measures in the presence of PMGSY and non-PMGSY road. This was done across the road characteristic variables (such as Phase of Construction, Type of Roads, Agro-Climatic Zones and States).

ii. The economic and social, and cultural benefits which depend on a number of other variables have been captured through user surveys to understand perceived benefits of PMGSY roads. These were used to derive a smaller set of variables for incorporating into future surveys. These were checked for correlation with the Speed Gains and Time Saved so that "speed of travel" and time saved becomes the easier and more tangible measures for monitoring the effectiveness of the PMGSY roads on a continuous basis.

[1]Time saved was measured as the percentage (or fractional time) reduction in accessing the service/ need between then (before the road building programme) and now (after road building). In the case where a PMGSY

was built it would be before. In the case where there is no PMGSY, the difference between after and before should show very little change. The "speed of travel gain" = (D/t2) – (D/t1) where t1 and t2 are times taken earlier and now. D is specific to the HH or Habitat and pertains to accessing the service/ facility in question (e.g. taluka headquarter, mandi, district highway head, heath care service etc). Note that t1 and t2 can differ from each other for a number of reasons that include mode change (such as the use of motorized transport when earlier that was rare) and the speeds of vehicles rising on a much better road.

iii. Considering the broader framework for poverty alleviation as part of the GoI's 12th Five Year Plan (2012-17), the Habitation analysis in Chapter 5 included variables on SC/ ST population, BPL population and Agricultural Labour population. This was to understand the impact of presence and maintenance of PMGSY roads on these marginalized populations.

iv. Since our study has identified a small set of variables as outcome monitoring variables across the different phases and quality of roads, this process can be scaled. This was an eight state study with consideration for various agro-climatic zones that capture various terrains and socio-economic profiles. Thus, the model is largely representative of the diverse terrains and socio-economic profiles.

The perception about access and other variables include specific questions on agriculture e.g. price realization of agricultural produce, access to market/mandi for agricultural produce, shift in agricultural practices or cropping pattern etc. The Speed Gain and Time Saved also include questions on time saved to mandi etc. This was to ensure that the study captures the impact on agriculture and its supply chain. Specific focus on impact on agriculture is ensured by analyzing impact across agro-climatic zones. Accessibility to markets/mandis for various agro-based products is also investigated. This has helped us to embed the aspects of agricultural supply chain in our analysis.

Findings from the Study

i. The presence of PMGSY road brings about significant and

substantial gain in speed of movement (obverse of time reduction), in access to all administrative headquarters and facilities considered. The same is also highly correlated with the access and other benefits claimed and reported by Habitats and HH.

ii. This is also found to be the case across states and agro-climatic zones.

iii. The impact of the PMGSY in terms of Speed Gains and Time Saved is less when the road in question was either of small length, or where the prior road was good. (e.g., Punjab). This is in terms of speed gain improvements and time saved. Nevertheless even there, there is maintenance of the Speed of Travel and of time in the face of rising use.

iv. The impact is also seen to be more in difficult terrains and agro-climatic zones such as plateau and terai, where the last mile before the PMGSY was uniformly poor.

v. The quality of road is another important factor. The specifications and most importantly the actual construction quality of PMGSY roads are much better than of other non-PMGSY roads. This being so even when the PMGSY roads are technically "earthern bound roads" or "macadam roads" they are able to yield significant speed gains/time saved. This would imply that the core change that has made the PMGSY better are the organizational, that the arrangements being "incentive compatible" have delivered in a significant way.

vi. The phase of construction of road is an important predictor of the requirement of maintenance of the road. This has become significant because maintenance is not to be assumed given the organizational weaknesses of government roads departments. Thus, the regular monitoring of road quality (emerging bottlenecks, congestion points, small sections of failure, overall surface roughness) and maintenance measures are suggested for holding on to the optimum speeds of travel /time of travel.

vii. There was decline in quality (as measured by speed gains)

over-time due to ageing of roads. Maintenance of roads thus becomes an important aspect of the primary task of the implementation agency. This is obvious. If a road is not maintained well, the quality of the road deteriorates to result in loss of social value.[2]

viii. Villages with higher populations of SC/ST, BPL and other backward sections of the society have indicated similar or (typically) higher speed gains. Thus, construction of PMGSY roads is able to bring about socio-economic benefits to the poor on par with that for the poor or socially backward and sometimes even more than for other sections of society. Since the more "remote" and as before the PMGSY, poorly connected habits would have had larger proportions of tribal and excluded people, and now they are being connected through roads that are distinctly better, hence these results. Being also not a transfer benefit but a benefit that arises out of value creation, the importance of the PMGSY by the improved access it creates, cannot be overstated. These sets of people may otherwise have not been able to leverage road connectivity in the existing administrative and political framework. Thus their inclusion via better connectivity can be attributed to the PMGSY.

ix. From the various correlational analyses, Principal Component Analysis (PCA) and regressions carried out in the study on the habitat and household dataset, one can infer that presence of PMGSY road is the major driver of perception in improvement of access. This happens measurably through speed gains and time saved to various administrative headquarters and facilities.

x. For monitoring and evaluation, speed gain and time saved can serve as important variables. Also these variables being directly measured and typically carried out close to the road would be pragmatic as well for the roads departments.

xi. The economic impact through population and income weighted mean of the speed gain in the presence of PMGSY roads and in their absence with other roads being present

shows there were significant gains due to the presence of PMGSY.

[2]The biases against poor maintenance arises from the poor incentive compatibility of public investments to ensure this. The distinction between plan and non-plan incentivized the state governments to neglect maintenance. There are other distortions in the fiscal process as well.

xii. Besides the study above, our various interactions with RRDA, SRRDA and other functionaries brought out the need to focus on:

a) The required connectivity to Habitations with a population of 500 persons and above in plain areas, 250 persons and above in special category states that have emerged in Census 2011.

b) Re-layering of early PMGSY roads and other rural roads.

c) Maintenance system (based on vehicle profiling)

d) Improving network reliability (interconnecting villages)

e) Removing bottlenecks on higher level roads.

Recommendations for Variables of Monitoring and Evaluation Database

The presence of PMGSY road, percentage Speed Gain and Time Saved variables are important variables to be monitored. Therefore, the suggestion is that Monitoring and Evaluation (M & E) database should annually collect data on percentage Speed Gain and Time Saved on newly built PMGSY roads. The Speeds achieved immediately after the construction would have to be maintained.

The process for arriving at the optimum Speed or Time for each agro-climatic zone in a particular state are as follows:

i. NRRDA should conduct periodic or annual studies to look at optimum speed. These may be derived by carrying out studies across newly-developed PMGSY in specific agro-climatic zone in that state. This may then be used as a benchmark against the speed gains derived in similar surveys across the

state and the previous survey. Any reduction will indicate the need to either widen or maintain the road.

ii. The survey is to be done on a sampling basis. Data on traffic and vehicle types will make the calculation of optimum speed more granular. Further, based on our analysis of the perception and opinions about access variables according to their explanatory powers of the variance (Refer Table 5.3.2 and 5.4.1) for habitation and HH data respectively, the desired questionnaire may be designed and administered.

iii. Alternatively, after the new construction when the PMGSY road is at its best, the speeds at those times may be recorded. Any fall/rise in speed/time from the same should be a matter of concern. Some bikes and four-wheelers (tractors) are the most important modes of transport for which the monitoring needs to be done. The survey should identify the new roads and existing roads that are to be covered. Similar data for point to point Village to Taluka Headquarter, District Headquarter, and State Highway, Mandi connectivity etc. may be monitored regularly.

iv. This data may be entered into a specifically designed Excel or IT system for monitoring and evaluation.

v. In case this study needs to be repeated, it can be done by handheld devices. These should automatically link the data captured into the M&E database. This would require NRRDA to develop the relevant apps on handheld devices and have the data consolidated at a central location.

vi. The survey instrument used is capable of capturing the socio-economic, environmental or safety-related benefits of the PMGSY road. The survey instrument uses 26 items in the scale. However, based on a systematic analysis using PCA we propose a reduced set of 16 items for the survey instrument for the Habitat.

***

MGNREGA and its impact on Sustainable Livelihoods*

A Report

Introduction

The service led growth process witnessed in India for several decades has meant that the pattern of income generation has changed considerably away from agriculture in favor of services sector, yet agriculture and allied sectors continue to employ close to half of the labour force. While open unemployment rate is not high, underemployment has prevailed extensively. In order to spread the benefits of growth process widely, several measures aimed at generation of employment opportunities for the rural poor and vulnerable groups have been adopted by Government. Named differently under different regimes, these programmes have primarily aimed at providing the rural poor with wage employment opportunity through community works. These programmes went through a paradigm shift in early 2006 with the National Rural Employment Guarantee Act (NREGA) which had several legally binding provisions including a guarantee up to 100 days of work a year to every rural household willing to do unskilled manual work. The focus of NREGA work has shifted to creation of the natural resources related work after 2014-15.

Covering 685 districts of the country, the programme generated 235.76 crore person days of employment for 7.67 crore individuals in FY 2016-17. Among the on-going and completed work, about 60.01 percent expenditure has been allotted for the creation of natural resource assets (both community and individual assets) in FY 2016-17. More recently, Natural Resource Management (NRM) has been an important component of MGNREGA to promote sustainable

1. Based on a study carried out for Ministry of Rural Development, Government of India by Institute of Economic Growth, Delhi, by Dr Manoj Panda & Shri Brijesh Shah

livelihoods for the poor. While several evaluation studies have been conducted on issues such as extent of job demand, wage income generation, social protection and safety net aspects of NREGA, impact of the reorientation of the recent focus towards the NRM component has not yet received adequate attention from the research community.

Objective

This study is a rapid assessment of the performance of the NRM component of MGNREGS in 30 districts spread over different agro-climatic zones in 21 states during 2015-16 and 2016-17.

The study aims at understanding the following:

- The process of planning involved for NRM activities and implementation
- Impact of assets created in the programme on household welfare by examining income, crop productivity, and non-tangible benefits, if any. In particular, the study tries to understand the role of assets created for individual households on their livelihood.
- We also question the household on extent of migration and changes, if any, after the programme was undertaken.
- Assess household perception on the quality of individual and community assets created in the programme and their maintenance
- Whether convergence is taking place among NREGA and other major government interventions in rural areas.

Survey Coverage and Tools

The survey has been conducted in 30 districts spread over 21 states and 14 agro-climatic zones. A total of 1200 (40 from each district) beneficiary households of NREGA assets have been covered through a structured questionnaire. The selection of districts was based on NRM expenditure per NREGA worker on natural resource management component. The districts having per capita expenditure close to the average per capita expenditure were selected. The primary

criterion was also supplemented by extent of urbanization and cropping intensity. Districts having high rate of urbanization and high cropping intensity were not selected for the study since pilot survey indicated low demand for NRM works in such districts. In case of one agro-climatic region spreading over two or more major states, we have tried to select the districts from each state. Table 1 provides the list of selected districts.

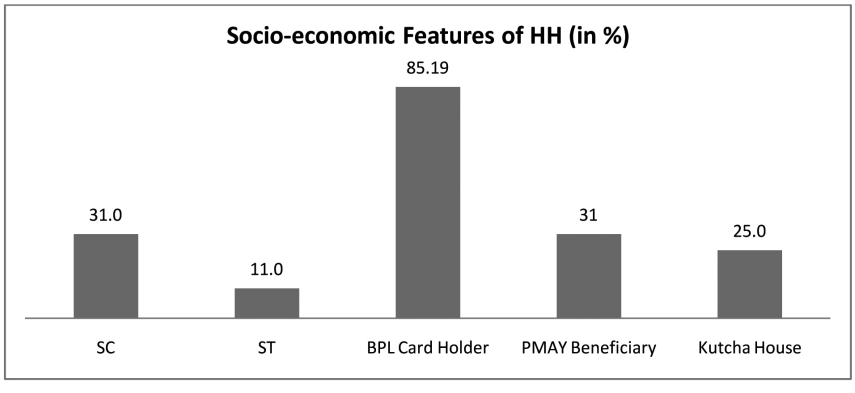
We attempted to select 4 blocks in each of the selected districts having the highest expenditure on individual asset creation and 1 gram panchayat (GP) from each block considering factors such as number of NRM assets, accessibility, terrain, and weather condition. But, two or three blocks were selected in a few cases because individual NRM component was nearly absent in other blocks.

The methodology for assessing the sustainability of livelihood mainly involves direct interaction with beneficiaries through structure questionnaires selecting individual beneficiaries as well as beneficiaries of community works under NRM. In each of the chosen Gram Panchayats, ten beneficiaries for NRM assets (individual or community) were selected for direct interview. The selection procedure also tried to include at least one household from each of BPL, SC/ST, small and marginal farmers. Focus group discussions were also administered at village community to understand the benefits from community assets specifically. Moreover, to understand the benefits of MGNREGA holistically from the perspectives of different stakeholders, one-to-one interaction guided by a semi-structured questionnaire was also conducted to extract information from officials involved in NRM at village, block, and district level.

Impact analysis is based on comparison of various NRM features before and after creation of the assets during the reference period. Being a rapid assessment survey of the NRM component, the sample of districts and blocks may not represent the entire spectrum of NREGA activities and the impact of such activities for the rural economy. It broadly represents the *average* picture of MGNREGS beneficiaries of NRM individual and community assets in those districts where per worker fund availability was around the average level during the reference period.

Socio-economic characteristics of the selected 1200 beneficiary households

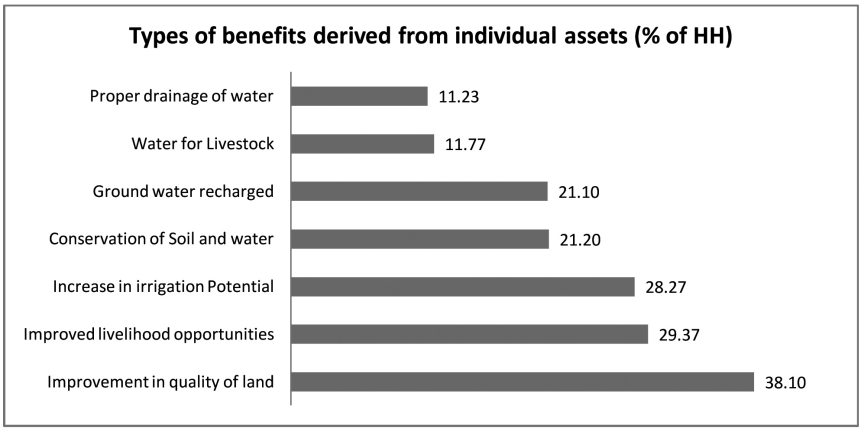
- 85 percent were BPL card holders.
- 31 percent of sampled households were beneficiaries of Prime Minister Awas Yojna (PMAY).
- 31 percent were Scheduled castes and 11 percent Scheduled Tribes.
- Average household size was of 6 members.
- In 14 percent households, members were illiterates and another 8 percent were literate without formal educational qualification. At least one person in the house studied up to 12^{th} standard or more in about a third of the households.
- Occupation: Small and marginal farmers constituted 65% of the sampled households and another 25% reported wage labour as their major source of income.
- Average land size was 2 acres and there was very little change in land size across districts reflecting thin land market.



Benefits of NRM Assets

The beneficiary households reported several types of benefits being derived from the NRM assets created in NREGA. Increase in irrigation potential was reported as the prime benefit from the creation of community assets. Both individual and community assets beneficiaries experienced increase in ground water table. Similarly, NRM assets have helped small and marginal farmers to

improve livelihood opportunities. Besides, a significant proportion of household beneficiaries found that access to water for livestock has increased. These are important factors contributing to sustainability of rural livelihood of small and marginal farmers. Overall, it can be said that both individual and community assets are helping the rural community in certain important aspects that helps them in sustaining and improving livelihoods.

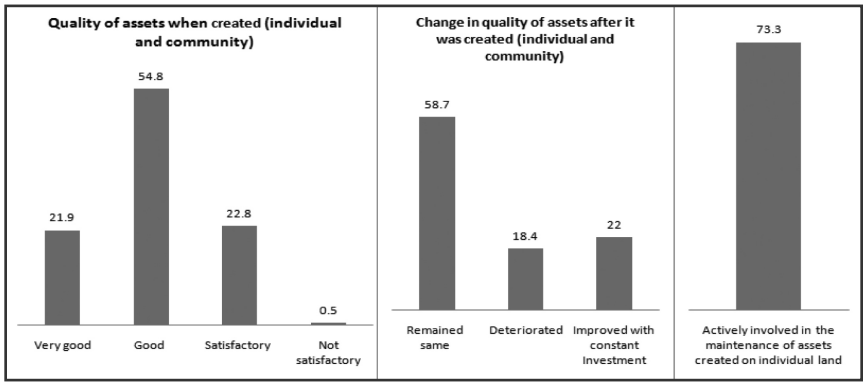


Quality of Assets: Users' Perspective

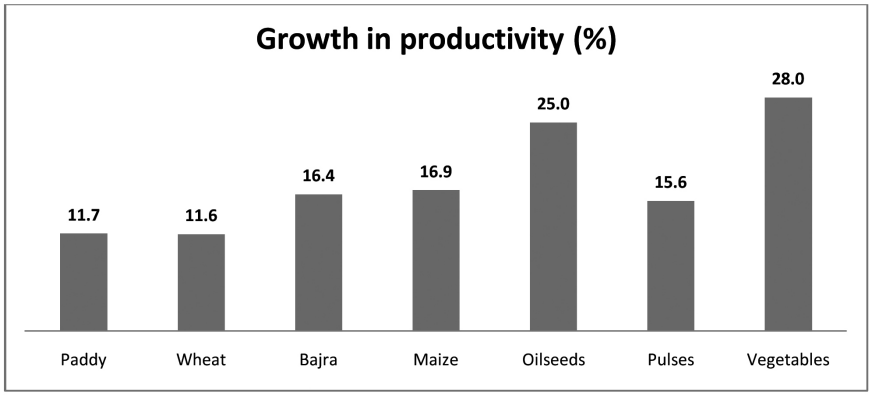
Though there are technical aspects to assess quality of assets, we have attempted to get the users' perspective on how they view the quality of asset created on individual and community land. Surprisingly, as many as 76% households thought quality of assets when created was very good or good in contrast to common perception about public works programmes. Moreover, 58% of respondents thought assets quality remained same after they were created. But, 18% of respondents reported that that the quality of assets has deteriorated. Another interesting response was that 73% of respondents indicated that they were actively involved in maintenance of assets created on individual land.

Agricultural Productivity Growth

The graph below depicts productivity growth for different crops. Participants in NRM assets reported a productivity growth of about 11% for rice and wheat, 16% for bajra, maize and pulses during the



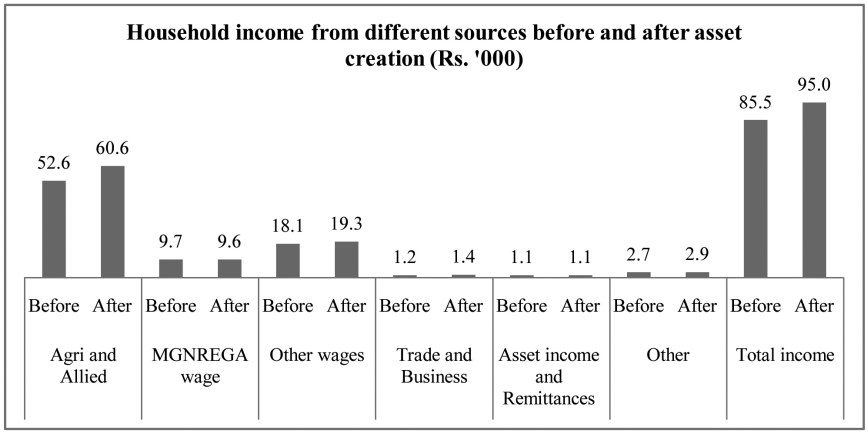
post-assets creation period compared to pre-assets period. Oilseeds and vegetables indicate productivity rise by a larger extent. Oilseeds productivity rose by 25%. The largest increase of 28% is reported for vegetables. These are obviously considerable productivity gains for the small and marginal farmers benefiting from the NRM assets.



Household Income

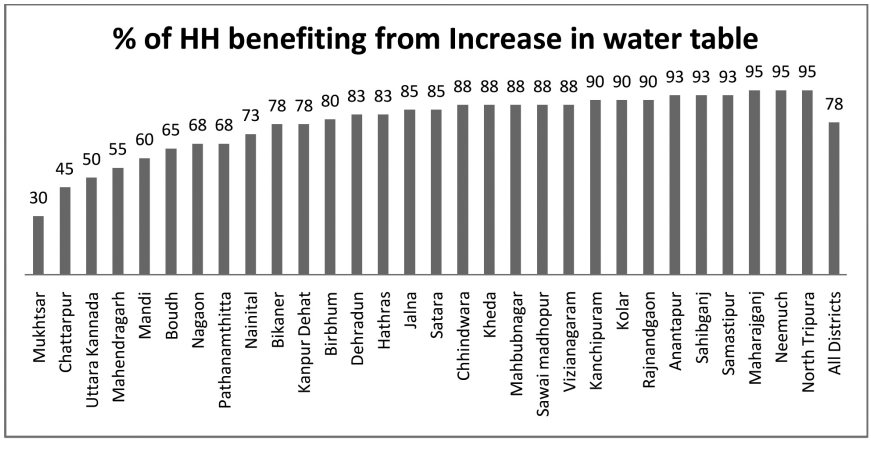
The respondents reported that per household income from agriculture and allied activities increased by 15% from Rs. 52,600 before assets were created to Rs. 60,600 after the assets were created. NREGA wage income fell marginally from Rs. 9,700 to Rs. 9,600, but non-NREGA wage income from rose from Rs. 18,100 to Rs. 19,300. Agricultural income, non-NREGA wage and NREGA wage were the three major sources of income for the households in that order and together contributed to 94% of total income. On the

whole, household income increased from Rs. 85,500 to Rs. 95,000 indicating a rise of 11% for the NRM beneficiaries.



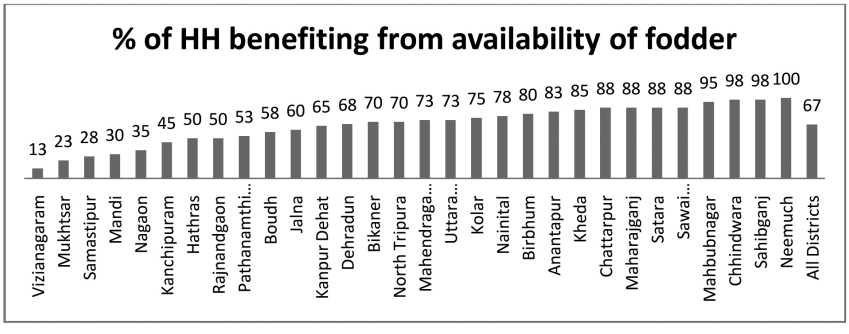
Water Table

Water table rise has been felt as a major ecosystem gain by the respondent households with as many as 78% of respondents reporting gain after construction of the NRM assets. The percentage varies from 30% in Mukhtsar (Punjab) and 45% in Chhatarpur (Madhya Pradesh) to 95% in Maharajganj (Uttar Pradesh), Neemuch (Madhya Pradesh) and North Tripura (Tripura). While this study does not relate to a technical evaluation of water table, the villagers predominantly perceive the benefits on long term sustainability of the agricultural activities.



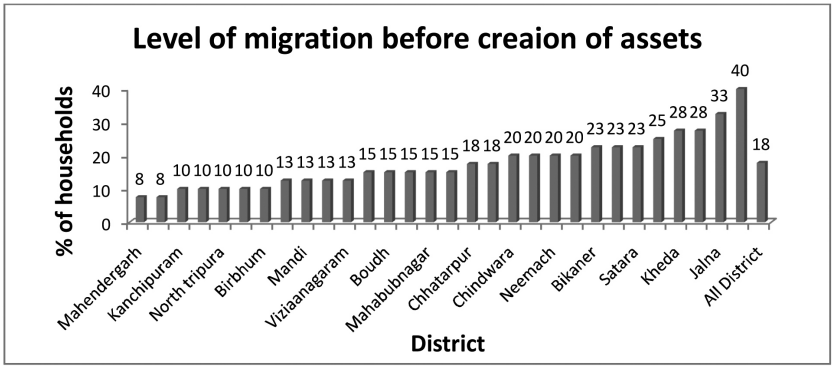
Fodder availability

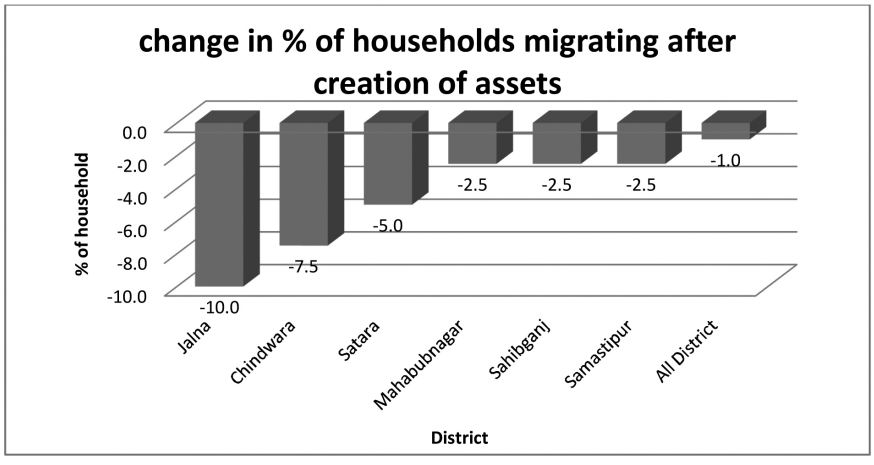
There is again a wide variation in responses across districts on availability of fodder. On the whole, two-thirds of the households report benefitting from fodder availability. Only 13% of the respondents mentioned benefiting from fodder availability in Vizianagaram district in AP, but all the respondents in Neemuch in MP reported the benefit. The response may be related to adequacy in fodder availability before the NRM activities were undertaken.



Migration

Seasonal migration in search of jobs is a normal feature for some low-income households in rural areas. All 30 districts taken together, 18 percent of NRM beneficiary households reported migration with the range varying from 8% in Mahendergarh (Haryana) to 40% in Nainital (Uttaranchal). The percentage of migrating households fell in 6 of the 30 districts covered in the survey, the highest being 10% for Jalna in Maharashtra. In 24 districts, percentage of migrating households did not change.





Conclusions and Suggestions for Improvement

On the whole, the NRM component of MGNREGA has introduced substantial changes in the MGNREGA operations. There has been greater emphasis on individual assets in recent years, though community assets remain important. Its impact on productivity, income, migration, new activities is noticeable within a short span of 2-3 years. The convergence of different development programmes with MGNREGA has helped in creations of meaningful assets. These assets have increased agricultural productivity and income of rural households and have been helpful in creating certain non-tangible benefits as well. The quality of assets on individual land is perceived to be better than the assets created on community land and households are paying attention to maintenance of assets created on their own land.

When productivity aspects do not get priority, expenditure on public employment programmes are basically seen as transfer payments which are needed for certain groups in the society. But, productivity aspects cannot be neglected in large scale public employment programmes such as MGNREGA. Seen in this angle, the emphasis on NRM is a welcome move that attempts to strike a balance between growth and distribution objectives of development.

We mention below some points that may enhance the effectiveness of the programme further.

Convergence of MGNREGA with development programmes: MGNREGA is primarily meant for providing employment to unskilled labourers with only 40 percent of expenditure meant for procurement of material cost. The convergence of MGNREGA with different development programmes helps in expanding volume of fund available and creating better assets. In the recent years, convergence of development programmes with MGNREGA has increased significantly in creating different kinds of assets such as flood control, water conservation & water harvesting, renovation of traditional water bodies, irrigation facilities, land development and connectivity. There is further scope for expanding convergence.

Delay in Payment: In recent years, transparency and timeliness of payment in MGNREGA has increased tremendously with account based payment, digital signature of concerned executives, concurrent changes in mode of payment like inclusion of executives only. Yet, field visits indicate some delay (beyond 15 days) in payment of material cost and wages. Delay in payment to material supplier of MGNREGA is more than the delay in payment of wages. Field level enquiry into possible reasons for such differentiated delay suggests that Union government solely provides wages of MGNREGA workers; whereas both Centre and State Government contribute to the extent of 75:25 in material cost. At times, there is delay in receiving matching grant from State government.

Wage Rate: In many regions (districts and blocks in a district), average wage earned by NREGA workers per day is lower than the market wage. In certain districts like Mahendragarh it is even lower than the minimum wages. In some regions, of course the wage of MGNREGA worker is higher than the market wage. A high wage rate disparity with market wage and limitation in the use of machineries restricts work of MGNREGA in few regions. MGNREGA wage is normally paid on piece basis, but it should take care of heterogeneity of efforts required; for example, 30 cft/day is maintained uniformly for cutting of either hard and soft soil in the state of Tripura.

Burden, Job Stress: At block level, technical coordinator provides technical sanction for a work, but due to shortage of staff, the technical coordinator of a block may have to look after another

block also. As a result, sanction of projects gets delayed. Field visits show that there is too much of paper work for MGNREGA staffs though most of details related to MGNREGA can be accessed from different kind of MGNREGA software.

Minimizing Paper Work: Considering the use of technology in MGNREGA, the study suggests minimization of the use of paper work further. For example, the PFMS (Public Financial Management System) can trace money spent in MGNREGA. On similar line, MIS based information will be helpful in reducing papers and registers. Field visit suggests that three registers related to asset creation (plan, estimate, work and job order) can replace requirement of 7-8 registers at Panchayat level.

Transparency: There have been many attempts to increase transparency in recent years: three stage photography, geo-tagging at different stages, e-measurement and certification of work, strictness in determining work and wages (piece). The procedure related to MGNREGA is changing rapidly to increase transparency and efficiency. Expanding social audit further could be a good move.

Table 1: List of Selected Districts

Agro-Climatic Zones	State	District
Western Himalayan	Himachal Pradesh	Mandi
	Uttarakhand	Dehradun
		Nainital
Eastern Himalayan	Assam	Nagaon
	Tripura	North Tripura
Lower Gangetic	West Bengal	Birbhum
Middle Gangetic	Bihar	Samastipur
	Uttar Pradesh	Maharajganj
Upper Gangetic	Uttar Pradesh	Hathras
		Kanpur Dehat

Trans Gangetic	Punjab	Muktsar
	Haryana	Mahendragarh
Eastern Plateau	Jharkhand	Sahebganj
	Odisha	Boudh
Central Plateau	Madhya Pradesh	Chhatarpur
		Chhindwara
	Rajasthan	Sawai Madhopur
Western Plateau	Maharashtra	Satara
		Jalna
	Madhya Pradesh	Neemuch
Southern Plateau	Karnataka	Kolar
	Andhra Pradesh	Anantapur
	Telangana	Mahbub Nagar
Eastern Coastal	Tamil Nadu	Kanchipuram
	Andhra Pradesh	Vizianagram
Western Coastal	Kerala	Pathanamthitta
	Karnataka	Uttar Kannada
Gujarat Plains	Gujarat	Kheda
Desert Region	Rajasthan	Bikaner

***

Aditya Malaviya

Reviving Rural Fortunes in Bastar

*A Case Study**

Summary

Khoba Ram Sinha, 34, has been growing vegetables and paddy in his five acres in Talnar village for as long as he can remember. Part of Bakavand block in Bastar district of Chhattisgarh, Talnar is one of the few vegetable growing villages in the district, blessed as it is with year-long availability of water from the Indravati River nearby.

"Till recently, the price farmers like me got for our produce in urban markets like Jagdalpur (25km away) was very low," laments Khoba. And while there are smaller markets nearby, high quality organic produce, if sold there, would fetch less than 2.5 times its price in urban markets. The only other recourse was to sell to middlemen at any price offered by them.

The Challenge of Bastar

The pattern of livelihood in Bastar continues to be dictated by tradition. Even today, agricultural practices are traditional: use of wooden ploughs is widely prevalent and there is little mechanisation of farm operations. Land holdings are fragmented and minimal to be economically viable for the land owners; most people in rural communities earn a livelihood from manual farm labour to make ends meet.

The prevalence of traditional agricultural practices has impacted agriculture significantly: it has lowered yields and agriculture production. Collection and sale of forest produce and other forest-related work supplements meager agricultural incomes.

---

* Based on a Report by Ministry of Rural Development, Government of India

Even today, the pattern of livelihood in Bastar continues to be dictated by tradition: agricultural practices are traditional, which translate into low yields and subsistence farming. Collection and sale of forest produce supplements meager agricultural incomes and finding all year round employment for most is difficult.

Many are forced into life-long indebtedness because they are often forced to resort to borrowing money from unscrupulous moneylenders in times of crisis; this situation is only compounded by the absence of alternate employment opportunities, leading to high incidence of poverty.

Although rich in natural resources, a large proportion of rural communities in the district continues to be isolated from modern development because of left-wing extremism. As a result, it lacks basic infrastructure and is reduced to subsistence farming to survive. In the Bastar plateau, irrigation coverage is only 1.2 per cent.

Says Syed Areeb Ahmad, PMRDF Bastar: "Farmers were moving away from agriculture because it was difficult to get the right price for their produce and little dignity for the farmer nor a fair market for his produce. Many of us associate a 'Sabzi bazaar'(vegetable market) with noise, chaos, dirt, crowds, lacks basic amenities like shade, drinking water and toilets, and both the seller and the buyer usually end up having to push, jostle and argue over the lowest bargain … in short, there is little that is dignified for the farmer or the consumer."

Harihar Bastar Bazaar: Dignity for Producer and the Product, Ease for Consumers

Areeb's idea was to change the way farmers did business by ushering in dignity for the farmer and utility for his produce. "I wanted farmers to have their own market, run by them, and which is modern, clean, orderly, accessible and organised and where farmers could properly display various varieties of their produce and sell at a fixed, fair price. In other words, farmers would have fair market linkages and their produce, utility. This idea of fair markets became the business approach of the idea called Harihar Bastar Bazaar."

A federation of 22 Farmer Producer Groups with over 3,500 active farmer-members, Harihar Bazaar retailed from a modern, state-

of-the-art facility that gave farmers the space and the opportunity to sell their produce at fair prices. It accorded the same dignity to consumers, who could now buy quality, fresh, well-displayed, varied and scientifically stored and packed produce in clean, well-lit environs. Furnished with well-equipped rooms for meetings or trainings, Harihar Bastar Baazar serves as a center wherein members explore, adapt and profit from newer cultivation and farming techniques and technologies by linking them to specialised marketing services, physical distribution, storage, grading and market information.

From a humble beginning in 14 November 2016, when four handcarts – without even a plastic sheet for a roof – were kept at the roadside in the Civil Lines area of Jagdalpur city – the seven-month-old federation today functions from a modern facility retailing a large variety of organic produce like vegetables, milk, dairy products, locally found and grown varieties of rice, pulses and millets, as well as processed products like tamarind candies, tomato ketchup etc. Retailing 1.5 tonnes of produce every day, Harihar Bazaar averages sales of over INR 2 lakh every month and a monthly profit of over INR 50,000 – all from an average footfall of around 250 customers per day.

Khoba's lament changes to one of delight when asked about Harihar Bazaar, as he stands amidst his half-acre field in the early morning nip. "We are now earning throughout the year, which has never happened before. The vegetables are taken from our doorstep (field) early in the morning. We collect produce from our farms based on the estimate given to us about the quantity of produce needed for sale in Harihar Bazaar beforehand for the day. We are free to sell any surplus in the open market. With a regular income, we now have a small cash surplus for expenses like children's education, medicine, seeds and implements – everything can now be planned for."

Reaching Out: Geographic Spread

Table 1: Harihar Bazaar: Geographic Coverage

Sr. No.	Product(s)	Number of villages	Blocks
1	Tamarind	2	Lohandiguda

2	Dairy	6	Bastar, Darbha, Bakawand and Jagdalpur
3	Scented rice & minor millets	3	Bastanar and Darbha
4	Green vegetables	5	Bakawand
5	Mahua Laddu	1	Darbha

Addressing the Challenge of 'What Next'

For Areeb, the solution lay in bringing farmers and producers to form their own 'company' by 'jointly' making them the driving force and inculcating a 'sense of shared ownership'. Since most rural communities were already familiar with People's Institutions (PI) like Self-Help Groups (SHGs), Farmer Producer Companies (FPC), Joint Liability Groups (JLG), Cluster Level Federations (CLF), he leveraged this advantage to form various farmers' cooperatives.

"The most common challenge faced by such groups is 'what next' after forming groups", says Areeb. With the support of the District Administration, Areeb decided to create and promote member-owned Farmer Producer Organisations (FPOs) that would enable farmers to get fair markets for their produce through enhanced productivity, sustainable resource use, cost-effective technologies, efficient markets and, most importantly, collective participation in decision-making.

To make the process sustainable, he created a coalition of partners supported by financial resources leveraged from various Centrally sponsored and State-funded schemes. By making it collaborative, multi-stakeholder and multi-level, Areeb was able to mobilise all the elements necessary for strong and viable producer owned FPOs.

Partners included the departments of Veterinary Sciences, Agriculture, Animal Husbandry Water Resources, Tourism, Co-operatives, Panchayat and Rural Development, State Renewable

Development Agency (CREDA), District Mineral Foundation Trust (DMFT), Ram Krishna Sharda Sewa Ashram (NGO), NABARD, Bastar Sewak Mandal (NGO), Chhattisgarh State Rural Livelihoods Mission (CGSRLM), PRADAN and District Cooperative Bank, thus covering all potential dimensions of livelihood promotion through enterprise.

Objectives of Harihar Baazar

Arrived at after numerous consultations with PMRDF, farmers, the government and civil society stakeholders, the basic objective of Harihar Baazar was to mobilise farmers into groups of between 15-20 members at the village level (called Farmer Interest Groups or FIGs) and building up their associations to an appropriate federating point i.e., FPOs. To achieve this, the larger objectives included:

- Rejuvenating collectives and promoting collectivisation into producer groups (People's Institution) by incentivising people.
- Promoting zero budget farming and local varieties by incentivising organic/ local foods
- Promoting product specialisation in producer groups by offering them full control over supply of niche products, and
- Dignity to the farm product and the producer

The First Steps

Tarapur village in Bakawand block of Bastar district was chosen in September 2014 for setting up the first FPO for various reasons, but principal among them were:

(i) presence of community of traditional vegetable cultivators (ii) state-wide reputation of growing the best vegetables in Bastar district, and (iii) a pool of trained community members: 2,200 households in five panchayats with 88 single women-headed households that had been trained two years ago under the MKSP project on organic farming; and Tarapur's proximity (25km) from Jagdalpur town.

To bring the farmers together as a cooperative, Areeb and the district-level functionaries of departments like Agriculture and Animal Husbandry held consultations with farmers on the advantages of strengthening farmers' capacity through access to and usage of quality inputs and services for intensive agriculture production, enhancing cluster competitiveness, facilitating access to fair markets including linking of producer groups to marketing opportunities through market aggregators, etc.

Ultimately, of the 2,200 households in five panchayats, two cooperatives with a total of 700 members were formed under the banner of Harihar Baazar.

Strength through Capacity Building

Following the formation of the first two cooperatives in Tarapur village, Areeb, in consultation with all stakeholders, put in place a comprehensive training calendar for all members. This included topics like marketing agri-produce, setting up and running cooperatives, leadership and decision-making, marketing and sales management, etc. Special attention was given to developing business plans, which included marketing, processing farm products, storage, packing, transport, etc. To further strengthen this process, experts like Mr Bhimsi Ahir, a leading expert on FPC management, were invited to Bastar several times to share their expertise.

The first trainings for FPCs started in December 2014 and continued till September 2016. The trainings were held both at the Collectorate in Jagdalpur as well as at the community/village level, and also included exposure visits to other successful FPCs in the state and outside.

Says Areeb, "There were two reasons for holding these trainings: the more obvious one was bringing them up-to-speed on modern cooperative management techniques, agri-marketing and market development. But equally significant was that the District Collector (DC) had agreed to support Harihar Baazar, provided members collectivise themselves into small producer groups and organically evolve policies that ensure quality and protect farmers' interest. Encouraged by the support shown by the Collector, members held

over 90 meetings in different villages to convince others to join them."

Harihar Bastar Baazar: The First Steps

In September 2015, the District Collector, in his interaction with cooperative members, was impressed with their determination and level of training that he allocated an old school building to function as the first point-of-sale premise. A light truck was also sanctioned using DMFT funds to ferry produce from farms to the nearby town of Dantewada. However, the farmers were not enthused about selling their produce in the town since transportation costs were prohibitive.

While the old school building was being renovated, Harihar Bazaar was 'soft' launched by using 3-4 thelas (handcarts) to sell vegetables and other produce in the Civil Lines area of Jagdalpur city on 14 November 2016.

On 30 November 2016, the handcarts were given a semi-permanent roof and their own branding.

From the initial handcarts, Harihar Baazar today is a vibrant federation comprising of 22 Farmer Producer Groups and over 5,000 farmers as active members. Today, these 22 Farmer Producer Groups comprise of: (A) Four Farmer Producer companies (B) Five cooperatives and (C) Thireteen women SHGs. These further include (i) Three dairy cooperatives (ii) Three dairy SHGs (iii) Four Farmer Producer companies producing scented rice, red rice, Kodo2, Kutki3, Arhar dal4, Urad5 dal, green chillies and flowers (iv) two vegetable producer cooperatives (v) Three organic fertilizer/pesticide producing SHGs (vi) Two Mahua6 Laddu producing SHGs (vii) One Jaggery producing SHG (viii) One tomato Ketchup producing SHG (ix) One tamarind chutney producing SHG (x) One tamarind cake producing company, and (xi) One cashew processing SHG.

The total number of products retailed numbered more than 100 and the total membership of all producer groups is about 5,102.

The modern, state-of-the-art building housing Harihar Bazaar is a multi-purpose complex offering office space, market space for products, training hall, farmer information centre, 5-tonne Solar Cold

Storage (funded by CREDA), warehouse/store space, and packaging and business-to-business services.

Says Amit Kataria, District Collector of Bastar, "With the decentralised manner of design and implementation, people's participation in Harihar Bastar Baazar has been made an indispensable component of the project. The PMRDF was critical in helping local government institutions and community organisations to establish a collaborative partnership for developing a local 'vision' and strategy; and designing/planning, allocating resources, implementing and monitoring/ evaluating of development activities that would better cater to the local needs."

Products

Just seven months old, Harihar Baazar today retails a variety of organic produce including vegetables, milk and dairy products, various local varieties of rice, pulses and millets and even processed tamarind candies and tomato ketchup. The project has managed to successfully address inefficiencies in transportation, credit, and other market challenges.

As a result, most significantly and in keeping with the larger mandate of Harihar Baazar, prices of several goods are fixed on a fortnightly basis and are not dependent on prevailing market rates. Price of produce is now determined by the production cost and quality of produce rather than just market-forces. Interestingly, the federation's policy of including labour costs while determining the price of produce makes it a big attraction for farmers. As part of the governing structure, two members from each Producer Group (P1, P2…) are nominated to the Governing Board.

The Governing Board decides issues like which group has to be trained in the training hall of Harihar Bazaar premises, how much space is to be allotted to which group in the Harihar Baazar store, etc.

Similarly, one member from each promoter is nominated to the Advisory Board of Harihar Bazaar, which includes (i) promoter of vegetable cooperatives like MKSP (BSM), (ii) promoter of dairy cooperatives, Department of Veterinary Services etc. (iii) promoter

of FPCs like Agriculture/Horticulture Departments, Chhattisgarh Agricon Samiti, etc. (iv) SHGs like GSRLM, RKSS, PRADAN (v) Sehkarita Vibhaag and District Cooperative Bank (vi) NABARD, and (vii) PMRDF/ DMFT representatives, respectively.

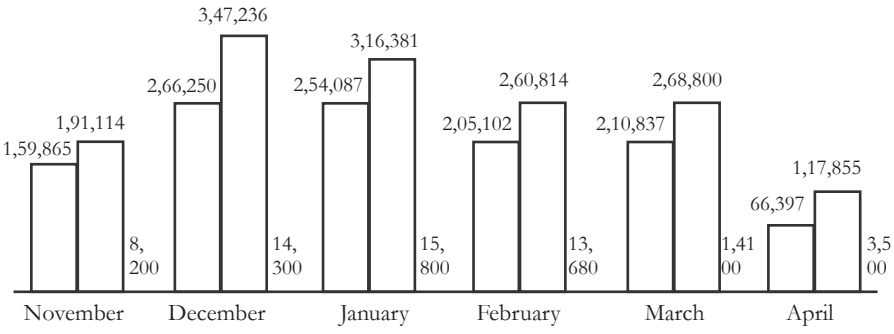
Since its launch almost seven months ago, Harihar Baazar has witnessed an average footfall of 250 people every day. That its popularity has been steadily increasing can be gauged from the fact that the total expenditure on buying produce was INR 11,62,538 and expenditure incurred in the procurement process (transport, labour etc.) was INR 69,580. The total income (revenue), thus, was INR 15,02,200, a profit of INR 2,70,082 or an average of INR 11,000 per day.

PI 1, PI 2, PI 3	2 members from each PI	Governing Board	Harihar Bazaar
Promoter 1	1 member from each Promoter	Advisory Board	

Figure 1: Harihar Bazaar — Governing Structure

The per capita income for each of the 700 members from two cooperatives from a revenue income of INR 15,02,200 comes to approximately INR 2,200. To ensure cash flow for members, a system of weekly settlements for member producer organisations and daily settlement for vegetable producer organisations is followed.

Harihar Baazar — Total Sales (14 November 2016 – April 2017)



Taking the Momentum Forward: Incubating Other Initiatives

While Harihar Baazar was a farm-based intervention, Areeb also ideated and worked closely with the district administration to operationalise innovative non-farm interventions as well.

"Historically, the youth have never been looked at as stakeholders in non-farm activities. For us, these activities were an important element of income diversification and employment generation in rural areas of the district given the large-scale under-employment and urban bias of the few schemes actually being implemented here. So we started encouraging educated youngsters to ideate and set up their own enterprises based on their interest and competency", says Areeb.

Since most could not access government funds, Areeb took on the mantle of ensuring government support by facilitating access to various government financial schemes. The emphasis was on adopting a collaborative approach with emphasis on convergence, synergy and promoting a sustainable, participatory and integrated approach to these interventions, be it agro-forestry, ecotourism etc.

Amcho Bastar Bazaar: Promoting Business

Seeing an opportunity in a dilapidated Chhattisgarh Tourism Development Board building, Areeb convinced the District Collector to renovate the building which was then used to house Amcho Bastar Bazaar. With livelihoods for the rural youth, farmer and artisan communities in mind, Amcho Bastar Bazaar became a one-stop shop to showcase the district's potential in tourism, agriculture products, local food and cuisine, etc. It is run by NRLM women's SHGs, the first in Chhattisgarh and was inaugurated on 25 January 2016.

The bazaar offers (i) space for producers groups to promote products unique to Bastar like handicrafts, organic food, forest products and even organising dance, music and literature festivals (ii) acts as a tourist facilitation centre on the 'Bastar experience' for tourists visiting Bastar (iii) serves as a centre for documenting and promoting indigenous culture (iv) serves as venue for events like tribal food festivals, photo competitions, etc. and (vi) helps link demand from urban areas with rural producers.

Table 2: Amcho Bastar Bazaar – Sales (in INR)

Month	Sales (in INR)
May 2016	1,255
June 2016	18,640
July 2016	48,898
August 2016	25,410
Sep 2016	51,900
Oct 2016	55,399
Nov 2016	38,562
Dec 2016	11,845
Jan 2017	3,705
Feb 2017	13,710
March 2017	27,681
Total	2,97,005

Source: Amcho Bastar Baazar, 2017

Benefits accruing to local communities from Amcho Bastar Bazaar:

- Direct wage employment generation for three SHG members
- Corpus of about INR 50,000 generated in 11 months with the Kudalgaon Village Organization (VO) of women SHGs, the institution running Amcho Bastar Bazaar
- Direct sales of products crossed INR 300,000 in 11 months, benefitting over 200 handicraft artisans and farmers
- 50 tourists visited and travelled to Bastar via Amcho Bastar Bazaar
- Preparation of yearly calendar of cultural performances is expected to generate about INR 2,60,000 for local performers over weekends
- Geographical indicator for Bastar Dhokra for Bell metal handicraft
- Library set up for compilation and dissemination of literature

from Bastar

- Two more branches of Amcho Baazar to open at Chitrakote and Tirathgarh
- 26 SHGs took up production/packing activities of Amcho Bastar Bazaar; corpus generated through profits will be used for paying wages to SHG members
- Tie-up with other districts: Narayanpur Mart (Narayanpur), Sukma Naturals (Sukma) and Abhujmaad Art Association (Sukma)

Support to Local Initiatives

Following the approach of Harihar Baazar, Areeb acted as the 'bridge' between the local District Administration and local entrepreneurs in setting up their enterprises, headed by their respective CEOs and operating out of the Amcho Bastar Baazar office. Says Areeb, "My role was that of an enabler; I ensured participation of local youth in these ventures to the largest extent possible."

Some of these include:

Unexplored Bastar: Jeet Singh Arya, CEO, was encouraged by the District Collector to seek Areeb's mentoring in setting up Unexplored Bastar in 2011 to showcase unexplored sites and tourism potentials in Bastar. Unexplored Bastar works on the 'aggregator model' by bringing together tourists, guides, hotels and home-stays on the same platform. The organisation has since held many events unique to Bastar, like night camping, trekking, etc., across some of the most unexplored and remote tourist sites in the district. Says Jeet, "Unexplored Bastar works in tandem with other similar organisations. For example, the trek to Chitrakote Falls was organised by both Unexplored Bastar (trekking trails) and Click Bastar (photography), while the social media aspect was the responsibility of Awesome Bastar and the food/cuisine was looked after by Mezban Bastar."

Click Bastar: Set up by Anzaar Nabi, CEO, along with Luzina (who is a handicraft designer), Anzaar was supported by Areeb to set up Click Bastar as a one-stop shop for all things related to photography in Bastar: where to go, what to do, equipment supply, photography

competitions etc. Says Anzaar, "I want to encourage photography enthusiasts in Bastar and across the world to travel to Bastar to photograph and publicise its magnificent natural wonders. Today, we have 180 photographers as members. When we organised our first photography competition, we went to the Collector for support in prize money -we were offering INR 5,000, INR 3,000 and INR 2,000 as first, second and third prize. He asked us to increase the prize money to INR 10,000, INR 5,000 and INR 3,000 respectively and also to offer seven consolation prizes of INR 1,000 each!"

Indravati Sahkari Paryatan Samiti (Indravati Tourism Cooperative)

Says Areeb, "We decided to frame our trainings based on the expectations and context of the rural youth to encourage them to take interest in professional tourism-related training."The argument was that by becoming trained guides they were more employable through better vocational skills. Hundreds of youth migrate to urban areas only to find limited chances of finding meaningful employment. The alternative then was to create employment opportunities in rural areas by reinforcing on farm and non-farm income generating opportunities, including exploring livelihood diversification. "Training gave these youth the skills for a sustainable future," adds Areeb.

The Indravati Sahkari Paryatan Samiti was formed by 25 youth (including three girls) in 2017. This was followed by a one-month long training that included communication training, yoga, ticketing at venues and car parking, guide skills, local culture, preparation of traditional food and cuisines, trekking, boating skills etc.

Bastar Krishi Utpadak Producer Company Limited: Set up by Ashish Pandey, CEO, who had come for a holiday to Bastar in 2016 and subsequently influenced by Areeb to set up Bastar Krishi Utpadak Producer Company Limited. "I decided to start my own Farmer Producer Organisation. We have over 450 members in five clusters – Darbha, Tokpal, Kilepal, Bastana, Lohandigua and Jagdalpur - who practice organic farming, of which 100 are registered organic farmers," says Ashish.

SHWET Bastar: It is estimated that Jagdalpur city has a shortage

of about 10,000 liters of milk while the shortage of milk in Bastar district is estimated to be about 15,000 liters.

In 2015, the District Administration and PMRDF held a series of meetings with around 50 dairy farmers from around Bastar. After several rounds of discussion, the farmers agreed to form their own dairy cooperative for bank linkages and trainings.

Today, that little effort has expanded into a large enterprise producing 3,240 liters of milk and 165 members.

Table 3: SHWET Bastar – Coverage

S. No..	Name of Cooperative	Village	Total Number of Members	Total Number of Cows	Total Production (in ltrs.)
1	Amrut Milk Producers	Turenar	60	120	1,200
	Cooperative				
2	Tiranga Milk Producers Cooperative	Keshapur	40	50	500
3	Gau Darshan Milk Producers Cooperative	Chhindwada	30	50	500
4	Gauri Self Help Group	Bodan Pal 2	12	40	400
5	Ganesh Self Help Group	Bodan Pal 2	12	40	400
6	Pushpa Self Help Group	Ulnar	11	24	240
TOTAL			165	325	3,240

Sustainability

Initiatives like Harihar Baazar and Amcho Bastar are successful efforts to develop infrastructure in predominantly tribal, agro-dependent areas by enabling primary producers to actively move up

the value chain. In the case of Harihar Baazar, for example, it has posted a turnover of INR 19,42,947 in five months (14 November 2016 – April 2017). Because of this, 700 primary producers from two cooperatives – many of them women – now get better prices for their produce, aided by innovative steps like the setting up of storage, packaging and processing facilities for organic produce. Both Harihar Baazar and Amcho Bastar Baazar have linked producers and entrepreneurs to markets through a bottom-up empowerment process by consolidating and leveraging their collective bargaining power.

The state government has engaged Areeb as part of DMFT so he can continue focusing on these initiatives to ensure their long-term viability and sustainability.

A large part of the success – and sustainability – of these initiatives comes from convergence between various actors: MGNREGA (labour and construction of cow sheds), DMFT (for infrastructure), Dairy Udyamita Vikas Karyakram (entrepreneurship; for bank linkages for purchase of cows etc.) Similarly, for Harihar Baazar, DMFT funds supported the premises building renovation and MKSP (NRLM) trained cooperative members in organised farming and other ways of cultivation; the cold storage equipment was funded by CREDA and the solar pumps and lights came from Sujala Yojana; while fodder seeds were provided by the Veterinary Department. The approach has also been able to leverage financial resources by linking cooperative members with institutions like the National Bank for Agriculture and Rural Development and other public sector banks to provide them the much-needed working capital. In all this, the role of the PMRDF was critical - not only in ideating, developing and piloting these initiatives - but also in identifying and engaging with all stakeholders for the larger benefit of the community at-large.

Largely due to the work done by various producer and farmer's groups in marketing their products, most local brand names like Harihar Baazar are now well-recognised and their products readily available in the market. Highly priced products like organic scented rice, organic ragi, processed tamarind and Mahua laddu's – indigenous to the region – are now grown, processed and marketed by the

organisation. Thus, it can easily be said that Harihar Baazar has put in place a viable model of agribusiness for market-oriented growth of small farmers. This is both relevant and suitable due to its focus on sustainable market development for marginalised farmers, especially since agriculture in remote regions of the district creates challenges that prevent farmers from entering into mainstream markets. By creating a strong supply chain – along with operational and managerial support – several small FPOs now have the ability to create a strong presence in a highly competitive market and be at par with the best. The value chain approach involves market/sub-sector studies, introduction of new technologies, market linkage, skill development, product development and promotion, and physical infrastructure for market access.

***

HS Gupta*

Application of Improved Agricultural Production Technology for Rural Prosperity

A Case Study

Agriculture is the backbone of Indian economy especially in rural areas. The agriculture sector although engages more than half of the country's population; yet, its contribution to country's GDP is mere 14% which has, of course, been growing in absolute terms. The principal reason behind this is the low productivity of our farms. This can, however be enhanced by application of improved agricultural practices, which will, in turn, increase the productivity per unit area and time. In order to test the strength of improved agricultural production technology, a village (Bhagartola) was selected in Almora district of Uttarakhand for the proposed interventions.

Bhagartola is situated at a height of ~6,000 feet above mean sea level, approximately 6 kilo meter away from Jageshwar Dham in district Almora. The farmers living in the village were practicing traditional agriculture and had been growing traditional field crops to meet their food requirement. There were, however, few farming families that were growing high value vegetables in summer season which fetched them better price. The traditional cropping system is rice-wheat and millet-wheat. The millets comprise mainly of finger millet and barnyard millet. Few vegetables like cauliflower, capsicum, tomato and cucumber were grown by some villagers who had some source of water for irrigation. The initial base line survey indicated that the low income from the farm wad mainly on account of use of low yielding traditional varieties of field crops, traditional method of cultivation without use of adequate plant nutrients, poor irrigation due to water scarcity and poor market link.

The village had several perennial water source with rather very low

* Team consisting of A. Pattanayak, A.K. Srivastava, J.K. Bisht & Renu Jethi.

discharge, therefore, it was decided to construct water storage tanks lines with low density polyethylene (LDPE) film to check seepage of water. The technology for construction of small pollutants was developed at the VPKAS, Almora and the same along with input (LDPF film) was provided by VPKAS. The labour component was supplied by the village folks by the family on whose land polytanks were constructed. Hand-in-hand, it was also decided to construct polyhouses (in the lower terraces in the vicinity of polytanks) for cultivation of high value vegetables (capsicum, cucumber, cauliflower and tomato). Here too the input and technical know-how for construction of polyhouses were supplied by VPKAS and labour component by the villagers.

The cost of construction of polytanks and polyhouses turned out to be 50:50 between VPKAS and villagers/owner. Once the production started coming from the polyhouses, people ploughed back their income to construct more number of these structures. Fig. 1 shows the area in the Google map before and after the project intervention. The total number of polytanks and polyhouses were 40 and 72 respectively constructed over 8 years. The total water storage was approximately 19 lakh litres every 10 days. Apart from this, improved

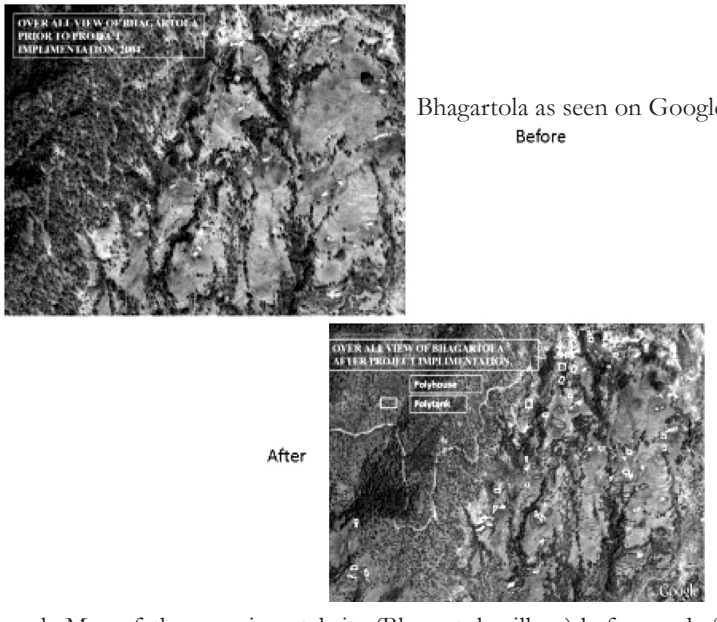
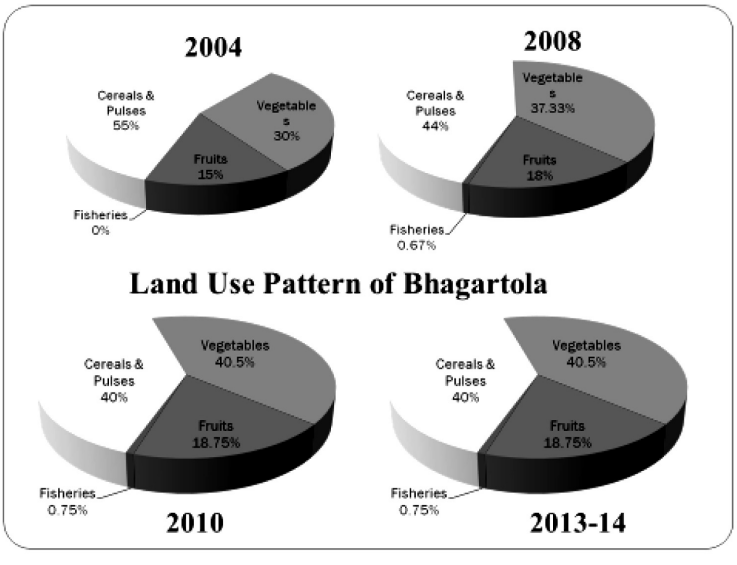


Fig.1 Google Map of the experimental site (Bhagartola village) before and after the intervention

varieties of food crops along with recommended package of practice were given to the farmers for adoption.

Change in land use pattern starting from the beginning of the intervention in the year 2004 followed by 4 years after the intervention in 2008; 6 years and 10 years after the intervention in 2010 and 2014 is presented in Fig, 2. The major change in the initial 4 years was increase in the area under vegetables (from 30% to 37.3%), which was further increased to 40.5% after 6 years of intervention (in the year 2010). Thereafter, the same land use pattern continued as seen in the year 2013-14.

The adoption of improved package of practices for cultivation of food crops (rice wheat, finger and barnyard millet) in open led to increase in their productivity which was sufficient to meet the food grain requirement of the farmers. The increase in food grain productivity due to adoption of improved package of practices

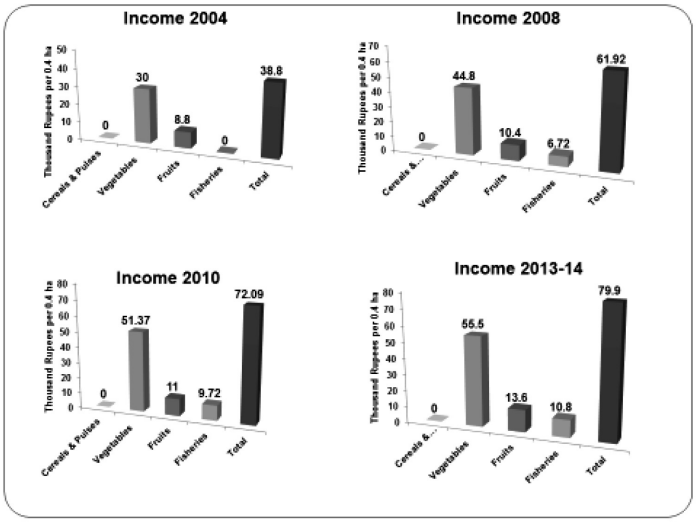


led to vacation of land that could be used for high value crops like vegetables.

Fig. 2 Change in Land use patter. In Bhagartola village with passage of time

With adoption of improved package of practices for cultivation of food crops as well as high value vegetables, the productivity and income started rising over the years. The total income from 1 acre

area (0.4ha) at the beginning of the intervention was Rs. 38,800, which increased to Rs 61,920 (% increase) after 4 years (in the year



2008); Rs 72,090 after a gap of 6 years (in 2010) and Rs 79,900 in the year 20014 (Fig.3).

Fig. 3. Change in total and component-wise income of the from 1acre (0.4 ha) land

The results presented above shows that the introduction of water harvesting led to cultivation of high value crops like vegetables income of the polyhouses – an improved method of cultivation of high value crops under protected condition, which not only helps in increasing productivity per unit area and time but saves the crop from damage due to rain/frost and pests. The vegetables thus produced in the village aws marketed by the villagers themselves. This helped in increasing net income as shown in Fig. 3. Thus, the income from small farms (<2 ha area) can indeed be doubled within a span of 4-6 years. There exists possibility of further increasing the income of the farmers by adopting processing and value addition right in the watershed. Besides, such villages can help promote agro-eco-tourism under which the farmers can avail low interest loans from banks for creating facilities for boarding and lodging of the tourists. The rural surrounding and location of the village will attract a large number of tourists during summer and winter as well.

Thus, adoption of improved agricultural practices by the small and marginal farmers can indeed double their income within 4-5 years.

CREDITS: The multidisciplinary team was headed by HS Gupta and A Pattanayak, the former and current directors of ICAR-VPKAS. The project was implemented in association with and major contributions from JK Bisht, AK Srivastva and Renu Jethi, head of the division, principal scientists and scientists respectively of the division of crop production. Apart from this, several research personnel worked in the project from time to time during the last 10 years.

***

OUR CONTRIBUTORS

ADITYA MALAVIYA is a journalist with 27-years' experience in working with NGOs / INGOs like DfID, Save the Children and UNICEF on communications, documentation and content for social media. He is also a travel writer and contributes online content to platforms like Infochange India, Grassroots, One World South Asia, Cyber Media Asia, among others.

AMARJEET SINHA is an IAS Officer of Bihar Cadre of 1983 batch and is currently Secretary, Department of Rural Development, Government of India. He has played a major role in designing Sarva Siksha Abhiyan and the National Rural Health Mission. He is a recipient of the National Talent Scholarship and the Rhodes Scholarship. He has published seven books.

G RAGHURAM is currently Director, IIM Bangalore, and has been a faculty at IIM Ahmedabad since1985 and Dean (Faculty) from September, 2013. He was the Vice Chancellor of the Indian Maritime University from July 2012 to March 2013. He was the Indian Railways Chair Professor from January 2008 to August 2010. He has a deep interest and specialisation in logistics and supply chain management, and infrastructure and transport systems; with a research focus on the railway, port, shipping, aviation and road sectors. He has over 30 years of experience in teaching, training and consultancy. He is also working on a project for impact assessment of rural road for NABARD.

HAREKRISHNA MISRA, Professor at IRMA, holds Ph.D. in information systems from Utkal University, Bhubaneswar and has about 36 years' experience in the industry and academia in IT and information systems infrastructure management and related areas. His research interests include e-governance, information systems management in development organizations, e-Business for rural enterprises, and ICT-enabled value chain in rural enterprises.

PRAMOD K SINGH, Professor at IRMA, holds M.Sc., M.Phil. and Ph.D. in Environmental Sciences from Jawaharlal Nehru University. He has over 18 years' experience in teaching and research in the areas of livelihoods, governance and management of natural resources, environment and development planning, climate change adaptation, and geo-informatics for development.

REKHA JAIN is the Executive Chair of the Telecom Centre of Excellence and Professor, Indian Institute of Management, Ahmedabad, India. She has consulted with several leading national and international organizations in Telecom Policy and ICT Strategy. Her recent projects have looked at innovations in mobile services, e-Gram service delivery and incubation in high tech sectors. She has a Ph.D. from the Indian Institute of Technology, New Delhi, India.

S. SIVAKUMAR is a Member of the Corporate Management Committee of ITC Limited, one of India's leading companies with a diverse portfolio of businesses. He oversees ITC's Agri and Information Technology Businesses. The pioneering farmer empowerment initiative, ITC e-Choupal, conceptualised by him, benefits over four million small farmers through customised agri-extension and market linkage services. He is Chairman of the National Agricultural Council of the CII, and a member on the Board of Governors of Institute of Rural Management, Anand (IRMA).

SEBASTIAN MORRIS works as Professor at IIMA and has over 25 years of experience in teaching, training and consulting, in international trade and investment, industrial development, macroeconomics, economic history, public sector, infrastructure, small firms, electricity reforms, regulation, public sector social policy and the Indian economy. He earlier worked as Associate Professor at Institute of Public Enterprise, Hyderabad, and Senior Correspondent for Business India (magazine). He is visiting fellow at University of Pennsylvania, and ICCR Chair Professor at Copenhagen Business School (Asia Research Centre).

SUMIT BOSE was an IAS officer and served as the Union Finance Secretary and Revenue Secretary in the Ministry of Finance. He is Vice Chairman, National Institute of Public Finance and Policy (NIPFP) and serves as an Independent Director on the boards of several companies and on the boards of Vidhi Centre for Legal Policy, Jal Seva Charitable Foundation (WaterAid India), Parivaar Education Society (Kolkata) and Samaj Pragati Sahayog (Bagli, Dewas).

VIJAY PAUL SHARMA is currently Chairman, Commission for Agricultural Costs and Prices, Ministry of Agriculture and Farmers Welfare, Govt. of India. He is on deputation from the Indian Institute of Management, Ahmedabad, where he was Professor in Centre for Management in Agriculture. He has been a FAO consultant in Riyadh and Saudi Arabia and Advisor to USAID's Economic Reforms Project in the Central Asian Countries in Tashkent, Uzbekistan. He has 12 books and more than 100 research papers on issues related to food and agribusiness sector.

***

IC Centre for Governance
Governing Council

Contributors

Aditya Malaviya * Amarjeet Sinha * G Raghuram
Harekrishna Misra * Pramod K Singh * Rekha Jain
S. Sivakumar * Sebastian Morris * Sumit Bose
*Vijay Paul Sharma

IC CENTRE FOR GOVERNANCE
3, Palam Marg, 3rd Floor, Vasant Vihar, New Delhi-110057
Telefax: 91-11-26146236/40809939
E-mail: iccfg@yahoo.co.in • Website: www.iccfg.net