

Need of Innovation in Concept & Employment Avenues for sustainable Livelihood

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Abstract

The notion of reverse innovation came into mainstream academic and industrial discussion when importance of business opportunity in surging developing world was revealed through various reports. This was also observed that creation of sustainable livelihood system can ensure wholesome economic development thereby providing cushion against depression and economic slowdown. However, reverse innovation cannot help until innovations are ushered in to ensure viable livelihood systems, which ultimately create substrate for the application of reverse innovation. Innovation is based upon basic elements of livelihood such as consumption, contribution, utility, productivity and sustainability of livelihood systems. Each economic activity comprises all the basic elements and has close impact on the sustainability of the activity. The concept of economic activities relived the notion of 'circulation by means of contribution and consumption' in the era of mass consumerism, which was evident from the fact of national income disbursement in the economy across various sectors that more consumption is followed by more production and thereby more income again leading to more consumption. However, this also exposed the gaps in the distribution system. More consumption is not necessarily followed by more production in domestic territory. In the age of globalization, domestic production and export has also to be increased to maintain pace with inflow of mass consumption products from abroad. In the nutshell if consumption in the economy increases, it needs to be supported by innovation and reverse innovation so that domestic production, trade and commerce can provide required balance for the sake of sustainable livelihood systems.

Keywords: *Reverse Innovation, Capital Formation, Creation of Infrastructure, livelihood Index, Works availability, Social Sector Development.*

Introduction

The term of livelihood has been main focus of academic deliberations and discussion still this remains unexplored completely in terms of applicability of existing system of utilizing resources. Passing through centuries of development several means of earning livelihood are created, adapted, emerged, disappeared and

abolished. The issue of livelihood always remained the core issue in economic planning in present world, deliberate governance during medieval world and egalitarian system during Vedic age. Masses are considered vulnerable on account of their disability to earn livelihood. Consequently, Livelihoods of people are inextricably linked to the rapidly changing

natural, political and socio-economic system.

Over the planned post Independence period Indian Economy have made all efforts to surpass all kind of hurdles so far the reliance of food sufficiency is concerned. Still, Govt need to enact Food Security Act to ensure at least sufficient availability of food for starving people. This is evident from performance of previous food security programmes that mere food security cannot help to create sustainable livelihood avenues. Brainstorming is required about the synergy in consumption and productivity pattern of the masses across the ages, employability and creation of employment avenues and to observe matter of livelihood with close reference of consumption pattern and rate of productivity.

The issue of livelihood in academia, in administration, and in all kind of literature is always observed as related with poverty. Moreover, it is understood that poverty is an outcome of falling availability of enough money to survive. Both notions are quite different and independent. This needs to be looked upon from collective and comprehensive approach about the incidence of poverty, consumption oriented capital formation, productive employment avenues, sustainable livelihood systems and viability of employment assurance schemes.

1. Need to redefine the employment avenues following enhancement in productivity of resources: An Application of Innovation & Reverse Innovation

The process of reverse innovation begins by focusing on needs and requirements for low-cost products in Less Developed Countries (LDCs). Once products are developed, tested and launched for these markets, are distributed worldwide - even in the Developed Countries (DCs) at significant advantage of low prices which carve out new markets and uses for these innovations. Reverse innovation leads to

products which are created locally in LDCs, tested in local markets, and, if successful, then upgraded for sale and delivery in the developed world. (see notes) The notion of reverse innovation came into mainstream academic and industrial discussion when importance of business opportunity in surging developing world was revealed through various reports. This was also observed that creation of sustainable livelihood system can ensure wholesome economic development thereby providing cushion against depression and economic slowdown. However, reverse innovation cannot help until innovations are ushered in to ensure viable livelihood systems, which ultimately create substrate for the application of reverse innovation.

Innovation is based upon basic elements of livelihood such as consumption, contribution, utility, productivity and sustainability of livelihood systems. Each economic activity comprises all the basic elements and has close impact on the sustainability of the activity. The concept of economic activities relived the notion of 'circulation by means of contribution and consumption' in the era of mass consumerism, which was evident from the fact of national income disbursement in the economy across various sectors that more consumption is followed by more production and thereby more income again leading to more consumption. However, this also exposed the gaps in the distribution system. More consumption is not necessarily followed by more production in domestic territory. In the age of globalization, domestic production and export has also to be increased to maintain pace with inflow of mass consumption products from abroad. In the nutshell if consumption in the economy increases, it needs to be supported by innovation and reverse innovation so that domestic production, trade and commerce can provide required balance for the sake of sustainable livelihood systems. (See notes).

1.1 Consumption and Capital Formation

Poor people spend less as they earn less; they earn less as they have no regular income; they have no regular income as there are less employment avenues; there are less employment avenues as less amount of resources are tapped and utilized up to their potential; resources are under-utilized and unutilized as there is no adequate availability of technology; poor technology is an outcome of low investment and low savings both by government and private entrepreneur; low investment is result of low savings and poor mobilization and marketability; poor mobilization and low capital formation leads to lack of sustainable employment avenues and so they earn less; they earn less as they spend less. There is a direct relationship between aggregate poverty and average consumption (Fig-1).

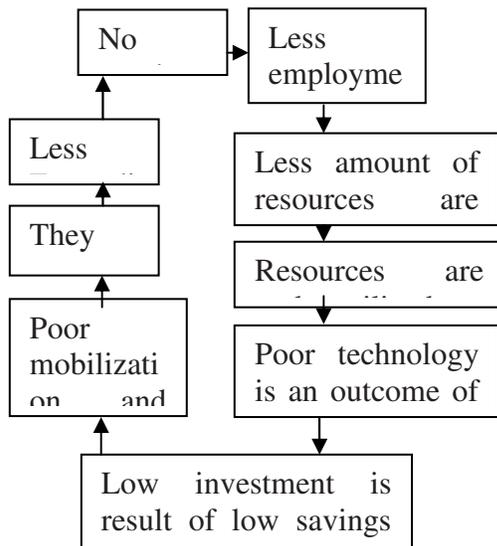


Fig-1 Vicious Circle of low capital formation

Growth of aggregate income as a result of aggregate consumption is therefore a sufficient condition for reduction of overall or aggregate poverty. National Sample Survey Office (NSSO) consumption data relating to monthly per capita expenditure (MPCE) for three years

between 2004-05 and 2006-07 indicates improvement in consumption pattern both across all MPCE levels as well as in rural and urban areas. This is indicative not only of favourable poverty reduction trends but also of the inclusive nature of growth as consumption has improved across the entire distribution in 2005-06 and 2006-07, both for urban and rural population and more so for the latter. Similar results are observed by other researchers apart from economic survey about intricate relationship between consumption expenditure, growth and poverty eradication. However, further research needs to be done to reestablish the notion of more consumption followed by more expenditure led to more growth and more prosperity. As per the new thought countering age old belief of more saving more secure market and economy, more savings can worsen economic downturn (see notes). In fact, mobilized savings which led to creation of infrastructure enabling the sustenance of business (or consumption expenditure of one and saving of other) is the source of livelihood for every one another.

The average MPCE_{URP} in 2011-12 was estimated at Rs.1281.45 in rural India and Rs 2401.68 in urban India resulting in per capita expenditure level of the urban population over rural population exceeding by 87.4 percent. So far the poorest 10 percent of India's rural and urban population had an average MPCE_{URP} of Rs.503.49 and Rs.702.26 respectively. Similarly, the top 10 percent of the rural and urban population, ranked by MPCE_{URP}, had an average MPCE_{URP} of Rs. 3459.77, about 6.9 times that of the bottom 10 percent and Rs. 7651.68, about 10.9 times that of the bottom 10 percent respectively (Table-1).

Table 1: Average MPCE_{URP} (Rs.)

NSS Round	Year	At current Prices	At 2004-2005 Prices

		R u r a l	U r b a n	Rur al	Urb an
68th Rou nd (Pro visio nal)	July 2011- June 2012	12 81 .4 5	24 01. 68	707. 24 (18. 06)	1359 .75 (13. 31)
66th Rou nd	July 2009- June 2010	92 7. 70	17 85. 81	599. 06 (7.2)	1200 .01 (14. 03)
61st Rou nd	July 2004- June 200 5	55 8. 78	10 52. 36	558. 78	1052 .36

URP: Uniform Reference Period of 30 days
Percentage figures in parentheses are
change over previous survey

Source: Press Information Bureau,
Government of India

1.2 Employment avenues, Opportunities and participation: significant factors for livelihood based poverty

Incidence of poverty is estimated by the Planning Commission on the basis of the large sample surveys on household consumer expenditure, income distribution and calorie intake conducted by the National Sample Survey Organization (NSSO). However, ground reality reveals huge diversion from the conceptual incidence of poverty where this is associated with distribution and involvement of working population (including all persons who can work) across available livelihood opportunities.

In the chinhat block of Lucknow only 30.22 percent population is engaged in work comprising farmers, peasants, laborers, agricultural laborers, Marginal Occupational Population and agripreneurs (see notes). Rest of the population is not involved and engaged in any of the legitimately recognized economic activities.

They are simply contributing their day to other wage-earners. They are neither considered in BPL nor in lower middle class (though unofficially). They are really adding up to the total population living below or at the margin of poverty line (if any exists on the basis of national poverty estimates methodology as adopted by NSSO and planning commission). Nevertheless, out of total working population 47.78 percent population is engaged only in agriculture either as farmer or agricultural laborer. The dependence of half of the population on primary sector reveals the high degrees of employment in disguise. This farm practitioner population accounts only 7.43 percent of total sown cultivable area as commercial cultivation which again confirms the same high degree of underemployment.

The above data reveals real picture of unsustainable livelihood systems and employment avenues. For the sake of livelihood security need of the hour is to engage each member of the total adult population in productive and identified economic activities. Rural Self-Employment Training Institute (RESTI) is established for the said purpose providing opportunities to the rural youth for their skill up gradation leading to self-employment. The RESTI's core offering includes its free, unique and intensive short-term residential training designed with demand driven approach to ensure sustainability of micro enterprise and credit linkage after training (see notes).

1.3 Development of livelihood Index

Poverty Line estimates are based upon the calorific consumption of person under observation. This advocates the theory of consumption in relation with available money income. While livelihood is not concerned with available money income, it is more associated with sources of money income. In turn sources of money income are function of connectivity of the area with rest of the world, available infrastructure; opportunities of production, distribution and consumption and role of facilitator in the

region (see notes). In fact, Livelihood is the function of shifts in consumption patterns, available infrastructure, creation of employment avenues, sustainable socio-economic development, regular income, returns to participation etc. However, researchers has devised various indices based upon the Independent variables such as actual expenditure per year, actual debt per year and actual savings per year measured using standardized scoring procedures developed for the study. The livelihood indexes were operationalizing on the basis of income, expenditure, and debt and savings pattern of the individual respondent which denotes the standard of living of the individual respondent.

2. Works availability vis-à-vis Creation of Infrastructure

The creation and maintenance of physical domestic and commercial infrastructure at the village, Block and district level which broadly include road connectivity within and outside the villages, blocks, town area and cities; potable drinking water and clean water for other chores (preferably from local sources, from rain water harvesting structures, and water distribution system); sanitation and drainage system along with incinerators, recycling and recharge system, waste disposal and management; Cold and dry warehouses; adequately managed transport system; banking establishments etc supported by basic social infrastructure in the village such as anganvadi, primary school, mid day meal arrangements, drinking water and toilets in schools, and administrative and judicial bodies is directly an outcome of works performed by engaged workers under MNREGA (Fig-II).

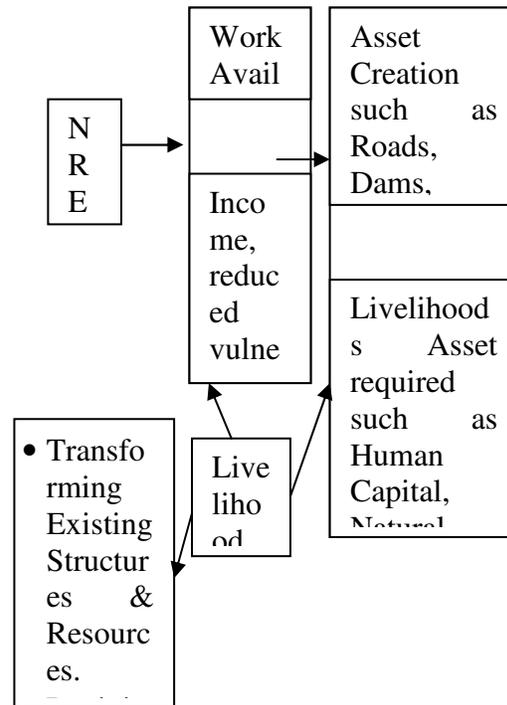


Fig: II Sustainable Livelihood Frameworks under NAREGA

All the existing employment and development oriented programs in the district such as SGSY, RSVY, WDP, IWDP, DPAP, DDP, PMRY etc and the other centrally and state sponsored programs that aim at providing additional employment and development of infrastructure in rural areas along with the funds available and employment (self and wage employment) to be generated under them and the total under employment existing at the district level are listed, which gives an estimate of the total resources available and the employment (self and wage employment) that will be generated through the resources as well as the total employment that needs to be generated. The MNREGA targets to identify the missing infrastructure on the basis of the list prepared earlier, estimating the resources required (including 15 percent for maintenance) to construct the missing

infrastructure (program-wise), and estimating the employment (self and wage) generated by creating the missing infrastructure. This listing, done each year for the coming five years, reveals present self employed persons and wage employment in the number of maydays, which is further divided by 100 to arrive at the number of persons figure. The village-level information on the missing infrastructure, its costs and the employment generated is compiled in the block level plan to further incorporate into the district plan.

Apart MNREGA, there are several other avenues which provide work opportunity to villagers and rural folks, which in turn create infrastructure to establish sustainable livelihood systems. This is therefore necessary to earmark the various employment avenues which are pre-requisite for sustainable livelihood systems.

Opportunity of earning livelihood is not needed to be searched any where rather it is spread across the entire region. For instance opportunities galore in rural areas such as value addition through processing and improved marketing, capacity building and skill development in core and allied agricultural sectors. Agribusiness is in itself sufficient to provide multiple employment opportunities to the villagers within the area.

Livelihood security is provided due to agribusiness with enhancement of employment for both farm and allied sectors. Food and nutritional security is assured on account of agribusiness innovative practices in terms of production of diversified agricultural cultivation of pulses, Oil seeds and vegetables, fruits and milk products. Energy security is also insured with operational innovations in agribusiness such as Micro-hydel systems, farm mechanization and energy plantations improving availability and reducing cost of cultivation and servicing. The involvement of technologically qualified young people will promote rural entrepreneurship and

reduce out-migration. Environment security is promised under improved watershed management techniques through economy of water harvesting of at least 30 percent of available runoff, enhancement of perennial vegetation cover to 40 per cent, organic matter turnover by 60 per cent and improved soil productivity, reduced exploitation of natural resources beyond their carrying capacity, thereby preventing degradation and ensuring better environment. Better quality of life through the spread of business ethics and more awareness of cultural ethos.

It is well known fact that plantation and tree crops have the ability to withstand the vagaries of nature without causing heavy losses and most of tribal population is dependent on their fruits and other products. Agro-Forestry and plantation can provide sustainable livelihood opportunities and can ensure ecological balance.

An equally important sector is livestock, which needs some support. A majority of the small farmers in India, who do not have good land for agriculture, depend on livestock for supplementary income. Therefore, livestock is well distributed among various sections of the community unlike land holdings.

Farm operations including seeding, intercultural operation and threshing are innovative employment avenues for rural women, which led to their effective participation in decision making and economic independence through organized self-help groups. Moreover, Women are benefited with the modules of management developed with respect to prioritized farming systems, Agro-processing and value addition based on commodity-product-packaging-marketing approach, and interlinked entrepreneurship: major outcome contributing towards livelihood security, inbuilt cross cluster advantages due to exchange and visits, periodic review, and effective communication, knowledge centers, a platform for technology and

product exchange and providing interface opportunity for stake holders.

3. Innovation in Social Sector Development: New Paradigms of Livelihood Security after NREGA

Over 65 percent of the population is still living in the villages and over 85 percent of the rural people are dependent on agriculture for their livelihood out of which more than 50 percent are engaged on agriculture directly even from those villages which are very close to urban area (see notes) and around 90 percent in the villages situated in the interiors of the continent. It is observed in the study area that villages near to urban area are able to attract more business opportunities riding on the effective and efficient communication link to the world, adequate availability of infrastructure such as health centres, veterinary centres, krishi vigyan kendras, facilities of banking & finance, schools & colleges, recreation centres, input supply stores and several other (see notes). Connectivity is serious issue for social sector development which indirectly play pivotal role in eradication of poverty. Poverty in absolute terms may be 21 percent, however in terms of poor connectivity of vital facilities and other business opportunities it is more than 60 percent as evident that almost 80 percent population on an average is engaged in agriculture due to lack of infrastructure.

The farming practices in the villages are done for earning livelihood. It is rare to find commercial farming in interior rural areas without government support. In the villages under study no commercial farming is being done so far. Diversified agricultural practices are out of cultivation profile of these two villages. They can grow enough to eat, but this can not give them security about their livelihood forever. Problems pertaining to routine cultivation practices are faced by masses and policy-makers and researchers have taken the cognizance of the seriousness of the issue. Significant among them is sustainability of

routine traditional agricultural cultivation practices. This perhaps is the big reason why they are suffering for livelihood security. In fact they are in dire need of food security via livelihood security.

The peasants are afraid of sowing any crop other than those they are familiar about. From the ages, they are practicing cultivation of traditional crops such as cereals, paddy, potato etc. Few of them do cultivate pulses, vegetables and oilseeds, but on a small scale. If they can grow enough, they can consume sufficient amount. Question is perhaps about the capability of doing sufficient to obtain sustainable livelihood. Here, we need Second Green Revolution (S'GR)

As stated in the Scheduled 1 of the NREGA Act 'creation of durable assets and strengthening the livelihood resource base of the rural poor shall be an important objective of the Scheme'. Successful implementation of the act, however, is likely to be a much greater struggle and a much bigger challenge. Ensuring an employment guarantee of 100 days at the specified wage rate year after year on a continuous basis to all those who demand it in the selected 150 districts in India is not an easy task. This will be feasible only if (1) works are planned in a way that they generate a continuous flow of employment on the one hand and the targeted poor are attracted and convinced to take up the employment on the other hand, and (2) the employment guaranteed under the act is planned in a way that it keeps creating assets that generate sustainable employment avenues in the mainstream economy for a part of the labor force that demands work under the act.

That is, the guaranteed wage employment cannot be treated as a pure welfare activity, a transfer of money to the poor, as the poor are after all a factor of production that needs to be used productively for creating assets that generate sustainable employment avenues in the main stream economy. It is also

envisaged in the NREGA Act that investments made under NREGA would generate employment and purchasing power, raise economic productivity, promote women's participation in workforce, strengthen the rural infrastructure through the creation of durable assets, reduce distress migration, and contribute to the regeneration of natural resources. (See notes)

The project is implemented jointly by McGill University and the Kenya Agricultural Research Institute, in partnership with the Ministry of Agriculture of the Government of Kenya, the Kenya Medical Research Institute and Fresco Seed Ltd. The project engages a multi-disciplinary team of researchers with farmers and other stakeholders in the semi-arid counties of Makueni, Machakos and Tharaka-Nithi in the Eastern Province of Kenya in a participatory process of evaluating agricultural and livestock practices. The purpose is to facilitate adoption and scaling up of best practices for enhancing the resilience of farming systems (See notes).

In the nutshell, it is worth-mention that agricultural practices and quasi food security is far from being inimical for livelihood security, however, sustainable livelihood can be had only through innovation in participation and multiplying economic activities in the rural area. For the sake of livelihood rural folk needs to understand importance of innovative organizational pattern in the form of self help user groups as they are not only useful in creating a mass movement but also in establishing efficient communication among the members. They can tap emerging employment opportunities if they are capable to reach up to the opportunities. Innovation in agribusiness practices will definitely open more avenues for employment; still it needs to be complimented by mass awareness and mass-initiative. Nevertheless, there is also a need of innovation of thought and concept.

Notes:

1. Reverse innovation will transform just about every industry, including energy, healthcare, transportation, housing, and consumer products," explained Govindarajan, who coined the term in 2009 while working as a chief innovation consultant at General Electric. - See more at: <http://www.northeastern.edu/news/2013/03/vgreverse/#sthash.F2THS XoI.dpuf>
2. The National Commission on Enterprises in the Unorganized Sector (NCEUS), in its report, suggested that 77 per cent of the total population of the country in 2004-05, had per capita consumption expenditure of less than Rs. 20 per day. However, it has been observed, based upon calculations on data for 1999-2000 (NSS 55th Round) and 2004-05 (NSS 61st Round) that per capita consumption expenditure of 78.3 per cent of the rural population and 42.5 percent of the urban population was less than Rs. 20 per day in 1999-2000. For the country as a whole, the per capita consumption expenditure of 68.1 per cent of the population was less than Rs. 20 per day. Per capita consumption expenditure of 71.9 per cent of the rural population and 32.3 per cent of the urban population was less than Rs. 20 per day in 2004-05. For the country as a whole the per capita consumption expenditure of 60.5 per cent of population was less than Rs. 20 per day.
3. SWAMINATHAN S ANKLESARIA AIYAR (Times of India, Editorial): The global recession has many roots. One is the erosion of traditional US household prudence. US households used to

save 6percent of their disposable income. But in recent years they went on a borrowing and spending spree, and household savings dropped to virtually zero. Corporations and financiers also ran up record debts, partly to buy assets such as houses, stocks and commodities. This created huge bubbles in all three markets. When the bubbles finally burst, US households, corporations and financiers found themselves in dire straits. Many financial giants were rescued by the government. Meanwhile households, sobered by the turn of events, started saving 4percent of disposable income, up from zero. More saving meant less spending, and made the recession deep and sharp.

4. According to Prof. Swaminathan, 'Food security was linked to livelihood security as 60 per cent of Indians depended on agriculture. This majority comprised the producers of food, who were also consumers. International bodies such as the World Trade Organization did not comprehend this ethos.
5. In Chinhat Block of Lucknow District of U.P. Only 30.22 percent population is employed out of which 37.04 percent are farmers and 10.74 percent are engaged as agricultural laborer while only 2.6 percent self employed in family business and 31.92 percent are engaged in some other work.
6. Prof. A. C. Pigou in which he says that maid servant is an economy until she is not wife, which is non economic activity.
7. In hill areas project for women entrepreneurship and green India is working in which knowledge centres are being established. These knowledge centers are expected to

provide basic facilities towards effective uptake plan. The proposed revolving fund will be raised and supported by the community resources to introduce brand 'HIM'. This emphasize firstly upon popularizing produce of clean agriculture from the hills, secondly, reducing the cost involved in certification thirdly, Promotion of brand will bring social pride to the hill community as well as to the project and lastly, once accepted, the brand will help in attracting better price to the produce from the hills.

8. Across two villages namely Malhaur and Allunagar-diguriya from chinhat block it is observed that 78.39 percent population in allunagar-diguriya out of actual working population excluding marginal occupants is directly engaged in agriculture, which is just less than 60 percent in malhaur as other occupants are not engaged directly in agriculture. In Allunagar-diguriya 62 percent population is directly engaged in agriculture which is just 47 percent in Malhaur reason to the poor connectivity to communication links and other facilities. The availability of basic facilities in Allunagar-diguriya is average 10 kilometers which is just in village or 4 kilometers away in malhaur.
9. Rural Self-Employment Training Institutes (RESTI) are promoted for the purpose of providing opportunities to the rural youth for their skill up gradation leading to self-employment. Rural Development and Self Employment Training Institute (RUDSETI) have also been successful. The Ministry of Rural Development has established RSETIs in all the rural districts of the country. These

institutes are bank led i.e managed and run by the public/private sector banks with active support of the State and Central Governments. The RESTI's core offering includes its free, unique and intensive short-term residential training designed for rural youth. What makes it different from other vocational trainings is its demand driven approach, a priority for rural BPL youth, a wide choice of vocations and continued hand holding to ensure sustainability of micro enterprise and credit linkage after training. So far, more than 190 RSETIs have been established in different States of the country with active participation of 35 public/private banks, and these institutes have trained more than 1.5 lakh rural youth on various trades.

10. Several attempts have been made to improve the planning for assets/works under the programs in a way that they create durable assets that can promote generation of sustainable employment in the mainstream economy. Some of the improvements introduced over the years in the designing of the programs have been:
 - a. Advance planning of assets/infrastructure at the village/district level to promote construction of local infrastructure
 - b. Focusing on assets/works relating to natural resources management (particularly land, water, and forestry) as against roads and buildings under the programs.
 - c. Preparation of shelf of projects at the local level on the basis of the local needs and demand Involvement of Gram Sabhas and Village Panchayats in the planning and implementation of the programs.
 - d. Focus on durable assets in order to promote sustainable employment generation in the second and subsequent phases of these programs.
 - e. Selection of beneficiaries through the Employment Register, which is expected to register all those who want work on these programs.
11. Climate change, regional drought and famine, and chronic food insecurity are together making innovation not an option but an imperative. The research problem being addressed is the dilemma of cyclical hunger crises engulfing Kenya and much of East Africa, on the one hand, and on the other hand, the reality of low rates of farmer adoption of new technologies meant to relieve household food insecurity. Preliminary research in the project suggests that low adoption is related to farmers' disappointment with previous agricultural initiatives, in particular in terms of lack of sufficient information, extension, marketing and post-harvest support. The current project hopes to avoid previous pitfalls by combining the establishment of on-farm trials of drought-resistant seeds and other resilient farming practices (integrated soil, water, pest and livestock management practices) with an integrated assessment of the process of agricultural innovation and adoption. An interdisciplinary research team addresses key dimensions of resilient farming systems through the implementation of research streams: economics; nutrition and health; gender equality; land tenure; policy and institutions; and

environment and natural resource management. By integrating knowledge from these research streams and that generated by farmers and other stakeholders, the project findings will inform the development of appropriate technological, institutional and policy innovations to enhance sustainable and equitable food security.

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