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## **Rapporteur's Report on Review of Eleventh Plan - Implementation and Impact Study at a State/District Level with Special Reference to Agriculture and Rural Development**

**Rapporteur: H.R. Sharma\***

### **I**

Given the overwhelming importance of agriculture in providing livelihood to a preponderant majority of rural population, agriculture and rural development have always engaged the attention of the planners and policy makers. These sectors, therefore, have always remained high priority sectors in terms of resource allocation in different five years plans. In so far as performance of agriculture and allied sectors in the last two-three decades is concerned, while it recorded a reasonable growth rate of 3.52 per cent during 1981-82 to 1990-91 and 3.66 per cent during 1991-91 to 1996-97, the rate of growth decelerated to 2.50 per cent per annum during the Ninth Plan period and further to 2.29 per cent during the Tenth Plan period. At the grassroots level, the deceleration in the growth rate of agriculture got manifested, *inter alia*, in huge disparities in per worker productivity between the agriculture and non-agriculture sectors and, in ultimately increasing number of farmers' suicides in different regions of the country. The sorry state of affairs has been ascribed to a host of factors, most notably, persistent neglect of agriculture in terms of declining plan outlay, declining public sector capital formation, decrease in credit supply, neglect of agricultural research and extension, technology fatigue manifested in stagnation/deceleration in growth of yields of important crops, fall in the use of critical inputs, increase in the cost of production and faulty price policy and practically no increase in the area under irrigation.

A plethora of schemes/programmes have been initiated to correct the sorry state and revive and accelerate growth in agriculture and allied sectors. Important among these are Bharat Nirman, National Rural Employment Guarantee Programme, National Horticulture Mission, National Food Security Mission, National Bamboo Mission and National Project for Cattle and Buffalo Breeding and Livestock Insurance. A National Rainfed Area Authority has been set up to coordinate all schemes relating to watershed development to address the problems of rain-fed areas. Likewise, a centrally sponsored scheme, Rashtriya Krishi Vikas Yojana (RKVY), with an allocation of Rs. 25,000 crores, has been introduced to give states more

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flexibility and autonomy in planning and executing programmes for agriculture. The Eleventh Five Year Plan launched against the background of prevailing crisis in agriculture and widespread agrarian distress allocated Rs. 3,46,707 crores for agriculture and allied sectors including irrigation and flood control and Rs. 3,01,069 crores for rural development which represented an increase of 100.27 per cent and 118.60 per cent over the tenth plan outlays for these two sectors. These two sectors respectively accounted for 9.51 per cent and 8.26 per cent of the total plan outlay. The revival of agricultural growth raising it to 4 per cent per annum has been identified as one of the important strategies for achieving faster and more inclusive growth and accomplishing an overall growth target of 9 per cent per annum. Against this background, it is important to know as to how huge amount of resources being spent on agriculture and rural development through these schemes/programmes including eleventh five year plan has impacted on agricultural production and productivity in different states/districts of the country. A more recently conducted mid-term review of the eleventh five year plan by the Planning Commission concluded that while prospects looked good, the overall agricultural growth may fall short of the target 4 per cent and may come in the range of 3-3.5 per cent level in the plan period. The mid term review has identified factors, among others, slow seed replacement, collapse of agricultural extension system, low use of micro-nutrients, low level of crop diversification and lack of supply of high quality seeds responsible for poor agricultural performance and has asked the states to pay focused attention to these areas. Nonetheless, while the above mentioned factors are indeed important and deserve attention of the policy makers across the board, the role of different factors affecting implementation and impact of various schemes/programmes on crop production and productivity vary from state to state and district to district. The analysis and documentation of these factors from different states/districts of the country by undertaking empirical studies is essential to suggest more region/problem specific remedial solutions. It is against this background that the decision to include Review of Eleventh Plan: Implementation and Impact Study at State/District Level with Special Reference to Agriculture and Rural Development as a topic for discussion in the conference is timely and welcome.

In all ten papers were submitted for discussion under this theme. The papers covered issues like the implementation of National Rural Employment Guarantee Scheme (NREGS) at the state and taluk levels, implementation of National Food Security Mission, impact of watershed development programme, agricultural performance during different five year plans, inclusive growth and rural poverty and Rashtriya Krishi Vikas Yojana (RKVY). Geographically, the coverage of papers was limited to few states. Two papers discussed agricultural performance and inclusive growth and rural poverty considering all-India situation including major states. Among the remaining papers, four pertained to Maharashtra, two focused on Madhya Pradesh, one covered the state of West Bengal and one paper studied four states, namely, Andhra Pradesh, Karnataka, Rajasthan and Maharashtra. Further, among

papers exclusively covering Maharashtra, two papers discussed the implementation of National Rural Employment Guarantee Scheme (NREGS), one in different districts of the state and the other in a taluka in Thane district, one evaluated the performance/improvement of the agricultural sector during the eleventh five year plan in Jalgaon district of Maharashtra and one paper discussed Rashtriya Krishi Vikas Yojana (RKVY). In a similar vein, out of the two papers that pertained to Madhya Pradesh one evaluated the development of agriculture sector in Jabalpur district and the other discussed the implementation and impact of watershed development programme in Dewas district. The paper on West Bengal took stock of the implementation of National Food Security Mission. All the ten papers have been accepted for discussion in the conference. Again, while four papers are recommended to be published as full length papers, the remaining six have been recommended to be published as summary. Guided by the major thrusts of the papers, the following broad heads are adopted for reviewing them and facilitating discussion: Implementation of National Rural Employment Guarantee Scheme, Rashtriya Krishi Vikas Yojana, Implementation of National Food Security Mission, agricultural performance during Five Year Plans, miscellaneous issues and issues for discussion.

## II

### IMPLEMENTATION OF NATIONAL RURAL EMPLOYMENT GUARANTEE SCHEME

The implementation and impact of National Rural Employment Guarantee Scheme (NREGS) since its launching in 200 most backward districts of the country in February 2006 have been a matter of intense debate and discussion. There have been a number of empirical studies on the quantum of employment generated, wages paid, the assets created and, in the final analysis, the impact on the economic welfare of the weaker sections of the society. While the impact of the scheme in terms of the above-mentioned parameters varies from state to state, there is a broad consensus that it has made a positive impact on the livelihoods of the weaker sections of the society. It is in this context that Deepak Shah and Sovna Mohanty while reviewing the implementation of NREGS across different districts in Maharashtra discover (i) low proportion of households registered under NREGS actually getting job cards; (ii) very low proportion of SC and ST households who have received job cards compared to households of other social groups; (iii) wide deviations and low number of employment days generated compared to target of 100 days of employment in most of the districts with the notable exceptions of Nandurbar, Thane and Aurangabad; (iv) low wages which were sometimes lower than the prescribed minimum wage; and (v) water conservation and harvesting activities followed by draught proofing, rural irrigation and renovation of water bodies as the major works undertaken under NREGS. The poor implementation of the scheme, according to authors, could be attributed to a number of factors like lack of awareness among people about the scheme and the registration process, lack of awareness among workers about wage

rates for different kinds of works in different types of terrain, lack of door to door survey to register eligible persons, discrimination based on caste and community, improper entries in the job cards, inflation of number of days worked, improper method of measurement of productivity and fudging of muster rolls.

The second paper on Maharashtra by Jayanti Kajale and Sangeeta Shroff examined implementation of the NREGS in tribal dominated Jawhar taluka which is one of the most backward talukas of Thane district in Maharashtra. The authors find that in the first and second years of the implementation of the scheme almost hundred per cent of the households who asked for employment were provided the same and nearly all households who demanded employment belonged to scheduled tribe category. More importantly, women accounted for around fifty per cent of the person days of employment generated. There was, however, a significant decrease in the quantum of employment provided in the third year, i.e., during 2009-10. The factors which lead to a drastic decrease in the demand for employment are, among others, mandatory wage payment through banks or post offices, reluctance of households to open bank/post office account because of cumbersome procedure to open account and bank branch/post office located far away from the house, payment of wages on the basis of the actual amount of work done which in many cases result in the payment of lower wages than prevailing in non-farm activities like construction, reluctance of the farmers to offer their land for construction of ponds and other works, preference of labour to work in nearby sites, migration of workers to urban areas and tremendous pressure on the panchayat level officials.

The paper by K. Kareemulla *et al.*, empirically evaluated the impact of NREGS on the livelihoods and capital formation in agriculture in sixteen villages spread across four states, namely, Andhra Pradesh, Karnataka, Maharashtra and Rajasthan. The paper brings out a number of important findings on issues which have been relatively less explored in the available literature on the implementation and impact of NREGS. These include, *inter alia*, reduction in the level of migration in the sample villages in the aftermath of the implementation of NREGS, weaker sections and women getting more employment opportunities and wages and earnings being primarily utilised for purposes like food and health security, education, repayment of debt and construction/purchase of house. More importantly, however, the authors find that the implementation of NREGS has lead to capital formation on farmers' fields through creation of assets like farm ponds, open wells, field bunds and land leveling besides renovation of village tanks and construction of chek/earthen dams. Most of these assets were being reportedly used by the farmers implying a positive impact on the production and productivity of different crops. The authors, however, report that inadequate technical supervision in the process of creation of these assets is impinging on their quality and, therefore, suggest adequate technical support and supervision and greater involvement of the beneficiaries to enhance their productivity and longevity.

## III

## RASHTRIYA KRISHI VIKAS YOJANA (RKVY)

The paper by S.S. Kalamkar and Sangeeta Shroff gives background of the launching of Rashtriya Vikas Yojana (RKVY) and examines the allocation, release and expenditure incurred under the scheme with special reference to Maharashtra. The paper besides RKVY also discusses issues like the contribution of agricultural sector towards state gross domestic product and employment, sectoral growth rates in the state since eighth five year plan and sectoral distribution of plan expenditure since third five year plan. Insofar as discussion on RKVY is concerned, the authors report that seven major states, namely, Andhra Pradesh, Gujarat, Karnataka, Uttar Pradesh, Maharashtra, Tamil Nadu and Rajasthan together accounted for 67 per cent of the total expenditure incurred under RKVY since its launching in 2007-08. For the state of Maharashtra, a total outlay of Rs. 27,799.7 crores has been proposed to be incurred under comprehensive district agricultural plans. Among different activities, water conservation and minor irrigation account for 45 per cent of the total proposed outlay followed by agriculture and horticulture with respective shares of 17.2 per cent and 11.6 per cent. Across districts, while Nagpur reportedly accounted for the highest allocation under RKVY, Yavatmal received the lowest allocation. In another paper, S.K. Gupta outlines a plan for the development of agriculture in Jabalpur district of Madhya Pradesh. Given the available resource endowment in terms of soil and irrigation and the existing land use pattern, crop yields and major constraints, the author suggests a strategic plan for agricultural development and crop diversification. The suggested plan proposes a number of interventions like increasing seed replacement rate through seed rolling plan and breeder seed production plan, replacement of low productive crops with high value crops through crop diversification, strengthening agricultural extension services and training programmes and improving recommended crop production practices by incorporating crop geometry, integrated nutrient management, integrated pest management and soil and water management components. The detailed seed rolling plan for different crops, plan for substitution and diversification of crops and a programme for farmers' trainings including nature of activities and expected beneficiaries have been suggested to accelerate agricultural development and crop diversification. Likewise, the agencies involved in seed development programme and farmers training programmes have also been mentioned. The major constraints in accelerating agricultural development of the district like lack of irrigation facilities, poor soil fertility status coupled with soil erosion, low cropping intensity, low value crop agriculture, high number of small and marginal farmers and high incidence of pest and diseases have also been discussed.

## IV

## IMPLEMENTATION OF NATIONAL FOOD SECURITY MISSION

S. Chatterjee and A.K. Giri in their paper assess the impact of National Food Security Mission (NFSM) and discuss, among other things, state-wise spread of districts under NFSM separately for rice, wheat and pulses, the distribution of additional 10 million tonnes of rice, 8 million tonnes of wheat and 2 million tonnes of pulses among selected states in relation to their area weightage and the growth rates required to achieve the target production between the base period and target for year 2011-12. In particular, the paper assesses the progress of NFSM in West Bengal and brings out the casual factors affecting its performance. The analysis shows that in order to meet the target of 10 million tonnes of additional rice production, the major contribution has to be made by states like Uttar Pradesh (17 per cent) followed by West Bengal (14 per cent), Chhattisgarh (12 per cent), Andhra Pradesh (11 per cent) and Orissa (11 per cent). In the case of wheat, most of the contribution has to come from Uttar Pradesh (39 per cent), Madhya Pradesh (22 per cent), Punjab (13 per cent) and Bihar (10 per cent). Likewise, for meeting the target of pulse production Madhya Pradesh alone is expected to contribute as high as 54 per cent followed by Uttar Pradesh (16 per cent). The required growth rates to achieve these target levels of production for selected states vary from 3.61 per cent to 15.83 per cent in case of rice, 0.64 per cent to 8.8 per cent in respect of wheat and as high as 12.15 per cent to 55.86 per cent in case of pulses. However, while assessing the actual performance in respect of the state of West Bengal, the study finds that out of the eight districts identified for increasing rice production only two, namely, Coochbehar and Dinajpur (N) surpassed the target level of production. In the case of wheat only one, Dinajpur (S), out of the four identified districts exceeded the target production. And none of the identified districts for augmenting pulse production had achieved their target levels. An analysis of the constraints causing non-fulfillment of the production targets reveals that inadequate release of funds was the most important factor which affected crucial interventions like timely distribution of hybrid and high-yielding variety (HYV) seeds for all the three crops adversely.

## V

## PERFORMANCE OF AGRICULTURAL SECTOR UNDER FIVE YEAR PLANS

Three papers have discussed the issues like the performance of agricultural sector in terms of increase in the area, production and productivity of different crops over different time periods at different levels and inclusive growth and rural poverty. P.B. Pagire *et al.*, discusses agricultural development of Jalgaon district of Maharashtra. Compound growth rates of productivity of different crops were computed between 1995-96 and it was 2006-07 and the study found that while the productivity of *rabi* sorghum, gram and wheat recorded significantly high growth rates, the productivity

of safflower and sugarcane recorded very low growth. However, banana which was a major horticultural crop of the district experienced impressive growth rates in area, production and productivity which were 5.42 per cent, 7.21 per cent and 1.62 per cent, respectively. Likewise, total value of output in livestock and fishery sectors registered a growth rate of 1.32 per cent and 1.72 per cent between 1999-2000 and 2005-06. The authors also estimated a net increase in income from different crops during the Eleventh Five Year Plan if the technological interventions suggested by Mahatma Phule Krishi Vidyapeeth were actually implemented.

The paper by Madhusudan Ghosh deals with inclusive growth and rural poverty in India and evaluates, besides discussing the temporal changes in the incidence of rural poverty across major states, the effect of agricultural performance on incidence of rural poverty and the strength of trickle down process. The study finds that agricultural performance measured in terms of state domestic product in agriculture per head of rural population did have a statistically significant negative effect on the incidence of rural poverty. However, the numerical strength of its effect on rural poverty has been limited and weakening over time which was evident from the fall in the absolute value of regression coefficients associated with agricultural performance. The author, therefore, argues that agriculture performance alone may not be sufficient to reduce poverty and ensure inclusive growth and suggests implementation of schemes to generate more productive employment in the farm and non-farm sectors. Among more specific factors affecting rural poverty, while the effect of average size of marginal and small operational holdings and real wage rate for male agricultural labourers was negative and statistically significant, the usual status unemployment rate did have a positive and statistically significant effect. The author further argues that against the background of the actual performance of agricultural sector during the ninth and tenth five year plans and the second and third years of the eleventh five year plan in conjunction with factors like decrease in public sector and private sector gross capital formation in agriculture and allied sectors, constant public and private investment in agriculture, decrease in the share of public sector outlay and expenditure in eleventh five year plan compared to ninth and tenth five year plans and fall in the share of actual expenditure on agriculture and allied sectors in the first two years of the current plan, the agricultural growth target of 4 per cent during the eleventh five year plan is unlikely to be accomplished.

Agricultural performance during different five year plans in terms of a number of parameters like net sown area, gross cropped area, net irrigated area, cropping intensity, productivity of important cereal crops, fish production and milk availability and use of plant nutrients has been discussed by R.P. Singh and Jai Parkash in their paper. The study reports that agriculture sector including irrigation was allotted around 20 per cent of the total plan outlay during different plan periods except the first, fourth and sixth plans. The results show that while net sown area and cropping intensity respectively increased at a rate of 0.35 per cent and 0.42 per cent per annum between 1950-51 and 2005-06, the net irrigated area registered an annual compound



growth rate of 3 per cent. Over the period, there was a decrease in the proportion of cultivated area devoted to food grains implying increase in area under non-food grain crops. Further, while fertiliser consumption reported to have increased from about 1.93 kg per hectare during the second plan to about 117 kgs during the Tenth five year plan, the total number of pumps rose from 109 thousands in 1951-52 to 15,683 thousands during 2003-04. In so far as growth of productivity of different crops was concerned, the productivity of rice, wheat, maize, jowar and bajra between the first five year plan and the tenth five year plan reportedly increased at a rate of 3 per cent, 5.64 per cent, 2.95 per cent, and 4.51 per cent per annum. The over all net food grain production recorded an increase of 5.24 per cent per annum during the period. The fish production, including marine and inland fisheries, registered a very high growth rate of 12.2 per cent per annum so was also the case of milk production which increased at rate of around 9 per cent per annum.

#### VI

##### MISCELLANEOUS ISSUES

A.R. Verma in his paper compares the cropping pattern, levels of investment and benefit cost ratios between farms of different sizes in watershed development programme areas and non-watershed development programme areas and examines the constraints in augmenting crop production and productivity. The author finds positive impact of the implementation of watershed development programmes on soil and water conservation which has lead to the replacement of long duration indigenous varieties of crops like sorghum, cotton and soybean with improved and short duration varieties. This has resulted in higher crop yields and cropping intensity on watershed development farms as compared to non-watershed development farms. Naturally, therefore, the benefit cost ratios for different crops were higher on farms covered under watershed development programme compared to those not covered under the programme. Inadequate capital, lack of technical guidance, lack of appropriate institutional arrangement for institutionalising participatory monitoring and evaluation at watershed level were identified to be the major constraints in effective implementation of watershed programme.

#### VII

##### ISSUES FOR DISCUSSION

On the whole, the response of the paper writers was limited since only ten papers were submitted for discussion in the conference. Not only that the papers submitted for discussion were geographically limited to few states but also they covered very few issues raised in the guidelines for paper writers. Against this background, the issues emanating from review of the papers submitted for discussion and some other important issues requiring discussion are given below.

1. Though the literature on the implementation of National Rural Employment Guarantee Scheme in terms of number of employment days created especially for weaker and more disadvantaged sections of the society like scheduled caste and tribe and wages paid is proliferating very fast, some important issues like the nature of assets created under NREGS and their implications for agricultural and rural development and effect on consumption and nutrition security of the beneficiary households remain relatively less explored. It is in this context that the implementation and impact of NREGS in various states need to be discussed thread bare. In particular, how the implementation of the scheme could further be improved to enhance economic welfare of the weaker sections and disadvantaged groups need to be discussed and debated.

2. The implementation and impact of important programmes like national food security mission has not received adequate attention from the paper writers. The only paper that has looked into its implementation in West Bengal has shown that inadequate release of funds adversely impacted the production targets of the three selected crops. A glance of the available literature on the implementation of different developmental programmes gives the impression that most of the programmes are launched without putting adequate infrastructure in place which adversely affects their implementation and, almost universally, results in non-fulfillment of the targets. It is in this context that a thorough discussion on the possible reasons for tardy implementation of various developmental programmes launched to revive agricultural development and promote rural development and possible solutions to overcome them is required.

3. The implementation of RKVY in terms of types of projects sanctioned and their actual implementation and effect on crop production and productivity requires discussion in the light of the findings of the papers. More importantly, the need and nature of convergence and synergy between RKVY and NREGS need to be deliberated and discussed. The issues outlined in guidelines for paper writers like the extent of resource allocations to different states and activities under RKVY, its impact on actual outlay in agricultural sector, the utilisation of allotted resources need to be discussed in view of the experiences of different states.

4. To what extent a number of programmes initiated in the last few years have made an impact on the identified causes of deceleration in agriculture growth also requires discussion. In particular, it needs to be discussed whether there is a reversal in the trends in capital formation in agriculture, proportion of gross domestic product spent on agriculture, proportion of expenditure on research and development in agriculture, and so on?

5. The progress in some of the areas of concerns expressed in the Eleventh Five Year Plan like water management, rainwater harvesting and watershed development, recycling degraded land, improving soil quality, bridging the knowledge gap through strengthening extension, diversifying to high value outputs including horticulture crops, promoting animal husbandry and fishery, providing easy access to credit at affordable rate of interest and strengthening SHGs need to be discussed. The discussion on these issues could help in concretising the possible reasons for poor progress and solutions/interventions that are required.

6. A discussion of the experiences of the implementation and impact of various programmes/schemes in some of the high performing states in agricultural growth like Gujarat and Bihar would also be useful to understand the policy lessons that emerge from their experiences.