Chapter 11
Economic Impacts of MGNREGA in Dryland Region of India: A Meso and Micro Study in Selected States

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11.1 Introduction

Besides wage income and guaranteeing employment for at least 100 days per household in a financial year, in practice, the activities of MGNREGS have also provided other benefits like generating productive assets, protecting the environment, empowering rural women and reducing rural-urban migration. In this perspective, the MGNRWEGA scheme in fact also aims to achieve sustainable development in rural India through improved natural resource management. In India, poverty is still rampant, though Poverty Head Count Ratio declined from 45.3 in 1993/94 to 22.9 in

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2011/12 (GoI 2015). When we consider the overall efficacy of the programme, several issues rose affecting the performance of MGNREGA on the ground, and misappropriation of fund at the local level, etc. In this context, this chapter discusses to what extent MGNREGA has been successful in achieving the MDG of 'Eradicating Extreme Hunger and Poverty'. Likewise, has MGNREGA programme been successful in providing 100 days of employment per annum and social protection to rural families demanding employment?

In this context, the overarching objective of this study is to evaluate the performance of MGNREGA in the reduction of poverty and distress in selected dryland states of India. The specific objectives are: (a) to analyze whether MGNREGA programme has been successful in providing 100 days of employment per annum to rural families demanding employment, (b) to what extent the MNREGA has offered social protection to the rural poor, and (c) how far this programme guarantees sustainable development through improved natural resource management conditions. The study combines employment generation aspect, social aspect, as well as environmental, and community scale of benefits through natural resource management in rainfed tropical region of India, which is a most vulnerable zone to climate change issues in the country.

With this background, this chapter is organized as follows: The Sect. 11.2 describes the context and the salient features of the MGNREGS. Section 11.3 discusses briefly the objectives of the study, then illustrates study methodology, source of data, sampling methods and empirical tools used in this study, Sect. 11.4 provides an inter-state comparative perspective of the implementation of MGNREGA across the six states selected. This is done in terms of provision of employment, gender and social inclusion and wages earned. Then, Sect. 11.5 analyzes micro-level evidence on the role of MGNREGA in selected sites in Karnataka state. This involves natural resource management and water conservation, village development, and community development. The last Section provides the conclusion and policy implications of the study.

11.1.1 Features of the MGNREG Act and Sustainable Development

The MGNREGA scheme marks a paradigm shift in implementing rural development programme in India by way of ensuring the right of employment to the rural people, especially women. Thomas (2010) argued that 'NREGA is unique in the sense that, it gives primary importance to women participation and empowerment as well as a corruption less implementation of the wage employment programme through social auditing by Gram Sabhas'. By ensuring regular work at minimum wages, the thrust was to be on 'employment first, with growth as an outcome', rather than vice versa (Bhaduri 2005).

The striking feature of the MGNREGA is that it not only provides employment to combat chronic poverty, to grow resilience against drought, deforestation, soil erosion, etc. but also aims at generating productive assets, protecting the environment,

empowering rural women, and arresting rural-urban migrations. The impact of climate change falls differentially on people, and the poor are the most vulnerable to its adverse impact. NREGA, by encouraging works on water harvesting, flood protection, afforestation and plantation helps to insulate local communities from adverse effects of climate change (Sharma 2011). In this sense, the objectives and overall criteria adopted for implementing MGNREGA in 2011/12 were, in fact, consistent with the nation's overall goal and objectives (targets) set in meeting the Sustainable Development Goals by 2030 and its targets and milestones on several fronts.

MGNREG act is the most prominent act in the history of Independent India in terms of ensuring grass-root level participation of every citizen and beneficiary in local development process, through democratic process, multi-layered social audit and transparency mechanism by involvement of the civil society, comprehensive planning at village level towards sustainable and equitable development, etc. (Reddy et al. 2014; Pankaj and Tankha 2010). Some of the important features of the Act are to improve the quality of life of rural households who are vulnerable to out-migration in search of daily wage employment by channelizing the wage workforce towards developmental activities at the village level itself.

In this context, a study by Esteves et al. (2013) quantifies the environmental and socio-economic benefits generated by the works implemented under the Mahatma Gandhi National Rural Employment Guarantee Act. The same study has also assessed the potential of these benefits to reduce vulnerability of agricultural production and livelihoods of the beneficiaries, post-implementation (2011–12) as compared to pre-MGNREGA (2006–07), to current climate variability and showed reduction in agricultural and livelihood vulnerability due to implementation of works under the Act and resulting environmental benefits.

11.2 Methodology and Data

This study attempts to address implications of MGNREGA at both macro and micro scale of analysis. For macro-scale of analysis, we have analyzed implications of MGNREGA across six states of India, which are predominantly dryland states with higher percentage of crop acreage under a rainfed system of production than the irrigated production system. Then, the meso-level analysis is supplemented by doing a micro-level assessment on implications of MGNREGS on selected indicators of rural development at stratified randomly selected block, and then randomly selecting households in these blocks in the state of Karnataka.

11.2.1 Across States Level Analysis

The comparison across states on the impacts of MGNREGS on selected indicators of rural development and sustainable developments were carried out using the data

and statistics largely from the official sources of data on MGNRGA implementation across the states provided by MGNREGA authority, Ministry of Rural Development (http://www.nrega.nic.in/). The national level data are too generic to make any meaningful assessment on any specific performance indicators of MGNREGS. Whereas, disaggregated data at the state level would discern the factors that make a difference in these performance indicators. Six states which broadly represent the dry regions of agro-climatic sub-regions of semi-arid tropics of India are taken for the analysis. Therefore, we have taken following six states for across states comparative analysis, and they are: Karnataka, Rajasthan, undivided Andhra Pradesh, Gujarat, Madhya Pradesh and Maharashtra. The comparative assessment of performance of MGNREGA on selected indicators across the six states of India was done taking data from MGNREGA report (2012–13) as well as MGNREGA reports for 2008–09 and 2010–11 fiscal years.

11.2.2 District and Taluka Selection in Karnataka State for Micro-Level Studies

The micro study was done by selecting few schemes based on stratified random sampling method in dryland regions of Karnataka. In particular, a modest attempt has been made to analyze the economic impact of MGNREGA on income and employment in the most disadvantaged districts of Karnataka to provide micro-level evidences along with meso (macro) level analysis across the states, as noted earlier.

Following criteria were adopted to select districts to undertake a study with regard to various issues related to the implementation of NREGA in Karnataka state.

In the first stage, selected districts of Karnataka were identified for a survey to cover all the three phases through which NREGA has been implemented in Karnataka state. In the second stage, based on the financial performance and number of person-days of employment generated, Ministry of Rural Development, GOI, has classified districts in each of the state into two categories: good performing districts and poor performing districts. Out of these lists, we decided to select four districts for field site observations and micro-assessment, covering two from good performance districts and two from poor performance districts. In particular, we selected Chitradurga and Davanagere as good performing districts, and Shimoga and Hassan were selected as poor performing districts, based on the MGNREGA performances indicators provided at the government reports (website). The same criterion was adopted to select two taluks\blocks within the selected districts. In the third stage of sample selection, within the selected blocks, four Gram Panchayats were selected randomly and one work was selected in each Gram Panchayat in such a way that out of four works three are ongoing and one is a completed work. In the fourth stage of sampling, 40 NREGA beneficiaries were selected per taluk to collect detailed information by using structured schedule on performance and implications of MGNREGA to individuals and at community scales. In addition, interaction meetings and series of Focus Group Discussions

(FGDs) were conducted with state, district and taluk/block level stakeholders of MGNREGS work activities.

MGNREGA work activities in Karnataka have been implemented since 2006, and by 2008, the annual budget of MGNREGA in the state was about Rs. 3,580 million generating 9 million days of employment across the 27 districts in a year. Focus Group Discussions and Participatory Impact Assessment (PIA) were used for in-depth understanding of the impacts and wider implications of the MGNREGA activities on the targeted communities at different scales, such as communities, households, and at individual members identified from the selected villages of Karnataka. The micro-data compiled from these schedules were analyzed using simple statistical tools like averages, ratios, percentages and graphical presentations.

11.3 Implementation of MGNREGA: A Comparative Overview Across Six States

The comparative assessment across the states on implementation of MGNREGA was done taking selected performance indicators of the MGNREGS, such as the extent of fulfilment of the basic entitlements in terms of days of employment, duration of employment, age-wise employment, season-wise work demand pattern and the extent of involvement of women for MGNREGA work. The results are summarized below by each performance indicator.

11.3.1 Trends in Employment Sought and Offered by MGNREGA

Table 11.1 presents the results of the comparative overview across the selected states on average person-days of employment per household and households with 100 days of employment. The results also provide a gleam of demand for and supply of MGNREGA related employment across states selected for comparative analysis. The performances of MGNREGA widely varied across the states of India, as clearly illustrated by the huge variation on these performance indicators across the states (Table 11.1).

For example, in 2008–09, the households registered under MGNREGA demanded employment varied from 20% in Maharashtra to 75% in Rajasthan. The demand for employment in 2011/12 also varied across the states. It declined at huge scale in Rajasthan, Gujarat and Maharashtra. This reduction in demand for employment under MGNREGA in these states may be due to more attractive labour market wage outside of MGNREGA, and outside of agriculture. We accept the fact that it is difficult to isolate the real impact of MGNREGA on employment only based on simple average related data as shown in Table 11.1. The employments are also affected by other economic factors like spillover effects from economic growth,

Table 11.1 Level of employment sought and offered by MGNREGA across the 6 states between 2008–09 & 2012–13

State/period	Households registered for employment (millions)	Proportion of households seeking/demanding employment	Proportion of households offered employment	Employment provided in no. of person-days per household	Proportion of women provided employment	Proportion of households availing 100 days of work
1. *Karnataka*						
2008–09	3.4	26.5	98.9	32.1	50.4	3.0
2012–13	5.7	33.0	68.0	49.0	47.0	7.7
% of change	68.0	25.0	-31.0	53.0	−7.0	157.0
2. *Rajasthan*						
2008–09	8.5	75.3	100.0	75.8	67.1	41.3
2012–13	9.9	39.3	86.3	46.0	68.0	8.6
% of change	16.0	−48.0	−14.0	−39.0	1.0	−79.0
3. *Andhra Pradesh (undivided)*						
2008–09	11.3	50.2	100.0	48.0	58.2	8.5
2012–13	12.6	53.7	84.5	45.0	59.0	8.5
% of change	12.0	7.0	−16.0	-6.0	1.0	0.0
4. *Gujarat*						
2008–09	2.9	29.6	100.0	25.0	42.8	5.8
2012–13	3.8	19.6	90.8	41.4	42.9	7.7
% of change	31.0	−34.0	−9.0	66.0	0.0	33.0
5. *Madhya Pradesh*						
2008–09	11.2	46.4	100.0	56.6	43.3	18.8
2012–13	12.1	29.3	99.4	39.8	42.4	5.6
% of change	8.0	−37.0	−1.0	−30.0	−2.0	−70.0

(continued)

Table 11.1 (continued)

State/period	Households registered for employment (millions)	Proportion of households seeking/demanding employment	Proportion of households offered employment	Employment provided in no. of person-days per household	Proportion of women provided employment	Proportion of households availing 100 days of work
6. *Maharashtra*						
2008–09	4.8	18.9	99.8	46.3	46.2	3.6
2012–13	7.1	23.2	98.8	53.7	44.5	14.2
% of change	48.0	23.0	−1.0	16.0	−4.0	294.0

Source www.nrega.nic.in (18.4.2014)

urbanization, non-farm rural growth, rural non-farm employment, increased literacy, introduction of minimum wages act, and so on. All of these factors also often coincide with the impact of MGNREGA.

Table 11.1 also shows that almost 100% of households who demanded employment got offer to work under MGNREGA in the initial periods of its implementation (2008–09), and the situation was same across all of the six states. This trend continued in Madhya Pradesh and Maharashtra, however, this was not the case in Karnataka, Rajasthan, Andhra Pradesh (undivided) and Gujarat. In Karnataka, unmet demand was as high as 30%. These states are with extremely varying socio-economic, cultural and political conditions. The reduction in the proportion of households for MGNREGA may be because of higher rural infrastructure development work, higher wage levels and an overall situation of labour shortage. These alternate factors may attract less number of labour force opting for physical work under MGNREGA with wage rate less than the statutory minimum wage in the state.

Over the same period, in Karnataka, Gujarat and Maharashtra, the number of person-days per household increased by 53, 66 and 16%, respectively, while it experienced a decline of 39, 6 and 30% in Rajasthan, undivided Andhra Pradesh and Madhya Pradesh, respectively. The sharp reduction in demand for MGNREGA work in Rajasthan could also be the reason for highest reduction in person-days in this state. This indicates that MGNREGA work could become un remunerative for them, given the lower wage of MGNREGS than alternate options in rural areas.

In sum, the set indicators in Table 11.1 provide us a mixed performance of MGNREGA across the selected six states. In some states, MGNREGA was able to generate sufficient manual work for unskilled labour, but not for all. It is therefore also important to know whether these jobs are sustainable or not, and how the situation would change in the coming years.

11.3.2 Share of Women in Workforce Under MGNREGA

The MGNREGA Act has given priority to women. Accordingly, in implementation also it has mandated a minimum of one-third of the work funded by MGNREGA should be reserved for women. As such, the women participation varied from 40 to 70% across sample states: in Rajasthan, undivided Andhra Pradesh and Gujarat, the proportion of women force continued to be almost the same in 2012–13 compared to 2008–09. But, the proportion of women participation slightly declined in Karnataka (7%), Madhya Pradesh (2%) and Maharashtra (4%). It means that the proportion of women participation has not changed over the years. It is a noticeable fact that, though in Rajasthan MGNREGA was not functioning well, the proportion of women employed was maximum (68%) among all the six states.

11.3.3 Duration of Employment Under MGNREGA

Duration-wise employment patterns across the states are presented in Table 11.2. Almost 50% of the households in all six states got only about one month of work annually under MGNREGA programme. Only about 30% of the households got about 60 days work per annum, and 20% got 61 to 99 days work per annum in the period studied. Only 9% of the households each in Rajasthan and undivided Andhra Pradesh, 8% in Karnataka, Gujarat, Maharashtra, and 6% in Madhya Pradesh got employment for 100 days per annum. The data suggest that MGNREGA activities were not providing 100 days of wage employment uniformly across states (Table 11.2).

Table 11.2 Duration-wise employment provided under MGNREGA in SAT states

State/period	Number of days work undertaken by families per year				Total no. of HHs. attending MGNREGA work (in million)
	1–30 days	31–60 days	61–99 days	100 & more days	
	Proportion of households attending to work (%)				
Karnataka					
2011–12	40.4	30.0	26.6	3.0	15.7
2012–13	40.4	26.0	25.9	7.7	7.0
% change	–	–	–	157.0	–
Rajasthan					
2011–12	34.6	30.8	26.9	7.7	17.6
2012–13	41.2	31.4	18.8	8.6	12.0
% change	–	–	–	12.0	–
Andhra Pradesh (undivided)					
2011–12	–	–	–	–	4.0
2012–13	42.8	28.2	20.5	8.5	14.0
% change	–	–	–	–	–
Gujarat					
2011–12	50.9	26.4	17.4	5.3	5.4
2012–13	48.1	27.0	17.3	7.7	6.2
% change	–	–	–	45.0	–
Madhya Pradesh					
2011–12	45.0	27.0	20.0	7.8	10.0
2012–13	50.3	26.8	17.3	5.6	7.1
% change	–	–	–	−28.0	–
Maharashtra					
2011–12	50.9	23.4	12.6	13.1	8.1
2012–13	31.0	37.0	24.0	7.7	4.3
% change	–	–	–	−41.0	–

Source Same as Table 11.1

11.3.4 Pattern of Age Profile of Employed Persons Under MGNREGA

An age-wise disaggregated analysis of the workers participating in MGNREGA gives better insights of the performance of MGNREGA across the states. The results of the disaggregated analysis for 2011–12 are illustrated in Fig. 11.1. Around 40–56% of the persons employed under MGNREGA were below 40 years of age. It shows MGNREGA has also attracted young and able-bodied persons, contradictory to the findings from several other studies on the topic.

In undivided Andhra Pradesh, around 50% MGNREGA workers were of 40–60 years, whereas, 41% were from the youth category. In Karnataka, the situation was opposite, compared to the middle age, 17% more youngsters were engaged in MGNREGA work in 2012–13. In the period, the total number of employed persons in Karnataka was almost half than that of the undivided Andhra Pradesh. But people working below 40 years were almost 20% higher than in undivided Andhra Pradesh. Major proportion of workers employed, i.e. more than 40% belonged to the age group of below 40 years across states. Thus, MGNREGA also increased employment opportunities for youth across the states, along with women and others.

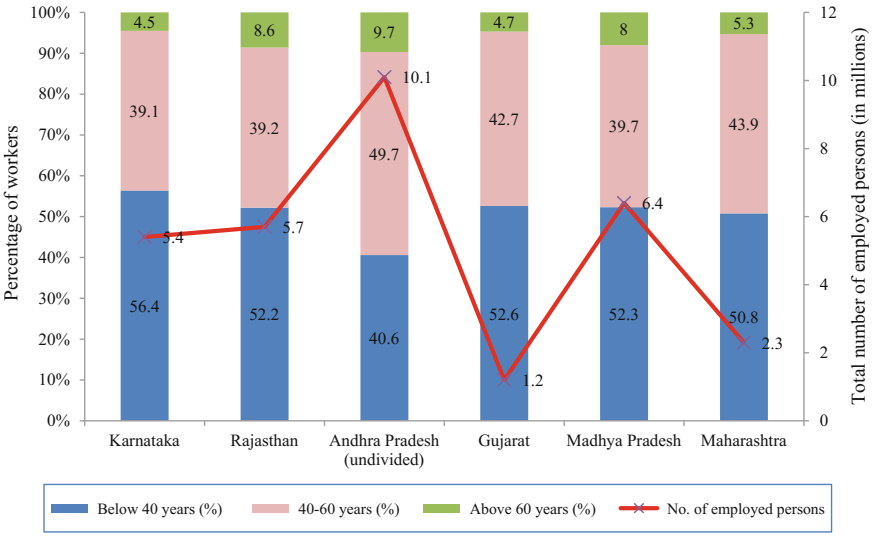

Fig. 11.1 Age-wise details of employed persons under MGNREGA in selected states

11.3.5 *Effective Targeting of Disadvantaged Group: Social Dimension of NREGA*

We also evaluated differentiating the impact of MGNREGA on the extent of coverage of socially disadvantaged groups like SC, ST and women? To test whether a social protection scheme like MGNREGA is reaching the right social group or not.

An attempt has been done to assess the extent of inclusion of the social groups (and women members) in relation to their share in work participation[1] under MGNREGA across the six states. The results are summarized in Table 11.3. The SC household participation in the MGNREGA also depends upon relative share of SC population in each of the state. The proportion of SC population in the state total varies from as low as 6.87% in Gujarat to as high as 18.45% in Andhra Pradesh. For the country as a whole, there was a decline in the share of SC households in the total person-days of employment under MGNREGS from 26.71% in 2008–09 to 22.02% in 2011–12, only with a marginal increase in Andhra Pradesh, Madhya Pradesh and Rajasthan. In Maharashtra, there was a sharp decline in participation of SC in NREGA work over the years.

The share of ST households in the total employment created in 2008–09 was disproportionately very high level—more than double their population share in the selected states, then it declined over the years, but still their participation is relatively at a high level. Earlier, Reddy et al. (2014) reported that the population share of ST in the first phase of MGNREGA implemented districts was significantly higher and most of the ST households suffer from extreme poverty, for whom, MGNREGA work is of great relief (and social safety nets) and an option to protect their livelihoods in lean season of farming. The higher share is a positive inclusion, and the decline of their in share in later years may suggest not decline in their actual employment to the programme, but increasing trend of participation of other social groups under MGNREGA activities.

MGNREGA is designed to encourage women to participate in wage payment under MGNREAG within the vicinity of their villages. On an average, the participation rate of the women's workforce surpassed the statutory level of a minimum of 33% set across the states. However, there are several factors like sociocultural, economic and locational factors which affect women's participation in physical work under MGNREGA. Earlier, Pankaj and Tankha (2010) reported that the MGNREGS works have broadened women's choices by opening them a new avenue of paid employment under a government programme rather than working for a privately operated farm or non-farm works, and by reducing economic dependence of women members in rural poor households.

The results in Table 11.3 also show that regardless of cultural differences, in all of the six states selected, women's share in MGNREGA employment was higher

[1]Earlier, Reddy et al. (2014) have also suggested to check share of SCs and STs in the total number of employment created.

Table 11.3 Share of SCs, STs and women in total person-days of MGNREGA employment (%)

State	% of SC population to total population[a]	% share of SCs in MGNREGA employment		% of ST population to total population[a]	Percentage ST share in MGNREGA employment		Rural female participation rate[b]	% Women person-days to total person-days	
		2008–09	2011–12		2008–09	2011–12		2008–09	2011–12
Andhra Pradesh	18.45	25.85	26.99	8.39	14.05	18.36	34.1	59.83	57.79
Gujarat	6.87	10.64	7.85	21.63	60.52	40.26	42.7	46.83	45.23
Karnataka	18.39	31.14	15.7	8.41	15.97	8.3	45.9	57.76	45.93
Madhya Pradesh	15.7	14.79	21.16	25.35	51.85	27.42	36.6	45.23	42.65
Maharashtra	10.93	18.46	5.8	13.42	36.62	17.11	47.4	47.78	45.98
Rajasthan	17.88	12.78	16.76	15.52	64.05	24.54	40.7	68.92	69.17
All states	17.82	26.71	22.02	10.63	31.94	18.25	32.7	46.52	48.15

[a]Census 2001 and http://www.nrega.nic.in

[b]FWPR based on NSS 61st Round (2004–05) Usual Principal and Subsidiary Status and http://www.nrega.nic.in

Source Reddy et al. (2014)

than average of women work participation rates in these respective states. It appears that MGNREGA opened up a new window for the ease of livelihood specially for rural women and successfully mainstreaming them into the contemporary process of economic development.

11.3.6 MGNREGA and Wage

The MGNREGA work related guidelines from Ministry of Rural Development clearly mentioned that the wages for MGNREGS funded works have to be paid according to the minimum wages as prescribed under the Minimum Wages Act 1948 for agricultural labourers. Likewise, equal wage rate is to be paid to male and female workers. When the Scheme was launched in 2006, an indicative wage rate of ₹ 80 per person-day was proposed. This meant that workers engaged under MGNREGA would be assigned physically measurable work equivalent to ₹ 80, as a Standard Schedule of Rate. Later, in 2009 the indicative wage was raised to ₹ 100 per person-day. Further, it was agreed to revise the base indicative wage rate of ₹ 100 indexed on the basis of inflation rate (Reddy et al. 2014).

Figure 11.2 presents the average nominal and real wage[2] rate per person-day across the six states selected from 2006–7 to 2011–12. Though nominal money wage rates have been rising over the years, the real wage rates have been virtually stagnant for Gujarat, Rajasthan and Madhya Pradesh. In contrast, Karnataka experienced a steep increase in wage rate in both nominal and real terms, especially after 2009–10. Whereas, in Andhra Pradesh, real wage declined over the years from 2006 to 2012. In Maharashtra, trends in wage rate behaved in 'U' shape, it started with higher value, then reached a minimum level of 80 ₹ in 2008–09, and again showed a tendency of acceleration from 2010 onwards.

11.3.7 Season-Wise Trends in Employment Generation Under MGNREGA

Table 11.4 shows the season-wise work demand pattern under MGNREGA across the six states. In Karnataka, the demand for labour to do MGNREGA work in the peak season of farming (Kharif and Rabi season together) has increased from 38 to 72% within a year, indicating scarcity of labour for farm work. Whereas, the reduced demand in summer season further creates seasonal unemployment, as farm work would also be very less in summer season.

[2]Real wage rate was derived by deflating the money wages by Consumer Price Index for Rural Labour at 2009–10 base year.

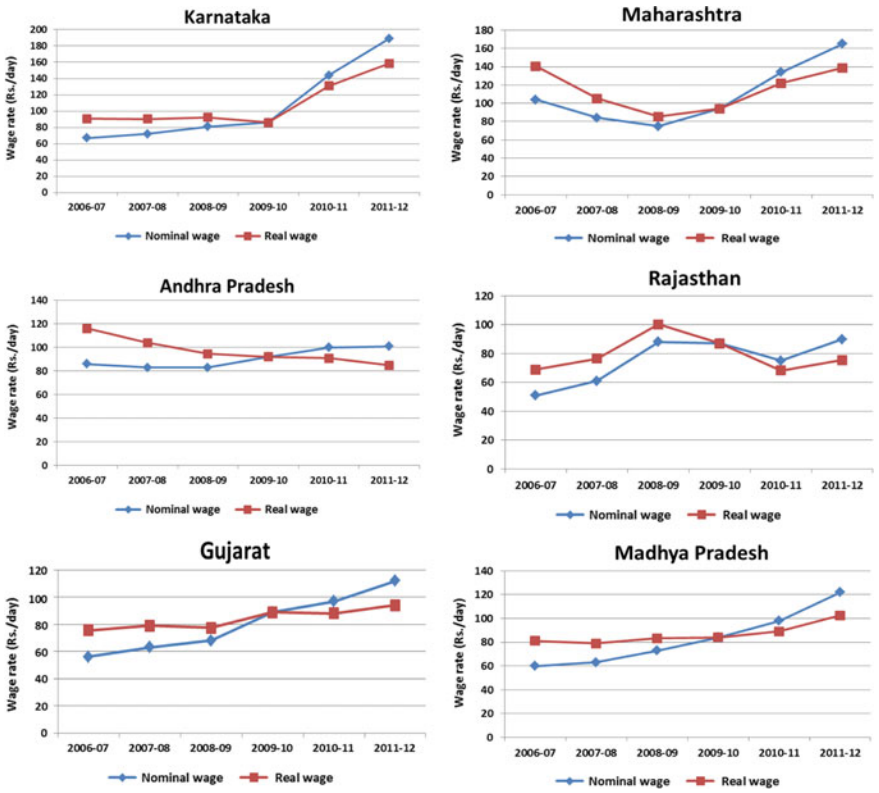

Fig. 11.2 Trends of MGNREGA nominal average money wage and real wage per person-day in selected states. *Source* www.nrega.nic.in; Real wages are 2009–10 base

Apart from that, total annual demand for employment in 2011–12 was highest in undivided Andhra Pradesh (47 million), and lowest in Gujarat in recent years. The low share of work for MGNREGA compared to annual demand suggest that MGNREGA is not the sole reason for the problem of labour scarcity in rural India. Several other factors are also responsible for this observed phenomenon on shortage of labour in agricultural activities in rural India in recent days.

11.4 Natural Resource Management and Sustainability Under MGNREGA: A Micro Study in Karnataka

In addition to 100 days guaranteed employment in a financial year to a poor rural household, MGNREGA also aims at regenerating the environment by enhancing productivity of land and forest by execution of works such as construction/renovation of irrigation tanks, ponds, water harvesting trenches and check dams. These

Table 11.4 Season-wise work demand pattern under MGNREGA in selected states

Season	Proportion of persons employed in MGNREGA as % of annual demand										
	Karnataka		Rajasthan		Andhra Pradesh[a]	Madhya Pradesh		Gujarat		Maharashtra	
	2010–11	2012–13	2010–11	2012–13	2012–13	2010–11	2012–13	2010–11	2012–13	2010–11	2012–13
Kharif (June–Sept)	9.1	14.8	37.5	32.6	30.7	31.9	32.0	22	33.2	19.4	33.3
Rabi (Oct–Jan)	28.8	57.3	14.3	25.9	16.1	22.9	18.8	24.1	25.3	13.4	16.9
Kharif + Rabi season (June–Jan)	37.9	72.1	51.8	58.5	46.8	54.8	50.8	46.1	58.5	32.8	50.2
Summer (Feb–May)	62.1	27.9	48.2	41.5	53.1	45.2	49.2	53.9	41.5	67.2	49.8
Total annual demand for employment (in million)	11	10	20.4	16	47	19.8	15	5	3.5	1.5	7

Note [a]For Andhra Pradesh, data for 2010–11 is not computed
Source As per Table 11.1

physical assets will persist for a longer time, if well managed by the local communities, and thereby MGNREGA has a potential to foster a regional economic growth. In this context, MGNREGA works are not only employment and livelihood generating (CSE 2006a), but also with the potential to produce sustainable rural development outcomes. In the following sections, we present the role of MGNREGA in water conservation activities, based on the detailed micro-level studies in Karnataka.

11.4.1 Water Conservation Activities Under MGNREGA

MGNREGA operational guidelines stipulate that priority of work shall be given to community assets and water conservation structures. In all the four districts that we visited in Karnataka, water conservation and renovation of traditional water bodies accounted for more than 50% of the fund utilized under MGNREGS (Fig. 11.3). In a relatively better-endowed district, such as Shimoga, which had excellent surface water resources, 60% of the MGNREGA expenditure was on water conservation through water harvesting, renovation of irrigation tanks, cleaning of irrigation channels, provision of irrigation to tail end areas and flood control. This reflects the important role of MGNREGA in water conservation activities. In Chitradurga district, 74% of the MGNREGA expenditure in a year was devoted to water conservation activities, by harvesting water and offering protective irrigation to farms

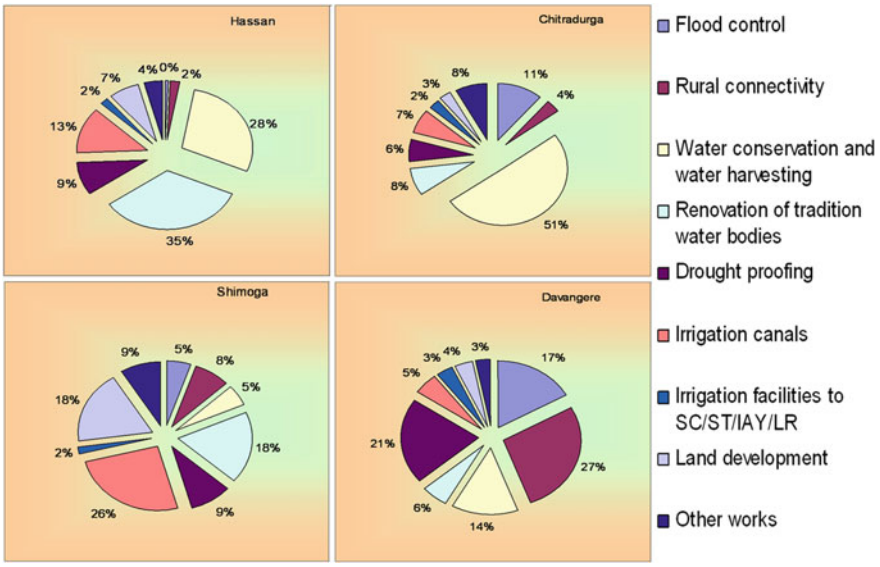

Fig. 11.3 Utilization of funds under MGNREGA (2009–10). *Source* The lead authors' project report, Nagaraj et al. (2009)

and drought proofing. This enabled Chitradurga to provide water to farmers during the critical periods and seasons.

Davanagere is a most disadvantaged district, where around 50% of the MGNREGA expenditure was incurred on water conservation. Thus, the micro-level results in Karnataka state also suggest that natural resource management has received greater emphasis in MGNREGA programme, as noted earlier.

11.4.2 Impact of MGNREGA on Village Development

In the studied villages in Karnataka, we also documented the type of benefit that accrued to the villagers by the community works like rehabilitation/desiltation of tanks, construction of water bodies, laying out of canals/roads. It was observed that rejuvenation of water bodies and water conservation activities considerably benefited the village—communities by augmenting additional area under irrigation and improving ground water recharge for all in the community. Consequently, in the studied villages, there was an increase in area under irrigation both under tank and well commands that enabled improved income of the farmers. The general benefits accrued to the beneficiaries by the types of rural development and NRM work activities undertaken by MGNREGA are presented in Table 11.5. Likewise, some of the selected village development works taken up under MGNREGA are shown in Fig. 11.4.

Table 11.5 Impact of MGNREGA on village development in selected districts

	Work executed	Impacts	District/Taluk
1	Desiltation of tanks	Improvement in water impounding Facilitating ground water recharge Double cropping Increased irrigated area Improved water bodies	All districts
2	Water conservation practices like construction of check dams	Improvement in water table was discernible Water table improved by 50–100 feet	All districts
3	Regeneration of water bodies	Drinking water available for livestock even during summer months	Davanagere (Harappanahalli) and Hassan
4	Clearing of drainages and diversion of flood water flow	Drainage related problems like flooding of roads and houses in the low lying areas during rainy days, blocking vehicular traffic and stagnant water creating health hazards solved	Shimoga (Bhadravati), Chitradurga (Hiriyur), Davanagere
5	Bunding and land development activities	Reduced soil erosion and improved land productivity	Shimoga (Bhadravati), Hassan (Arasikere)
6	Road works	Improvement in rural connectivity	Shimoga (Bhadravati)

Source PIN-NREGA-UASB, (2009)

Fig. 11.4 Village development works taken up under MGNREGA

11.4.3 MGNREGA: Community-Level Benefits

In addition to individual level benefits, community works like rehabilitation of tanks, construction of water bodies, repairs and laying out of canals have resulted in improving ground water recharge and augmenting area under irrigation. These outcomes benefit the community at large, and do not benefit only the work participating households. Here two unique case studies in the villages surveyed in Karnataka are presented to illustrate the kind, nature and scale of community-level benefits acquired under NGREGA programme (Table 11.6).

Nagenahalli village in Hassan district has a village tank spread over 23 acres, which was heavily silted and the tank bund of which was in a dilapidated state. Usually, the tank had supported only one paddy crop a year. Table 11.7 gives the benefits accrued because of MGNREGA work programme implemented in Nagenahalli in those years.

Rejuvenation of this village tank was planned under MGNREGS with a total budget of ₹ 10.3 lakhs (or ₹ 1.3 million). The work executed in 11 month period benefited 146 households in the village by providing them additional irrigation to 80 acres of land for growing crops. The tank now supports for growing two crops of paddy in a year, which is generating an additional income of ₹ 20 lakhs per annum. In addition to the employment of 7,102 person-days generated while implementing the programme, this MGNREGS work has also ensured drinking water to animals in all the seasons and has recharged 5 bore wells: these benefits have not been accounted here.

The second study was conducted in Kodakani village of Soraba Taluka, located in Shimoga district. Soraba Taluka falls in a flat terrain, which possesses about 1600 tanks. Unfortunately, earlier, most of these tanks were neglected resulting in heavy siltation of these tanks, with reduced live storage capacity of the tanks. Feeder channels of most of the tanks were clogged and hence water inflow into the tanks gradually declined. All of these factors also led to a reduction in irrigation water availability, reduced cropping intensity, productivity and employment opportunities, but paradoxically also with unexpected flooding during a heavy downpour. As a result, the agricultural workers migrated to coffee growing areas in the neighbouring districts for stable employment and income.

Table 11.6 Case studies

	Case study 1	Case study 2
Location	Nagenahalli in Merkuli Gram Panchayat; Hassan District	Kodakani Village, SorabaTaluk, Shimoga District
Year	2007–08	2007–08
Type of work executed	Disiltation of Tank and strengthening of tank	Desilting of tank and repair of feeder channel
Total budget	Rs. 10.3 Lakhs. (Material: 4.48 Lakhs, Labour: 5.82 Lakhs)	Rs. 6.5 Lakhs

Table 11.7 Benefit accrued by MGNREGA activity in Nagenahalli

Particulars of benefit accrued	Status before MGNREGA	Status after MGNREGA
Area irrigated by the tank (Acres)	80	160 (in two seasons)
Cropping intensity (percent)	100	200
Paddy production in a year in the tank command area (quintals)	2000	4000
Additional returns (Rupees)	–	20 lakhs
Number of families benefited by additional irrigated water availability	–	146
Employment generated by MGNREGA (person-days)	–	7102
Number of bore wells recharged	–	5
Water availability for animals	–	In all seasons

Source Field Survey by authors in 2010 and in 2011

Haluru tank under the Kodakani Gram Panchayat, under Soraba Taluk in Shimoga district, has a command area of over 300 acres. Due to heavy siltation, the tank was not supporting more than one crop in a year until 2008. Under NREGS, with a budget allocation of ₹ 6.5 lakhs, a feeder channel with a length of 0.5 km was repaired and the tank was desilted after 2008. As a result, second paddy crop could be cultivated in 100 acres and more than 42 bore wells were recharged. The production of Paddy then increased by 20–22 quintals per acre for all. This is a community scale benefit of work implemented under the MGNREGA, which was also actively supported by the villagers, especially the wage earners. The work force that undertook the work, women folk who often faced the severity of the water shortage in a local community outnumber the male workers by 2.5 times. This development is in the right direction of women empowerment, as well.

11.5 Conclusions and Implications

The results from comparative analysis across the states and micro-level analysis presented in this Chapter clearly suggest that at meso- or macro-scale of analysis, the performance of MGNREGA is uneven across the six states selected for the study. Even after 6–7 years of its implementation, the performance of MGNREGA in terms of person-days generated varied widely across the six states studied. The potentiality of MGNREGA work to provide 100 days of wage employment is far away from its realized evidences across the states. Only 7–12% of the households out of total participants availed 100 days of employment per annum under the MGNREGA work.

Likewise, the trend of MGNREGA work of absorbing higher proportion of youth population poses some serious implication in terms of youth employment in

other sectors of rural economy. This increased demand for labour to do MGNREGA work in Kharif and Rabi seasons in Karnataka, whereas the reduced demand for work in summer season creates a seasonal imbalance on employment in the rural economy. Given the huge variations in real wages of agricultural and employments under MGNREGA across the states, problem of increased labour scarcity, which is more prominent in the peak season of farming in India, cannot be attributed only to MGNREGA, but it is due to a range of complex socio-economic and structural factors prevailing in the country. The spillover effects of economic growth, urbanization, non-farm rural growth, rural non-farm employment, increased literacy, the introduction of minimum wage act, etc. all of these factors also affect rural labour market and level of labour scarcity in a place at any moment of time, as discussed in the Chapter.

To have a maximum outcome and livelihood impacts upon rural poor, the time frame of MGNREGA work needs to be adjusted such a way it would ensure employment security in the villages in slack season of farming. It must create more jobs and more employment in slack season of farming so that the agriculture sector would not be adversely affected at the same time livelihood of the rural poor will also get secured. In Karnataka, only 50% of the households, who registered under MGNREGA, actually demanded employment under MGNREGA, which is due to attractive labour market opportunity outside of MGNREGA and outside of agriculture in Karnataka state. Over 60% of households in Karnataka were provided employment for less than 60 days under the MGNREGA.

Moreover, besides employment benefits, community-level benefits of MGNRGS, through asset creation, are also substantial. They include desilting irrigation tanks and construction of check dams benefiting bore wells through groundwater recharge, ensured source of drinking water for livestock even during summer months, improved rural connectivity due to more rural access roads in villages, construction of school building for children, and reduction in drudgery of travelling to far away schools, and so on. These indirect benefits of MGNREGS were also substantial level.

The overall sub-optimal performance of MGNREGA in the six states selected here may be due to the fact that MGNREGA wage rates are not as remunerative as market prevailing wages rate for un-skill labour work for non-farm activities. Hence workers usually prefer for non-farm labour, especially sand mining and other rural non-farm work, which provides as high as around Rs. 600 per person per truck load (in couple of hours), compared to ₹ 350 per person-days under MGNREGA work scheme in Karnataka. Also, women cannot do drudgery work as done by men and in the event of non-availability of men labour, the only alternative left is to use the machinery to meet the compulsory need to execute MGNREGS works in rural areas. Thus, the use of machinery in MGNREGS in many cases is by default needed.

Though MGNREGA works were able to assure sustainable development through improved Natural Resource Management (NRM) in some regions, but it also failed in most of the cases in providing social protection where the leadership of implementing agencies of MGNREGS was weak and the leaders lacked

dynamism in terms of selection of work and making participation of the whole village while selecting work activities and in bringing more funds to the village from high-level authority. Stringent rules and regulations of MGNREGS also resulted in an inordinate delay in executing works and making timely payment to workers, which deter the labour force who need daily payments of their wages to purchase the daily food needs.

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