

## **Impact of Workfare Programmes on Quality of Life:**

### **A Case Study of National Rural Employment Guarantee Act in India**

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#### **Abstract**

*This study attempts to analyse the effectiveness of implementation of The National Rural Employment Guarantee Act 2005 in India and its impact on quality of life in the Anekal taluk of Bangalore district in the Indian State of Karnataka. Data was collected from a sample of two hundred households who were beneficiaries of the NREGA, randomly selected from four different panchayats in the taluk. To measure the quality of life, two dimensions were considered. First, the household-level quality of life, comprising the variables of income, housing conditions, education level and health condition; and, secondly, village-level infrastructural development, including drought-proofing, land development, rural connectivity, renovation of traditional water bodies, irrigation, and drainage/sewerage. An index for quality of life was constructed using the variables above, which was used to analyse the impact of NREGA. The study found that there was a widespread variation in the effectiveness of implementation of NREGA among different panchayats in Anekal taluk. The results suggest that the NREGA has a significant impact in both village-level infrastructural development and also in household quality of life. However, there is also an urgent need for immediate rectifications of some of the flaws observed during the survey to make NREGA more effective and responsive to the needs of the underprivileged citizens.*

**Keywords:** NREGA; quality of life; village-level infrastructural development.

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## **Introduction**

Workfare programmes have been increasingly used in developed countries for many years with the aim of reducing work disincentives mostly caused by poverty and unemployment. In developing countries similar types of programmes have been adopted in the form of food-for-work or cash-for-work. The rationale for these types of programmes was to transfer income to poor unskilled rural households during slack agricultural seasons by providing them temporary employment on public work in rural areas, therefore enabling them to have smooth consumption spending.

In India, the Central Government had earlier implemented various programmes and policies that offered employment on public work at minimum wages. However, these programmes were found to have less than satisfactory results in mitigating the issues of unemployment and poverty in rural areas. In 2004, the National Advisory Council (NAC) to the United Progressive Alliance (UPA) Government had made an in-depth study of the job guarantee schemes launched by previous governments. The study revealed that the policies launched by the earlier governments had serious inadequacies. Some of the inadequacies at the rural level were: lack of awareness among local communities about existence of government programmes, dearth of community participation, lack of planning, creation of sub-standard quality of assets, false muster rolls, problems of payments, contract system, diversion of funds, weak monitoring and verification systems, absence of comprehensive database, inadequate capacity of implementing agencies, multiple wage programmes running in parallel, and, most importantly, no public accountability (Shome, 2011). The study recommended that these inadequacies should be corrected in future programmes. The NAC was then entrusted with the project to transform rural lives in India through social intervention by initiating a new programme called National Rural Employment Guarantee Act (NREGA)<sup>2</sup>. NREGA was enacted and notified in September 2005 to reinforce the commitment of the government towards livelihood security for rural households. The significance of NREGA is that it

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<sup>2</sup> On October 2, 2009, the Government of India renamed the National Rural Employment Guarantee Act as the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA).

ensures the right to employment and makes the government legally accountable for providing employment to those who ask for it. The Act guarantees one hundred days of wage-employment in a financial year to a rural household whose members volunteer to do unskilled manual work. The purpose of the Act, however, is not to provide full employment but to offer temporary earning opportunities in periods of lean agricultural seasons or natural disasters in the rural areas. In other words, the objective of the Act is to create durable assets and strengthen the livelihood resource base of the rural poor (Ministry of Rural Development, 2008b).

NREGA is undoubtedly a landmark event in the account of rural development policies in India as well as in the history of poverty diminution strategies in the world. It is an innovative programme in the Indian context. The Act advocates that by providing employment opportunities within rural areas, several social and economic issues are simultaneously addressed. Through employment in rural areas, rural poverty is reduced, and this leads to a reduction in rural-urban migration, which in turn curbs urbanization of poverty (Shome, 2011). The further purpose of NREGA, through the potential outcome of its effective implementation, is also to influence several core and non-core agenda items of ILO (Jha, 2009). These include stopping the flow of distress rural-urban migration, curbing child labour and making villages self-sustaining through productive asset creation (such as building roads, cleaning up of water tanks, soil and water conservation works, and so on). The works undertaken under NREGA are meant to regenerate the rural natural resource base, which in turn may result in sustainable livelihoods for residents. The Act was mainly targeted to benefit landless labourers, Scheduled Castes (SC), Scheduled Tribes (ST)<sup>3</sup>, and women. In other words, NREGA has great potential for increasing the volume of employment among the rural unemployed and underemployed. It provides ample opportunities for creating rural public assets, which has been largely neglected over the years. It helps to enhance the purchasing power of rural households, thereby contributing to poverty alleviation. It also has the capacity to tap the hitherto under-utilized labour of women in developing rural India (Ghosh, 2009). By providing equal wages to both men and women, NREGA upholds the social position and integrity of

<sup>3</sup> According to the Constitution of India, the weaker sections of the society include Scheduled Castes (SC) and Scheduled Tribes (ST).

women and thus promotes gender equality. In fact, NREGA is arguably the world's largest ecological security programme, which can successfully strengthen the ecological foundations for sustainable agriculture (Swaminathan, 2009). Thus, in brief, National Rural Employment Guarantee Act (NREGA) 2005 is landmark legislation in Indian history of social security legislation after independence. Needless to mention, a legislation of this nature is bound to act for the well-being of the poorer section of the society.

In this backdrop, the current study examines the effectiveness of implementation of NREGA and its impact on quality of life of the people engaged in the programme. In other words, the objective of this paper is to analyze the consequence of NREGA at the household level, by considering the income, housing conditions, education level and health conditions of the rural households. An initial baseline survey data of 200 respondents from Anekal taluk<sup>4</sup> of Bangalore district in Karnataka State was considered.

The structure of the paper is as follows. Section 2 briefly reviews some of the related literature. The next section discusses the methodology of the study. Section 4 discusses about the role of NREGA in one state of India, viz. Karnataka. Section 5 examines the nature and implementation of the projects in the selected Gram Panchayats<sup>5</sup>, based on secondary data. The subsequent section evaluates the impact of the programme at the village-level with the help of an index for infrastructural development. It also measures the impact of NREGA and infrastructural development on quality of life of the beneficiary households. Section 7 talks about the policy implications; and the last section contains concluding observations.

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<sup>4</sup> A taluk, also known as a block or a mandal, is an [administrative division](#) in Indian states. A taluk generally consists of a [town](#) that serves as its headquarters and a number of [villages](#). As an entity of [local government](#), it exercises certain [fiscal](#) and [administrative](#) power over the [villages](#) and [municipalities](#) within its jurisdiction. It is the ultimate executive agency for [land records](#) and related administrative matters. Its chief official is called the talukdar.

<sup>5</sup> Gram Panchayats are local self-governments at the village or small town level in India. A gram panchayat can be set up by clubbing together two or more villages.

## **Review of Literature**

There is extensive literature demonstrating the importance of NREGA in India's rural development. These studies can be mainly categorized in two different segments:

(i) Potential of NREGA: There are quite a significant number of literatures that are mainly based on the massive potential of the reforms suggested in NREGA. Most of these studies have examined the operational efficiencies of the NREGA.

(ii) Impact on rural households: Academicians and policy makers have also taken increased interest in assessing the impact of NREGA on the rural households from different aspects, viz. awareness, impact on the livelihoods, women empowerment, rural-urban migration, agricultural wages, marginalized sections, implementation problems, and so on.

According to Ambasta et al. (2008), the reforms suggested in the Act can potentially transform the livelihoods of the poorest, heralding a revolution in rural governance in India. Many studies (Chakraborty, 2007; Raja, 2007; Mehrotra, 2008; Vijayakumar and Thomas, 2008; Hirway and Saluja, 2009) have examined empirically how various features of NREGA, such as, access in rural areas, work guarantee, wage level and limited participation period, has influenced the welfare situation of the individual households. According to these studies, NREGA has reduced the incidence of poverty in rural households through its impact on food security, income, savings and health outcomes. Using an initial baseline survey data of 1066 households and a subsequent panel data of 320 households from Andhra Pradesh, Ravi and Engler (2009) also showed that NREGA has improved food security, has increased probability of holding savings and has reduced anxiety level among low income households.

There have been many evaluation studies on the impact of NREGA on women. Based on field data of 1060 NREGA workers from six Hindi-speaking states of North India<sup>6</sup>, Khera and Nayak (2009) studied the socio-economic consequences of NREGA for women workers. They observed that though there were drawbacks in the

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<sup>6</sup> Bihar, Chhattisgarh, Jharkhand, Madhya Pradesh, Rajasthan and Uttar Pradesh.

implementation of the NREGA, it has started providing significant benefits to rural women by offering access to local employment at the statutory minimum wage with relatively decent and safe work conditions mostly in their own village. Taking different case studies, the study also observed that NREGA has helped in improving gender relations in some of the most remote areas of the country. Similarly, Pankaj and Tankha (2009) examined the impact of NREGA on women empowerment in four North Indian states<sup>7</sup> and observed that there is direct impact of NREGA in increasing the social status of women. Another study by Pankaj and Tankha (2010) revealed that NREGA has benefited rural women in two ways: (a) it has opened a new avenue of paid employment; and, (b) it has broadened their choices and capabilities, by reducing dependence on other family members. Dev (2011) observed that NREGA can also have a significant positive impact on reduction in child labour through income effects and women's well-being and empowerment. According to him, the programme has increased income through higher wage rates, rise in agricultural wages, decline in migration, and so on. These positive effects can in turn reduce child labour and increase the participation of children in education.

The less privileged communities in India have also benefited from NREGA. A state-wise analysis of the Act shows that, compared to the share of population in India of SCs and STs, the participation rates in NREGA have been much higher in almost all states (Ghosh, 2009; Shome, 2011). Similarly, NREGA, by guaranteeing employment, has also alleviated the problem of rural-urban migration. It is assumed that it has impacted both the seasonal and the permanent migration trends. Seasonal migrations were reduced because rural workers secured employment during the lean season at their home districts. Permanent migrations are also likely to have been reduced because of rural development (Drèze and Khera, 2009; Shome, 2011).

Apart from its contribution to households, NREGA has had a beneficial impact on the community and village economy. Drèze and Khera (2009) found that 92 per cent of workers felt that the NREGA work was useful and 83 per cent felt that NREGA has led to useful assets creation. A study by Joshi et al (2008) in Rajasthan showed that there have

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<sup>7</sup> Bihar, Jharkhand, Rajasthan and Himachal Pradesh.

been significant changes in the villages due to NREGA. A significant proportion of respondents perceived that employment, road connectivity and water-table levels have improved in the villages. Some respondents also mentioned improvement in economic situation, soil erosion, drinking water for animals and reduction in untouchability.

There are also few studies which look at the implementation of NREGA in different states (Khera and Nayak, 2009; Drèze and Khera, 2009; Singh, 2009; Chhabra et al., 2009). Most of these studies showed that the coverage of NREGA at the micro-level, i.e. at the panchayat and village levels, has varied within the country. In other words, the Act has varied impact across states. Drèze and Khera (2009) observed that in some states (for example, Rajasthan and Himachal Pradesh), the Act has been very successful in terms of a large number of person-days of employment generated, works undertaken, and wages paid. On the other hand, in other states, the impact has been less remarkable (namely, Bihar and Maharashtra).

Given the background literature, this paper aims at assessing the effectiveness of implementation of NREGA on the worker households in Karnataka state. It also looks into the assets and facilities created by the programme and its potential benefits to the villages. The measurement of the impact of the scheme on quality of life of beneficiary households is another important component of the study. Though there are lots of existing studies (Ravindranath and Tiwari, 2009; Kumar, 2011; Tiwari and Somashekhar, 2011) about the evaluation of NREGA and its effectiveness in well-being in Karnataka state, however, the present study is somewhat different from others. This study is meant to identify the actual effect of NREGA on the beneficiaries with respect to impact on their quality of life. In other words, it measures the change in their standard of living at the household and village-level (i.e., how the programme has helped to improve their level of comfort). Based on the results of the study, the paper presents some policy implications in order to make the programme more effective.

## **Methodology of the Study**

Anekal<sup>8</sup> taluk in Karnataka state of India was selected for the study because of its geographical location, in close proximity to the industrial town of Hosur<sup>9</sup> across the border on the one side and the Jigani Industrial Area<sup>10</sup> and the Electronic City<sup>11</sup> in Bangalore on the other side. It is curious to note that in spite of casual employment opportunities for the workforce in this taluk, the government has chosen to implement NREGA here. Hence, this paper is focused on studying the justification for NREGA in Anekal and its consequent fall out on the quality of life in this taluk. Data was collected in April 2011<sup>12</sup> from two hundred households who worked in different NREGA projects in four panchayats of Anekal taluk. In each of these panchayats, five villages were randomly selected; and in each village, ten households who were beneficiaries of NREGA were again randomly selected for data collection. Official records from each panchayat were analyzed and informal discussions with the elected representatives and officials involved in NREGA were conducted. Conclusions have been drawn based on preliminary observations, discussions with representatives and officials, and personal interviews of the beneficiaries.

The study examines the impact of NREGA on the quality of life in the selected villages. Quality of life is a term used in a wide range of contexts, including the fields of

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<sup>8</sup> Anekal, a taluk of Bangalore district, is located between 12°42'N and 77°42'E latitudes and 12.7°N and 77.7°E longitudes. It has an average elevation of 915 meters (3001 feet). It lies in the southern part of the Bangalore metropolitan area around 40 km. from downtown Bangalore. Anekal is famous for the cereal Ragi which is being grown in the area and is the staple food supporting the agricultural fraternity. Anekal is also called as 'Ragiya Kanaja' which means Ragi Depot of Karnataka state. As of 2001 India census, Anekal taluk had a population of 299,428. Males constitute 53 per cent of the population and females 47 per cent. It has an average literacy rate of 70.4 per cent which is higher than the national average of 59.5 per cent. The male literacy is 79 per cent and female literacy is 60.5 per cent. The sex ratio in this block is 883. The taluk has work participation rate (WPR) of 43.6 per cent with male WPR at 61.9 per cent, and female WPR at 23 per cent.

<sup>9</sup> Hosur is a town and a municipality in Krishnagiri district in the Indian state of Tamil Nadu. It is a taluk of Krishnagiri district. It is located about 40 km. south-east of Bangalore. Hosur is an industrial hub for several areas such as abrasives, automobiles, welding and wire mesh industries.

<sup>10</sup> Jigani is located in Anekal taluk in South Bangalore and is situated at a distance of 20 km from Bangalore city. It has a well established industrial area and also very near to Electronics City in Bangalore.

<sup>11</sup> Electronics City is one of India's largest electronic industrial parks, spread over 332 acres (1.3 sq. Km.) in Konappana Agrahara and Doddathogur villages, just outside Bangalore. It has three phases – Phase I, Phase II and Phase III.

<sup>12</sup> The study considers the NREGA projects till the financial year 2010-11.



development, healthcare, and politics. The concept of quality of life encompasses not only wealth and employment, but also the built environment, physical and mental health, education, recreation and leisure time, and social belonging. In other words, quality of life is the degree to which an individual enjoys the important possibilities of his or her life<sup>13</sup>. Quality of life as employed in the study was viewed from two different dimensions: (i) village-level infrastructural development which includes drought-proofing, land development, rural connectivity, renovation of traditional water bodies, irrigation, and drainage/sewerage; and, (ii) household-level quality of life, comprising the variables like income, housing conditions, education level, and health conditions.

The index for village-level infrastructural development (VLID) was constructed using six parameters, viz., drought-proofing (DP), land development (LD), rural connectivity (RC), renovation of traditional water bodies (TWB), irrigation (IRR), and drainage/sewerage (DR). The rating for each parameter was taken on a 5-point Likert scale, with “1” representing “very poor,” and “5” representing “very good.” Data for the index was obtained directly from the respondents, relating to each of the parameters, both prior to and after the implementation of NREGA by using the method of ‘recall survey’<sup>14</sup>. The index was computed as a simple average of the respondents’ ratings, viz.

$$VLID = \frac{DP + LD + RC + TWB + IRR + DR}{6},$$

where each component is the average rating among the respondents. The overall reliability of the VLID index was moderate (Cronbach’s alpha = 0.647).

Similarly, the index for household-level quality of life (HLQOL) was constructed using four parameters, viz., income (INCM), housing conditions (HOUS), education level (EDUC), and health conditions (HLTH). Though these parameters varied according to

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<sup>13</sup> <http://www.gdrc.org/uem/qol-define.html>

<sup>14</sup> The ‘recall survey’ is a procedure used to ascertain respondents’ ability to recall employment to which they have previously been exposed.

household, the index was constructed at the village-level, in order to relate improvement in quality of life with village asset creation.

The ratings for *income* were as follows: “1” represented an average household income of “less than Rs. 50 per day”; “2” represented “between Rs. 50 and Rs. 100 per day”; “3” represented “between Rs. 100 and Rs. 150 per day”; “4” represented “between Rs. 150 and Rs. 200 per day”; and, “5” represented “above Rs. 200 per day”. The average household income was computed using the daily wage rates expressed by the respondents (with varying daily wage rates according to gender), adjusting for the average number of days worked.

The ratings for *housing conditions* were taken on a 5-point Likert scale, with “1” representing “very poor” and “5” representing “very good”.

The ratings for *education level* were as follows: “1” represented “illiterate”; “2” represented “upto 5th Standard”; “3” represented “upto 10th Standard”; “4” represented “upto 12th Standard;” and, “5” represented “graduate or above”. The education level of the household was taken as the highest education level of its members.

The ratings for *health conditions* were taken on a 5-point Likert scale, with “1” representing “very poor” and “5” representing “very good”.

Data for the index was obtained directly from the respondents, relating to each of the parameters, both prior to and after the implementation of NREGA again by applying the recall survey. The index was computed at village-level as a simple average of the respondents’ ratings, viz.

$$HLQOL = \frac{INCM + HOUS + EDUC + HLTH}{4},$$

where each component is the average rating among the respondents. The overall reliability of the HLQOL index was high (Cronbach’s alpha = 0.869).

In order to assess the impact of the implementation of NREGA on quality of life, the indices of village-level infrastructural development and of quality of life before and after implementation were compared using paired-samples t-tests, for each panchayat, as well as overall. To assess the impact of improvement in village-level infrastructural development on improvement in quality of life, regression analyses were performed, for each panchayat, as well as overall, viz.

$$HLQOL = a + b.VLID + \epsilon.$$

A perceptual mapping was finally performed to map the village-level variation in the change in quality of life due to implementation of NREGA.

### **NREGA and its role in Karnataka State**

NREGA was enacted in September 2005 with an objective of ‘enhancement of livelihood security of rural households by providing at least one hundred days of guaranteed wage employment in every financial year to every household whose adult members volunteer to do unskilled manual work’. Simply put, the primary objective of the Act is to ‘provide 100 days of unskilled manual work in rural areas’.

NREGA was launched in two hundred most backward districts<sup>15</sup> of India on 2<sup>nd</sup> February 2006 in Phase I, and was extended to 130 more districts in 2007-08 in Phase II. It was further extended to the remaining districts from 1<sup>st</sup> April 2008 onwards, in Phase III. In Karnataka, in Phase I, the programme was initiated in the rural areas of five districts, namely, Bidar, Chitradurga, Davangere, Gulbarga and Raichur. The programme was extended to other six districts, namely, Bellary, Hassan, Chikmagalur, Belgaum, Shimoga

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<sup>15</sup> The identification of backward districts in India was conducted in 1997 by a committee of the Ministry of Rural Areas and Employment. The committee used a composite method with differing weights for parameters such as: incidence of poverty, education, health, water supply, transport and communications, and degree of industrialization.

and Kodagu, by Phase II and to the remaining 16 districts by Phase III. The Government of Karnataka has issued detailed guidelines for implementing NREGA.

In sync with the choices of the work suggested in the Act, the shelf of projects chosen in Karnataka primarily consists of areas that address rural infrastructure development and poverty, such as, drought-proofing, flood control, irrigation canals, and land development, so that the process of employment generation is maintained on a sustainable basis. The works happened in financial year 2010-2011 mainly pertained to flood control, rural connectivity, water conservation and water harvesting, renovation of traditional water bodies, drought proofing, irrigation canals, irrigation facilities to SC/ST, land development, and so on. NREGA has already started making a considerable impact on various socio-economic predicaments of Karnataka. A comparison of Karnataka NREGA and all-India.

**Table 1: Comparison of Karnataka NREGA Statistics with All-India**

	Karnataka		India		% of India figures
	4481262		163316425		
Employment to households	No of days (in Crore)	Proportion of population	No of days (in Crore)	Proportion of population	
Total	3.36		75.88		4.42
SCs	0.41	15.17%	21.73	28.63%	1.89
STs	0.21	13.75%	4.66	19.14%	4.50
Women	1.68	47.10%	12.38	50.83%	13.57
Others	1.05	71.08%	14.84	60.92%	7.07
Works (in lakhs)					
Total works taken up	5.18		150.86		3.43
Works completed	0.03		45.47		0.06
Works in progress	5.14		105.39		4.87

**Source:** <http://www.nrega.nic.in> viewed on 22 April, 2011.

Comparing the NREGA statistics for Karnataka with all-India statistics reveals the following issues:

(a) A significant proportion of rural women workforce (47.1 percent) are engaged in NREGA related work Karnataka. However, this figure is not as much of as that at the all-

India level (50.8 per cent). Though the participation of rural women is encouraging, but such high levels of participation need further examination for a better understanding.

(b) While at the all-India level participation of Scheduled Castes is 28 per cent, Scheduled Caste participation in case of Karnataka is very much disappointing with estimates around 15 per cent.

(c) Participation of Scheduled Tribes is also not so satisfying in Karnataka. This figure is a meagre 13 per cent compared to all-India estimates of 19 per cent.

The above comparison shows that the progress of implementation of NREGA in Karnataka is less than that of all-India level. Nevertheless, it has created greater opportunities for women and has increased the participation of backward sections of society in productive employment in Karnataka. Various works have created productive assets at the village-level that contribute towards rural development. However, the challenge is to continue projects that would further build productive assets on a sustained basis.

### **Implementation of NREGA in the Panchayats and Villages Chosen for Study**

This section focuses on how the implementation of NREGA has taken place in the panchayats and villages of Anekal taluk from four different perspectives: (i) projects undertaken; (ii) number of registered households and individuals; (iii) number of job cards issued; and, (iv) expenditure under NREGA. It was observed that the implementation of NREGA projects in the selected panchayats and villages have broadly followed the guidelines published by the Government of India (NREGA Operational Guidelines, 2008).

#### **(a) Projects Undertaken**

The nature of projects undertaken in different panchayats in the study area is almost similar, with some minor variations. However, there are some differences in the number of projects undertaken in different villages in each of the panchayats. The total number of projects undertaken in the panchayats and their respective villages under study in all

the phases of NREGA implementation is presented in Table 2. There were in total 397 projects taken up under NREGA in the four panchayats selected for this study. Panchayat-wise analysis reveals that Karpuru Panchayat (187) has undertaken the highest number of projects followed by Samanduru (96), Marasuru (89) and Byagadadenahalli (25).

Project-wise analysis shows that rural connectivity, i.e. developing roadways within the village, was the most frequent venture that has been carried out. It was also observed that one-third of all the projects (i.e., 134 out of 397) undertaken were related to rural connectivity.

The panchayat-wise analysis reveals that in Byagadadenahalli panchayat out of 25 projects undertaken, there were 15 projects based on rural connectivity followed by land development with six projects. Samanduru panchayat also confirms the same pattern. Out of total number of 96 projects undertaken in the programme, 54 projects were anchored in rural connectivity followed by 10 each in land development and renovation of traditional water bodies. Similarly, Marasuru panchayat had 29 rural connectivity projects followed by 25 projects based on drought proofing. However, in case of Karapuru panchayat, other activities had 114 projects followed by rural connectivity (36).

There are a number of possible reasons for the observed differences between the panchayats and villages with respect to the projects taken under NREGA, including: institutional constraints (the implementing agency, panchayats versus taluk-level bureaucracy), ability to chart out a functional strategy for implementation, societal constraints, and, practical difficulties, among others.

#### **(b) Details about Registration and Job Cards: Panchayat-level Analysis**

This section gives a panchayat-level detailed analysis of the number of registered households and individuals and number of job cards issued under NREGA till March 2011. The data related to social status was collected from the NREGA Section of Gram Panchayat and Taluk Office. Table 3 shows that there was a substantial variation in number of household and individuals registered and also in job card issued among the four panchayats under study. The level of registration of SC households was found to be highest in Byagadadenahalli panchayat, at 63.4 per cent (as a percentage of the total

households registered), followed by Samanduru panchayat (28.6 per cent), Karpuru panchayat (25.7 per cent), and 18.27 per cent in Marasuru panchayat. The ST household registration was found to be less than one per cent in all the four panchayats. The ST participation in NREGA projects was substantially low because all the panchayats have a very negligible proportion of ST population.

Table 2: Number of Projects Taken in NREGA by Selected Panchayats till March 2011

Byagadadenahalli Panchayat						
Projects \ Villages	Chikkahagade	Kempavaderahalli	Avadadenahalli	Byagadadenahalli	Kaval Hosahalli	Total
Rural Connectivity	4	9	--	1	1	15
Drought Proofing	--	--	1	--	--	1
Land Development	1	3	--	2	--	6
RTWB	--	2	--	--	--	2
Any Other Activity	--	1	--	--	--	1
<b>Total Projects</b>	<b>5</b>	<b>15</b>	<b>1</b>	<b>3</b>	<b>1</b>	<b>25</b>
Samanduru Panchayat						
Projects \ Villages	Hompalaghatta	Samanduru	Guddanahalli	Kuvempunagara	Maranayakanahalli	Total
Rural Connectivity	2	18	4	3	27	54
WCH	3	--	1	--	4	8
Drought Proofing	--	--	1	--	--	1
Micro Irrigation	--	5	--	--	1	6
Land Development	--	6	--	2	2	10
RTWB	4	--	2	2	2	10
Any Other Activity	2	3	--	2	--	7
<b>Total Projects</b>	<b>11</b>	<b>32</b>	<b>8</b>	<b>9</b>	<b>36</b>	<b>96</b>
Karpuru Panchayat						
Projects \ Villages	Aravantigepura	Karpuru	Haradenahalli	Bidaragere	Bestamanahalli	Total
Rural Connectivity	8	14	6	8	--	36
WCH	--	2	--	--	--	2
Drought Proofing	--	--	--	--	2	2
Micro Irrigation	--	14	--	10	2	26
Land Development	--	--	2	--	2	4
RTWB	--	1	2	--	--	3
Any Other Activity	22	11	39	38	4	114
<b>Total Projects</b>	<b>30</b>	<b>42</b>	<b>49</b>	<b>56</b>	<b>10</b>	<b>187</b>
Marasuru Panchayat						
Projects \ Villages	M. Madiwala	Marasuru	Bandapura	Shettihalli	Adessonatti	Total
Rural Connectivity	2	13	3	9	2	29
Drought Proofing	6	5	6	8	--	25
Micro Irrigation	2	--	7	--	2	11
Land Development	2	--	--	--	1	3
RTWB	--	--	1	--	2	3
Any Other Activity	9	--	32	7	2	18
<b>Total Projects</b>	<b>21</b>	<b>18</b>	<b>24</b>	<b>19</b>	<b>7</b>	<b>89</b>

Source: NREGA Section of Gram Panchayat and Taluk Office.

Notes: (i) Out of nine types projects sanctioned under NREGA, only those projects which are taken by the respective panchayats are presented here. (ii) RTWB implies Renovation of traditional water bodies; WCH implies Water conservation / harvesting.



Interestingly, the study found that while issuing job cards the demographic profile, and in particular, the social status was given priority. Samanduru panchayat (1789) had the highest number of individuals who were issued job cards, followed by Marasuru (1558), Karpuru (1466) and Byagadadenahalli (630). This actually reflects the levels of NREGA activities in these two panchayats. For instance, Samanduru panchayat had very high levels of NREGA activity, while Byagadadenahalli panchayat had very low levels. However, the level of job card issue to SC households was found to be highest in Byagadadenahalli panchayat, at 61 per cent (as a percentage of the total households registered), followed by Samanduru panchayat (28 per cent), Karpuru panchayat (25.1 per cent), and 25.1 per cent in Marasuru panchayat. Again, the ST household job card issue was found to be less than one per cent in all the four panchayats.

**Table 3: Details about Registration and Job Cards in Selected Panchayats till March 2011**

Panchayats	No. of Registered Households				No. of Registered Individuals				No. of Job Cards Issued			
	SC	ST	Others	Total	SC	ST	Others	Total	SC	ST	Others	Total
Byagadadenahalli	425	01	244	670	716	02	569	1287	390	01	239	630
Samanduru	514	13	1268	1795	1218	24	3142	4384	514	13	1262	1789
Karapuru	369	07	1096	1472	1097	19	4005	5121	368	07	1091	1466
Marasuru	290	01	1299	1590	1402	02	4551	5955	263	01	1294	1558
<b>Total</b>	<b>1598</b>	<b>22</b>	<b>3907</b>	<b>5527</b>	<b>4433</b>	<b>47</b>	<b>10393</b>	<b>16747</b>	<b>1535</b>	<b>22</b>	<b>3886</b>	<b>5443</b>

**Source:** NREGA Section of Gram Panchayat and Taluk Office

**Note:** Data accessed till 22 April 2011.

### **(c) Details of Expenditure: Panchayat-level Analysis**

An analysis of panchayat-level expenditure classification for the period 2010-11 is presented in Table 4. The Table reveals that there were two major components of expenditure: (a) expenditure on labour wages; and, (b) expenditure on material purchased. Though three types of labourers are considered, namely, unskilled, semi-skilled and skilled, the data shows that unskilled labour wage constituted a major component of total wage expenditure in all the four panchayats. The Table indicates zero expenditure on skilled labourers, since they were not at all involved in NREGA work in the

selected panchayats. However, a small portion of the wage was spent on semi-skilled workers.

**Table 4: Details of Actual Expenditure on NREGA in Selected Panchayats till March 2011**

Villages	Labour			Material	Contingency	Total
	Unskilled	Semi-Skilled	Skilled			
Byagadadenahalli	6.9839	0.0616	0.0000	15.1554	0.0000	22.2010
Samanduru	75.0212	0.1148	0.0000	45.0971	0.0000	120.2331
Karapuru	59.0843	0.1171	0.0000	52.5925	0.0000	111.7940
Marasuru	42.2279	0.1633	0.0000	23.1335	0.0000	65.5247
<b>Total</b>	<b>183.3174</b>	<b>0.4569</b>	<b>0.0000</b>	<b>135.9786</b>	<b>0.0000</b>	<b>319.7528</b>

**Source:** NREGA Section of Gram Panchayat and Taluk Office.

**Note:** Data accessed on 07 June 2011.

Unskilled labour wages constituted 57.3 per cent of the total expenditure, combining all the four panchayats. In case of Marasuru panchayat, this figure was approximately 64 per cent followed by Samanduru panchayat with 62.5 per cent. The total expenditure on materials by combining all the four panchayats considered for study was approximately Rs. 136 lakhs<sup>16</sup>, which implies that the material to wage ratio in the surveyed panchayats was approximately 40:60.

### **Impact of NREGA: Panchayat-level Analysis**

This section assesses the impact of NREGA at the panchayat-level from two different aspects: (i) the overall development of the village in terms of infrastructure due to implementation of NREGA projects; and, (ii) the changes in the quality of life of the households who were involved in NREGA work.

#### **(a) Impact on Village-level Infrastructural Development**

The impact of NREGA in terms of infrastructure development in each of the sample villages is presented in Table 5. A village-level infrastructural development (VLID) index was also constructed to make a comparative analysis of the impact of pre- and post-NREGA on the villages. The impact of NREGA was found to be highly significant (at 1%) on

<sup>16</sup> One lakh = 100,000= 0.1 million

village-level infrastructure development in three panchayats, namely, Samanduru, Karpuru and Marasuru, but in case of Byagadadenahalli panchayat, the impact is found to be significant (at 5%). The latter could be because of the lesser number of projects taken up in Byagadadenahalli panchayat as compared to that of the other three panchayats.

In Byagadadenahalli panchayat, the major improvement was observed in Kempavaderahalli village, which had the maximum NREGA activity in the panchayat, with a variety of projects undertaken. At the other extreme, Avadadenahalli and Kaval Hosahalli villages, with only a single NREGA project, were not found to have a substantial improvement.

In Samanduru panchayat, a significant improvement was found in Maranayakanahalli village, especially in terms of rural connectivity; also, a notable improvement was initiated in Samanduru and Hompalaghatta villages, where a large number and a variety of projects were undertaken. In fact, Samanduru panchayat was found to have the biggest improvement in village level infrastructure development amongst all the panchayats studied.

**Table 5: Village-level Infrastructural Development Index**

Panchayats	Villages	Before NREGA	After NREGA	t-stat	p-value
<b>Byagadadenahalli</b>	Chikkahagade	2.25	2.50	2.45	0.0352*
	Kempavaderahalli	2.08	2.83		
	Avadadenahalli	1.92	2.00		
	Byagadadenahalli	1.92	2.25		
	Kaval Hosahalli	1.92	2.00		
<b>Samanduru</b>	Hompalaghatta	1.92	2.67	10.76	0.0002*
	Samanduru	2.00	2.75		
	Guddanahalli	2.00	2.67		
	Kuvempunagara	2.00	2.58		
	Maranayakanahalli	1.75	2.75		
<b>Karpuru</b>	Aravantigepura	1.83	2.08	5.26	0.0031**
	Karpuru	2.08	2.92		
	Haradenahalli	1.83	2.33		
	Bidaragere	2.00	2.42		
	Bestamanahalli	2.08	2.58		
<b>Marasuru</b>	M. Madiwala	2.17	2.67	4.11	0.0074**
	Marasusu	2.33	2.58		
	Bandapura	1.83	2.92		

Shettihalli	1.83	2.25		
Adesonnatti	2.08	2.75		
<b>Overall</b>			8.47	0.0000**

**Note:** \*\* significant at below 1 per cent level; \* significant at below 5 per cent level.

In Karpuru panchayat, the most significant improvement was observed in Karpuru village, with a variety of projects undertaken. Bidaragere and Haradenahalli villages were found to have had several projects executed, but their overall improvement in infrastructure development was relatively low, perhaps because most of the projects were non-specific activities.

In Marasuru panchayat, the best village in terms of development was Bandapura village, with variety of projects undertaken. Even in Adesonnatti village, where relatively fewer projects were undertaken, there was also a marked improvement in infrastructure development.

Overall, it can be concluded that NREGA projects have lead to a significant improvement in village-level infrastructure development.

### **(b) Impact on the Quality of Life**

The impact of NREGA in terms of household quality of life in each of the sample villages is presented in Table 6. As in the preceding analysis, a household-level quality of life (HLQOL) index was constructed to make a comparative analysis of the impact of pre- and post-NREGA on the individual families. NREGA was found to have highly significant impact (at 1%) on quality of life in each of the four panchayats considered for study.

In Byagadadenahalli panchayat, the biggest improvement was in Kempavaderahalli village, as it had the maximum NREGA activity within the panchayat, with a variety of projects undertaken. The other four villages also experienced a moderate level of improvement.

In Samanduru panchayat, the biggest improvement was found to be in Maranayakanahalli and Hompalaghatta villages, where a large number of various types of projects were undertaken. In fact, Samanduru panchayat was also found to have the

biggest improvement in village level infrastructure development amongst the panchayats studied.

In Karpuru panchayat, the biggest improvement was found in Haradenahalli village, with several projects executed.

In Marasuru panchayat, the biggest improvement was in M. Madiwala village, with a variety of projects undertaken. At the other extreme, Adesonnatti village, where relatively fewer projects were undertaken, was found not to have much improvement in quality of life.

Overall, it can be concluded that implementation of the NREGA programme has lead to a significant improvement in the quality of life of the families who were involved with NREGA projects.

**Table 6: Quality of Life Index**

Panchayats	Villages	Before NREGA	After NREGA	t-stat	p-value
<b>Byagadadenahalli</b>	Chikkahagade	2.75	3.00	6.00	0.0019**
	Kempavaderahalli	2.50	3.00		
	Avadadenahalli	2.25	2.50		
	Byagadadenahalli	3.00	3.25		
	Kaval Hosahalli	2.00	2.25		
<b>Samanduru</b>	Hompalaghatta	2.88	3.13	4.81	0.0043**
	Samanduru	2.63	2.75		
	Guddanahalli	2.00	2.38		
	Kuvempunagara	2.38	2.50		
	Maranayakanahalli	1.88	2.13		
<b>Karpuru</b>	Aravantigepura	1.88	2.00	4.13	0.0072**
	Karpuru	2.50	3.13		
	Haradenahalli	2.13	2.88		
	Bidaragere	2.00	2.38		
	Bestamanahalli	2.63	3.00		
<b>Marasuru</b>	M. Madiwala	2.75	3.38	3.83	0.0093**
	Marasusu	3.00	3.38		
	Bandapura	2.38	2.63		
	Shettihalli	2.25	2.38		
	Adesonnatti	2.13	2.38		
<b>Overall</b>				8.14	0.0000**

**Note:** \*\* significant at below 1 per cent level; \* significant at below 5 per cent level.

**(c) Impact of Village-level Infrastructural Development on Quality of Life**

To assess the impact of infrastructural development on quality of life, the improvement of quality of life was regressed on the improvement of infrastructure development for each of the panchayats. The results of the regressions are shown in Table 7. It is found that improvement in infrastructure development only had a significant impact on improvement in quality of life in one panchayat, namely, Byagadadenahalli, which had the lowest number of NREGA projects. Overall, however, it was found that improvement in infrastructure development did not have a significant impact on improvement in quality of life. This could be due to several other factors such as political issues/factors, implementation irregularities, lack of interest of the administration, and so on, which were beyond the scope of the study.

**Table 7: Results of Regression of improvement in QOL on improvement in VLID**

	<b>Coefficient</b>	<b>p-value</b>	<b>R Square</b>
<b>Byagadadenahalli</b>	2.2500	0.0276*	0.8438
<b>Samanduru</b>	0.2381	0.7975	0.0255
<b>Karpuru</b>	0.6140	0.1843	0.4960
<b>Marasuru</b>	0.3623	0.7266	0.0469
<b>Overall</b>	0.1924	0.6080	0.0149

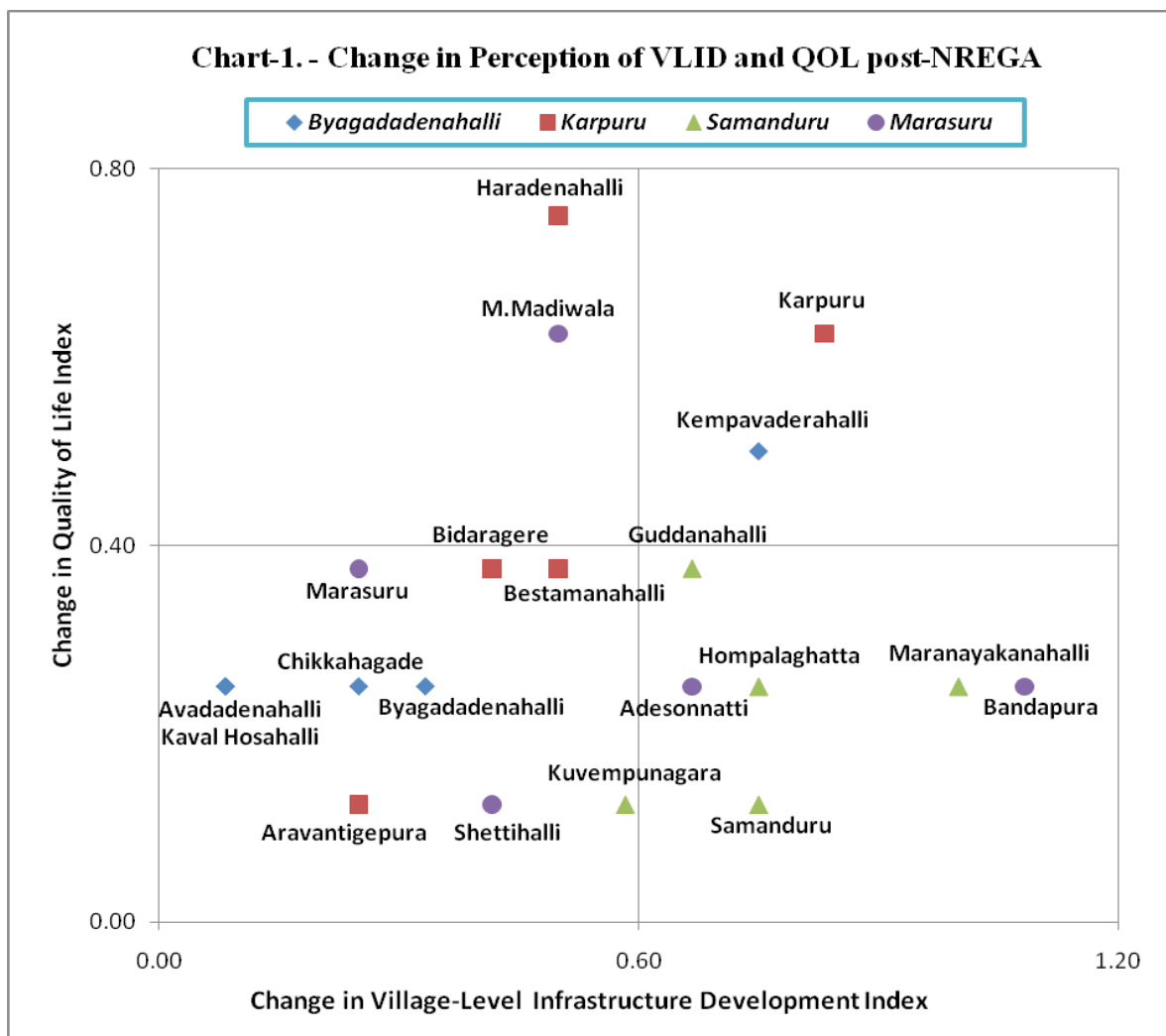
**Note:** (i) \* significant at below 5 per cent level.

(ii) QOL implies quality of life and VLID implies village-level infrastructural development

In addition to the above analysis, to capture the perceptions of the villagers regarding the improvement of quality of life and village-level infrastructural development, a perception mapping has been done, as shown in Chart 1.

The result of the perception mapping goes in line with the analysis of the regression analysis; as can be observed from Chart 1, the majority of the villages falls in the category where not much change has happened in terms of either of the variables. Only two villages, namely, Karpuru and Kempavaderahalli, among all the villages have

shown a significant improvement with respect to both change in quality of life and village-level development.



### 7. Policy Implications

Though the study is limited to only one taluk (Anekal) of Bangalore district, some serious defects of NREGA were observed during the primary survey. There is an urgent need for immediate rectifications to make NREGA more efficient and responsive to the needs of the underprivileged citizens. Some of the flaws observed during the survey are discussed in the following, with prospective solutions.

**(a) Lack of Systematic Work Schedule**

A proper and more systematic work calendar is needed at the Gram Panchayat level for planning works mainly in the agricultural lean seasons. In the absence of this calendar, the ability of the programme to strengthen the agricultural sector is adversely affected. Labour shortages in agricultural sector have also been aggravated due to NREGA works. Therefore, during agricultural time (i.e., sowing and harvesting) NREGA work should be stopped.

**(b) Deficiency in Understanding the Importance of NREGA amongst Villagers**

It was witnessed during the survey, particularly in Byagadadenahalli panchayat (where number of projects undertaken in very low), that there is lack of awareness among the villagers, especially among the people who live in the interior villages of the panchayat. An officer at the stature of Panchayat Development Officer should be appointed at every panchayat to not only monitor the planning and implementation of projects in each of the villages under that particular panchayat, but also to arrange workshops regarding awareness of the programme among the villagers. The workshops will provide a detailed breakdown about the programme with its ways of implementation and effectiveness. A proper guidance and scrutinizing of project selection by the officer will increase the efficiency of the village-level coordinators. Also, the NREGA cell at the Gram Panchayat should be strengthened by providing more staff.

**(c) Understanding the Socio-economic Dynamics**

Given the importance of NREGA, there is a need to understand the taluk and village-level dynamics and the social and economic relevance of the programme amongst the rural households. A village-level quantitative survey needs to be undertaken to estimate the welfare impact of the programme at the grassroots level. Similarly, qualitative studies in the form of focus group discussions with the stakeholders can complement and enhance contextual understanding of the programme.



**(d) Fool-proof System in Case of Funding**

During the course of interviews of the beneficiary households, some of them had expressed concern about the role of middlemen in case of fund disbursement for different projects. According to them, some middlemen were involved in illegal nexuses with corrupt government officials, siphoning away the funds provided for implementation of projects. Such corruption would hamper the effectiveness of NREGA. The only way corruption can be stemmed is by proactive people's involvement in the implementation process. People should actively question the officials for transparency in the process and get proper information about creation of muster rolls and disbursement of funds.

**(e) Nature of Work**

The study observed the majority of the work was menial in nature, and the beneficiaries of NREGA were mostly the unskilled workers. There was lack of encouragement for the skilled and trained workers. Thus, there is a need to design some developmental works that can target the skilled workers also. It will motivate them to stay back within the village, thus curbing rural-urban migration. There is also a need to arrange for some training programmes for the unskilled workers so that they would not only have to rely on NREGA projects. This can motivate them to look for some better alternatives when there are no NREGA projects.

**(f) Discrepancies and Favouritism**

Some villagers, mainly in Byagadadenahalli panchayat, complained about the discrepancies and favoritism for the number of days of employment. Again, few villagers have also alleged that there is a tendency of local influential people of the village to get their names registered in the muster roll, without actually engaging themselves in the assigned projects. This leads to work burden on the other labourers as their work is divided amongst the workers in order to provide wages to them. This is a serious issue and it should be checked immediately by bringing it under the purview of the Panchayat Development Officer.

**(g) Reluctance to Work**

The villagers are assured of the minimum payment of Rs. 82 per day once registered in the muster roll, whether they work or not. Therefore, some of them take advantage of this fact and do not perform the required task for the day. A nodal officer should be engaged for intensive supervision and evaluation of daily work. This will lead to decline in the escapist problems at worksites.

**Concluding Observations**

This paper examined the impact of National Rural Employment Guarantee Act (NREGA) as measured by the changes in the quality of life at the village and household levels. Using household surveys conducted in four panchayats of Anekal taluk in Bangalore district of Karnataka, the paper applied quality of life index as well as regression methods and perception mapping to compare the village-level infrastructural development with beneficiary households.

The study found that there was a widespread variation in the effectiveness of implementation of NREGA among different panchayats in Anekal taluk. The results suggest that the NREGA has a significant impact in both village-level infrastructural development and also in household quality of life. First of all, the NREGA appears to have a substantial positive effect on village development. The infrastructure in the villages has improved in the post-NREGA period. Besides village development, there is a substantial increase in the quality of life of the people who participated in the project. The study shows that NREGA is so far successful in enhancing the welfare of rural households by offering them consistent income through better access to local employment at minimum wages. However, there is also an urgent need for immediate rectifications of some of the flaws observed during the survey to make NREGA more effective and responsive to the needs of the underprivileged citizens.

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