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Poverty & Social Impact Analysis

of the **National Rural Employment Guarantee Act**
in **Karnataka** to Enable Effective Convergence

APRIL 2013



THE WORLD BANK

Suryanarayana Satish & Grant Milne
with
C. S. Laxman & Crispino Lobo

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Foreword

The success or failure of any government-sponsored scheme hinges largely on three pillars of ownership, equity and transparency. These three pillars support the superstructure, and cracks or weaknesses in any one of these leads to the instability of the entire structure. The Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), perhaps one of the few “schemes” of the government that has been sanctified through legislation, remains dependent upon these pillars for its success. Although the scheme is still nascent, yet one can discern certain early cracks appearing in its implementation. This study has highlighted these cracks and has attempted to caution policy-makers and stakeholders of such disturbing developments in order to initiate timely action to reinforce the system.

One of the major thrusts of MGNREGA is its emphasis on water harvesting initiatives. In a country where nearly 480 million people are dependent on rain-fed agriculture, it is indeed a boon. The question that arises is whether despite this laudable objective, MGNREGA has been able to achieve such purpose? The study throws interesting light on this aspect.

Being closely associated with two important watershed initiatives in Karnataka, the Integrated Watershed Management Programme (IWMP) as sponsored by the Government of India, and its precursor, the World Bank assisted and highly successfully and awarded *Sujala* Watershed Programme, I am of the firm opinion that the results achieved are largely due to the adherence to the three pillars mentioned earlier. While IWMP is still new, the experiences and results of *Sujala* have been phenomenal. However, one important strand that runs through all the programmes and which really is the cutting edge is the level of transparency. *Sujala* had a very robust Monitoring & Evaluation and Learning system. This ensured correct and timely feedback and the opportunity for course correction and thereby, its dynamic nature and success.

MGNREGA and IWMP have an important convergent objective. The objective is to provide livelihood options to disadvantaged persons in rural areas, while improving the natural resource asset base. While the two schemes take different implementation routes, the result that both aim to achieve is the same. MGNREGA emphasises on planning by the people via the Panchayats. IWMP also involves planning by the Watershed Committees at the Panchayat level but with a different process and framework. IWMP takes a more holistic macro watershed management perspective, yet implementation is focused at the micro watershed level. This is missing in MGNREGA, where planning is done only at the micro level and a holistic approach to area treatment is lacking. Likewise, while MGNREGA ensures activities through only manual labour, IWMP permits machines and thereby at times skips the landless in providing direct benefits. These are two examples which strongly advocate convergence between the two programmes. The study has strongly championed the cause of convergence as well.

I congratulate the experienced team of the authors of this study namely, Messers Suryanarayana Satish, Grant Milne, CS Laxman and Crispino Lobo for the excellent study and scientific analysis they have produced. I am sure that the study would further buttress the cause of convergence between these two important initiatives.

Dr Sandeep Dave, IAS
Former Secretary, Agriculture,
Government of Karnataka, Bengaluru

Preface

The World Bank is committed to understanding and addressing poverty in its various dimensions, which includes identifying the distributional impacts of the programs and projects it finances. To this end, the World Bank manages a Poverty and Social Impact Analysis (PSIA) facility to inform proposed and ongoing policies in its member countries. This report reflects outcomes of one such analytical piece carried out in India on the National Rural Employment Guarantee Act (NREGA) in Karnataka.

Given persistent poverty levels in India, programs aimed at generating employment have been the focus of attention of Indian policy makers and administrators. In this setting, NREGA, with its rights-based approach to employment, marks a paradigm shift from the Government of India's previous efforts to create employment opportunities for the poor and reduce vulnerability. Under NREGA – a program that has national coverage – the Government is legally bound to meet wage labor demands at the local level.

Despite its best intentions, however, NREGA is beset with a variety of criticisms and controversies. Concerns have emerged in relation to the capacity of local governments to manage NREGA; financing deficiencies; the quality of work undertaken through NREGA; and the overall sustainability of the scheme. In this context, the option of “converging” NREGA with another ambitious national program, the Integrated Watershed Management Program (IWMP), has been proposed. The largely agricultural state of Karnataka has a particular interest in such a convergence, as it has implemented the World Bank-financed Watershed Development Project (known locally as *Sujala I*) the successful implementation of which has led to a second Bank-financed project. In this context, a PSIA of NREGA in Karnataka was conducted to help inform the proposed policy change of convergence of the two programs.

I am happy to note that the PSIA of NREGA has already been relevant and useful, as evidenced by the fact that the findings have informed the design of the follow-up Karnataka Watershed Development Project II in Karnataka. Findings suggest that while NREGA not only offers additional financial resources enabling scaling up of watershed management activities, its focus on ‘putting people first’ enhances ‘participation’. IWMP, on the other hand, offers a technology focus in terms of scientific knowledge, skills and management practices that would help to enhance the relevance and impact of NREGA. A marriage between the two in Karnataka is thus bound to result in greater productive outcomes and benefits to the local poor and vulnerable. Results of the study are also being fed into the design of the World Bank-financed National Watershed Management Program (Neeranchal) in India. Finally, I am hopeful that this work will contribute to the broader dialogue on the future of the NREGA program at the national level.



Maria C. Correia
Sector Manager, Social Development Unit
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This report: 'Poverty and Social Impact Analyses of the National Rural Employment Guarantee Act in Karnataka to Enable Effective Convergence' is based on an Analytical Study conducted in the context of preparing the recently approved World Bank Assisted Watershed Management Project in Karnataka. The objective was to explore potential for 'convergence' between India's two major rural development programs: 'Mahatma Gandhi National Rural Employment Act (MNREGA)', the country's flagship rights based employment program, and the 'Integrated Watershed Management Program (IWSMP)'. The Poverty and Social Impact Analysis (PSIA) approach has been deployed to test the hypotheses that, convergence would result in enhancing:

- /// Social Capital: an institutional platform is provided for enabling the mobilization of all the stakeholders into group action, resulting in effective watershed effective management;
- /// Physical Capital: Creating durable assets of higher quality, resulting in an improved production base;
- /// Ecological Synergies: Natural resource-base regeneration through various watershed management activities will help in ensuring more sustainable use of resources;
- /// Economic Opportunities: Income enhancements, savings and investments become possible through various allied activities;
- /// Strengthening Democratic Processes: Convergence awareness and planning at the grass root level will lead to greater ownership of projects.

The results of PSIA enquiry have been highly positive and encouraging. Endorsing some hypotheses, the study explicitly brings to the fore analysis of the benefits of that convergence brings in. It analyzes the pros and cons of convergence between NREGA and IWMP, and considers some possible models of convergence. This is an abridged version of the main detailed report which is available on request from the authors.

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We are indebted to Ms Maria Correia, Sector Manager, SASDS, for her continued support and guidance as well as commitment for disseminating the results, without which this publication would not have been possible. We owe a debt of gratitude to Dr Sandeep Dave, former Agriculture Secretary, Government of Karnataka, Bangalore, despite being on vacation, graciously obliged our request and wrote the preface. Ming Zhang, Sector Manger, SASDU, graciously enabled administrative support by agreeing to anchor this study with the ongoing World Bank assisted Karnataka Rural Water Supply and Sanitation Project. Maitrayee Das (SDV) and Mario Picon (SASDS) reviewed an initial draft and offered comments which are thankfully acknowledged. Initial encouragement provided by Bhuvan Bhatnagar (WSP) is remembered with pleasure. Finally, this study could not have been possible but for operational and analytical support and guidance by Mr G Satish, IFS, Project Director, Department of Watershed, Government of Karnataka. Special thanks to John Dawson for his contribution through professional edits as well as for drafting the executive summary. Initial editorial help provided by Nidhi Gupta is also acknowledged. Last but not the least; our thanks are to Lakshmi Narayanan for her tireless efforts for successful completion of the study and printing of the report.

Suryanarayana Satish
Grant Milne

Abbreviations and Acronyms

CEO	Chief Executive Officer
GDP	Gross Domestic Product
GIS	Geographic Information System
GP	<i>Gram Panchayat</i>
IWMP	Integrated Watershed Management Program
KWDP	Karnataka Watershed Development Project
MGNREGA	Mahatma Gandhi National Rural Employment Guarantee Act
MIS	Management Information System
NGO	Non-Governmental Organization
NREGA	National Rural Employment Guarantee Act
PSIA	Poverty and Social Impact Analysis
Rs.	Rupees
SASDS	South Asia Sustainable Development – Social Development
SASDU	South Asia Sustainable Development – Urban Development & Water
SWOT	Strengths, Weaknesses, Opportunities, and Threats
WDD	Watershed Development Department

Executive Summary

INTRODUCTION

As the 21st century unfolds, the vast nation of India faces an array of challenges, including how to feed its burgeoning population in a situation where rural poverty is widespread and land resources are under mounting pressure. In such a situation it is vital that the resources supporting agriculture (especially rain-fed arable farming) – soil and water, physical infrastructure, and those employed on the land – operate efficiently and in harmony. Two huge programs are particularly important as India strives to achieve that aim: the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), and the Integrated Watershed Management Program (IWMP). Both have mobilized significant resources in pursuit of a sustainable rural economy in India. Both, however, have their deficiencies, and it has been suggested that greater cohesion between the activities of the two programs would add value to the projects they implement.

The aims of this report are:

- To show how NREGA and IWMP operate within themselves and in relation to each other, especially in the state of Karnataka, which is the focus of this report;
- To assess the performance of NREGA in Karnataka through a poverty and social impact analysis (PSIA);
- To analyze the benefits that might arise (taking into account the results of the PSIA) from a

closer convergence of NREGA and IWMP in implementing projects in rural areas.

NREGA AND IWMP

Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA)

NREGA, enacted in 2005, forms the basis of a massive scheme, implemented throughout India, with two main aims – to enhance the livelihood security of people in rural areas, and to boost the rural economy. It does the former by guaranteeing wage employment to members of rural households who have volunteered to do unskilled manual work; and the latter through public works, including water-resource management and tree-planting. The budget for NREGA in fiscal year 2010/11 was Rs. 40,100 crores (US\$ 8 billion), of which a portion is directed toward watershed works. The chief executing agency for works under the scheme is the village-level *Gram Panchayat* (GP). It is the GP's responsibility to mobilize human resources and issue job cards to volunteers, ascertain the infrastructural needs of the village through *gram sabhas* or village meetings, allocate funds for sanctioned projects, and ensure that laborers receive their wages. In the last three years NREGA has benefited 52 million households across the country, generating 2,200 million person-days of employment. Women account for 50 percent of beneficiaries.

Integrated Watershed Management Program (IWMP)

IWMP was launched in 2009/10 to promote integrated planning at the watershed level to ensure that resources are used efficiently and sustainably. It aims to restore the ecological balance through (for example) conservation and optimal use of water resources, prevention of soil erosion, and regeneration of natural vegetation, thus boosting agriculture and agro-based activities and providing sustainable livelihoods in the watershed area. Its methodology is firmly based in the application of sound science to the solution of environmental and agronomic problems. An executive committee is responsible for implementing projects at the watershed level.

Forecast disbursements from IWMP over the 11th and 12th Five Year Plan periods are approximately US\$6.6 billion.

Table ES1 compares NREGA and IWMP under various categories. The following section presents the results of a study of NREGA in Karnataka; this executive summary then concludes with some analysis of the possibilities for and consequences of greater convergence between NREGA and IWMP.

NREGA IN KARNATAKA: POVERTY AND SOCIAL IMPACT ANALYSIS

While NREGA has contributed significantly to watershed management throughout India, concerns

TABLE ES1. COMPARISON OF NREGA AND IWMP

Category	NREGA	IWMP
Inception	2005 Act, implemented through National Rural Employment Guarantee Scheme	Launched in 2009/10 by combining previous programs
Aims	Provide rural employment and boost rural economy through guaranteeing work on various infrastructure-related projects	Watershed management to restore ecological balance by conserving and developing degraded natural resources, thus improving and ensuring sustainable livelihoods
Approach	Rights-based, demand-driven	Administration-based, allocation-led
Method	Provides at least 100 days of guaranteed wage employment in every financial year to every household whose adult members volunteer to do unskilled manual work	Science and investment-based; scientific planning of projects by using information technology and GIS for planning, monitoring, and evaluation
Focus areas	Aims to create durable assets and strengthen livelihood resource base of rural poor; provides farm-based productivity-enhancing infrastructure (wells, pumps) to defined socioeconomic groups	Funds all soil and water conservation measures on all lands in watershed, irrespective of land ownership or socioeconomic restrictions
Activities	Digging tanks and ponds, construction and repair of embankments and check-dams, developing plantations to arrest soil erosion, land-leveling, road-building. Focus has been on watershed development and connectivity enhancement	Rainwater harvesting, soil conservation, combating soil erosion, vegetation regeneration, recharging groundwater table at watershed level and below
Governmental responsibility	Ministry of Rural Development	Department of Land Resources
Level	Within GP boundaries	Sub-watershed and micro-watershed, often cutting across GP boundaries
Implementation	Main executing agency is the village-level GP, which ascertains community needs through <i>gram sabhas</i> viz., village meetings, issues job cards to volunteer households, allocates funds to selected projects, and ensures laborers receive their wages	State-level nodal agency works through a project implementing agency and executive committee, presided over by a chief executive officer
Project period	Annual approach	4–7 years

have been expressed about the capacity of local government to manage the program; deficiencies in the financing arrangements; the quality of the works undertaken; and the sustainability of the scheme. To gain a clearer picture of the benefits (and shortcomings) of NREGA implementation, a Poverty and Social Impact Analysis (PSIA) was undertaken in Karnataka. The largely agricultural state has particular interest in the findings of such a study: its World Bank-supported Watershed Development Project (also known as *Sujala*) generated positive lessons on watershed management, agricultural intensification, and rural livelihoods that offer potential for scaling up, and a state Watershed Management Project was recently approved by the World Bank. In 2011/12, the NREGA budget in Karnataka was over US\$1 billion, with 30–40 percent of disbursements directly linked to soil and water conservation. Over 5 million job cards have been issued in the state.

The PSIA was carried out in seven sample GPs, all characterized by a high percentage of poor and marginalized communities, inadequate connectivity, high dependence on rain-fed agriculture, and deficient infrastructure. The PSIA employed a number of methodologies, including household surveys, participatory rural appraisals in sample locations (watershed-level and below), and desk research. The study looked at both the economic and social impacts of NREGA. The following subsections summarize some of the key findings of the study.

Employment: While NREGA had generally succeeded in providing local employment opportunities at reasonable wage rates, few households had managed to avail themselves of the full 100 days of employment guaranteed by NREGA, and 20–30 percent of job card holders had received no employment under the scheme. The number of days of employment ranged between 15 and 90, with an average of 50, across the seven GPs. Several factors contribute to that mediocre performance, including the lack of appreciation of a demand-driven, rights-based approach, with inadequate community participation and consultation, for example, in *gram sabhas*, particularly in the case of women and scheduled castes and tribes. In summary, substantial scope exists for “widening” (number of households) and “deepening” (number of days employment per household) the scope of NREGA.

Poverty: Income for NREGA was about Rs. 2,000–7,000 per household per year, or 5–15 percent of total income. Both private and public works had the potential to provide long-term poverty-reducing impacts, and a benefit-cost analysis gave a payback period of about five to six years. However, lack of capacity often results in poor planning, deficient quality control, inadequate skills base, delays in execution of works, and unsatisfactory payment procedures. Moreover, while most of the households engaged in wage labor were “poor” (as to be expected), there was little evidence that that employment contributed significantly to closing the poverty gap.

Migration: Wage rates and the availability of local wage employment were often deficient, inducing migration to cities or other rural locations (up to 15 kilometers away). Through such local migration, men could receive wages in the market up to Rs. 200 per day. Women received lower wages (around Rs. 80 per day), but often found it advantageous that hired work was available within the village itself. Generally speaking, the workforce was mobile, with 10 to 30 percent of households having migrant members in the sample GPs, and the implementation of NREGA seems to have had little impact on reducing migration. Commuting – daily travel for work – was also found. Unlike migrants, most commuters were women travelling to neighboring villages for farm work during the peak agricultural seasons.

In conclusion, the main actions that would benefit the implementation of NREGA were identified as greater political leadership at the local level; full and efficient utilization of funding; greater community participation; improved modalities for job-card issuance, provision of employment, and wage payment; and greater external assistance from government and other agencies to build capacity and ensure efficient implementation of projects.

CONVERGENCE BETWEEN NREGA AND IWMP

NREGA and IWMP have a number of key objectives in common, particularly watershed development and the enhancement of rural livelihoods. Both mobilize considerable funding resources. Table ES2 analyses, by various categories, how convergence could add

TABLE ES2. NREGA AND IWMP: WHAT WOULD CONVERGENCE BRING?

Category	NREGA and IWMP: current situation	Convergence of NREGA and IWMP
Objectives	NREGA: Employment generation, rural development IWMP: Similar, but in a watershed context	Similarity of objectives facilitates convergence in the categories below
Life cycle and implementation	NREGA: Funding on annual basis IWMP: Three phases (preparatory, implementation, consolidation) over 4–7 years	Dovetailing NREGA into IWMP project cycle would provide a framework to realize the long-term objectives of NREGA in a sustainable manner, and would assist capacity-building and institutional development
Human resources	NREGA: Competence of personnel often inadequate for planned activities, so quality of works is often poor IWMP: Inadequately staffed but can draw on qualified and competent individuals and agencies to provide technical support and social facilitation	Convergence could widen the pool of human resources available, and skills and competencies of IWMP could enhance quality of works and planning and implementation of projects. Convergence would also create more person-days and improve chances of NREGA delivering on its 100-day promise
Planning and proposal formulation at project level	NREGA: Works selected by popular consensus and represent “wish list” of current needs IWMP: Allows deployment of technology-assisted tools (GIS, remote sensing) to map resources, plan project, and select interventions	IWMP techniques would bring to NREGA application of sophisticated tools and planning processes and a multiyear perspective, leading to better quality and longer shelf life of projects, with longer-term benefits
Capacity building	NREGA: Capacity-building is objective but agencies not equipped to handle this requirement IWMP: Can deploy resources for capacity-building	More technological and science-based approach of IWMP can bring capacity-building potential to NREGA
Funding	NREGA: 100% of labor costs and 75% of material costs from central government; 60:40 labor to material ratio in projects IWMP: Central share is 90%, state’s is 10%; no restrictions on ratio of labor to material In both cases, funds routed through GP	To improve scale, quality, and speed of implementation of watershed development interventions, NREGA can augment IWMP funding and allow works to continue where IWMP funds are delayed or inadequate. Labor-intensive works could be financed through NREGA and material-intensive works under IWMP, or combination of the two
Inclusiveness and transparency	NREGA: Has mechanisms for transparency and accountability but often lacking in practice IWMP: Engages NGOs and uses exposure visits to raise awareness, increase participation, and enhance transparency	Methodologies of IWMP could help realize accountability objectives of NREGA. Satellite-based remote planning could help verify targeting in planned locations for soil and water conservation works for both IWMP and NREGA
Reporting	NREGA: Reporting done on regular basis by uploading data on web-based Management Information System (MIS) platform directly from GP level IWMP: Such a system not followed	IWMP could move in this direction, though connectivity, software and hardware, and power problems would need rectifying. MIS has potential to enhance transparency, give access to market information, and garner Internet knowledge resources
Institutional arrangements	NREGA: Line management through ministry and state to GP IWMP: Similar line management; executive committee set up, chaired by president of GP	The common administrative and operational arrangements of NREGA and IWMP would facilitate convergence, with a chief executive officer overseeing coordination and dovetailing of resources, partners, and activities so that synergies and sustainable livelihood opportunities are created, a goal of both programs
Role of Watershed Development Department (WDD)	NREGA: WDD provides technical and other assistance as main body concerned with watershed matters in the state IWMP: WDD acts as implementing agency for projects	WDD can contribute in several areas in the case of convergence, including capacity-building and technical expertise, though it may be resistant to some of the structural changes required

value to the current parallel structures and modes of operation of NREGA and IWMP. Among the items for consideration is the important question of how the role of the Watershed Development Department (WDD) of the government of Karnataka might change under convergence.

As can be seen from the analysis in Table ES2, the similarities between NREGA and IWMP in goals and objectives, institutional arrangements, and other areas offer considerable potential for convergence, though a number of issues need to be resolved on the way, including in the areas of approach, cost norms, nature of funding, planning and project formulation, implementation horizons, beneficiary contributions, transparency, and accountability. A pilot project would assist in testing a convergence-based approach and would offer insight into how best to proceed.

Models of convergence: An important issue is the framework around which convergence is structured. Four models have emerged as possible options:

- **Collaborative or synergistic**, in terms of works and activities. Once a watershed (sub-watershed or micro-watershed) is prepared with due cognizance of the aspects raised above, an activity breakdown matrix can be drawn up, detailing works to be accomplished and assigning roles and responsibilities to different institutions or agencies, for example GP, executive committee, WDD, NGO, and so on. Roles are to be defined depending on relative strengths. In this manner, NREGA and IWMP would retain their institutional (including financial management) identities, but would require an overarching coordination mechanism as well as oversight bodies.
- **WDD as a facilitator rather than provider.** In this scenario, WDD transforms itself completely to a “facilitator” from the existing “provider cum facilitator” role. In this model, WDD will assume full technical assistance responsibility, right from selection of watersheds or villages, through planning and implementation, and including capacity-building, monitoring and evaluation. All decision-making, including managing funds and procurement of goods and services, will rest with the GPs.

- **WDD as a service provider.** Here, the GP entrusts complete responsibility to WDD and the payments are made as per mutually agreed terms and conditions according to a detailed schedule with specific work accomplishments.

- **WDD to act as a depository.** WDD will perform all activities, including procurement and financial management, and will share the reporting from time to time with the GP, but finally be accountable to the higher echelons.

CONCLUSION: PROSPECTS FOR NREGA AND IWMP

It is apparent that a number of obstacles need to be overcome in order to achieve greater convergence between NREGA and IWMP. These challenges relate to dovetailing the institutional arrangements for implementation at GP- and watershed-level, and the governance structure at the national and state level; matching the annual NREGA project cycle with the four to seven years of IWMP; balancing the rural employment, demand-driven approach of NREGA with the watershed development, science-based approach of IWMP; deciding what activities would be undertaken within the new arrangement; and overcoming the inefficiencies that tend to afflict both programs, so that their outcomes and achievements tally more closely with the stated aims and objectives.

Critical to overcoming these obstacles is identifying, from the various options, the best framework around which convergence is structured. Accuracy in that task could allow significant benefits to emerge from convergence, including an efficient system of watershed management with the triple benefits of sustainable resource use, employment generation, and enhanced agricultural production; flexibility in the project cycle, allowing the employment of a variable combination of human and physical resources depending on the nature of the project and its time scale; enhanced long-term sustainability and post-project maintenance; more rational project identification, based on both local demand (NREGA) and sophisticated planning tools (IWMP); greater access to and mobilization of funding; an increase in both the quantity and quality of

labor, as the NREGA workforce benefits from the capacity-building expertise of IWMP; adoption of a more technological and science-based approach to project implementation; an opportunity for greater accountability and community participation; and greater equity, with the increased involvement of

marginalized or disadvantaged groups (women, scheduled castes and tribes).

In summary, greater convergence has the potential to significantly increase the quality and scale of rural projects in India, with considerable economic, social and poverty reduction benefits.

Project Background

Agriculture accounts for about 16 percent of India's annual Gross Domestic Product (GDP). Approximately 60 percent of the country's population depends on agriculture, largely rain-fed, for its primary livelihood. Of a net sown area of 141 million hectares, approximately 68 percent is under rain-fed cultivation, mostly in arid and semiarid areas. Thirteen states, including Karnataka, account for about three quarters of the total rain-fed area.¹ Generally, these areas receive less than 750 millimeters of rainfall annually and have less than 30 percent of land under irrigation. But these areas assume importance in the context of meeting the nutritional requirements of the country's ever-growing population. Assuming moderate forecasts of population growth, India requires an additional 102 million tonnes of food grains to be produced by 2020. While 64 million tonnes of this food could perhaps come from increasing the irrigated area and irrigated productivity, the balance (38 million tonnes) can only come from rain-fed lands (or imports), which implies the marshaling of huge resources – technical, financial, and institutional.

One way in which the government of India is addressing this challenge of food security is by channeling funds from the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) (Box 1) to finance soil and water conservation activities in arid, rain-fed areas

1 These include Maharashtra (14.49 million hectares), Madhya Pradesh (9.31 million hectares), Rajasthan (12.15 million hectares), Karnataka (7.46 million hectares), Uttar Pradesh (4.42 million hectares), Andhra Pradesh (6.48 million hectares), Gujarat (6.58 million hectares), and West Bengal (2.54 million hectares).

through local self-governments (Box 2). The budget for NREGA in fiscal year 2010/11 was Rs. 40,100 crores (US\$ 8 billion), of which a portion is directed toward watershed² works. However, there is growing concern about the capacity of local self-governments to effectively manage the program, especially in incorporating the latest technologies, ensuring quality, and effectively handling procurement and funds. On the other hand, given NREGA's huge financial resources, there is increasing interest in "convergence" with other national sectoral programs, such as the Integrated Watershed Management Program (IWMP) (Box 3). Forecast disbursements from IWMP over the 11th and 12th Five Year Plan periods are approximately US\$ 6.6 billion, making it the world's second largest watershed program after that of China.

This document summarizes the findings of a Poverty and Social Impact Analysis (PSIA) of NREGA, carried out in Karnataka, to assess the possibility of convergence between NREGA and IWMP. Karnataka's dry regions are among the state's poorest areas, with low agricultural productivity resulting from susceptibility to drought and deepening environmental stress

2 A watershed is defined as a topographically delineated area with a single drainage point. Adopting a watershed approach is both biophysically and socioeconomically logical. Given the natural direction of gravitational flow, biophysics provide a unidirectional dimension to cause and effect relationships. As soil and water move down slope, communities may also move in either direction, depending on livelihood opportunities such as trade and employment. A watershed approach enables systematic conservation of soil and water, critical to sustaining agriculture-based livelihoods, as the treatments start from the ridge and move toward the drainage point.



BOX 1: NATIONAL RURAL EMPLOYMENT GUARANTEE ACT

In 2005, the government of India passed landmark legislation that promised to deal effectively with the problem of unemployment in the country. NREGA was constituted “to provide for the enhancement of livelihood security of the households in rural areas of the country by providing at least 100 days of guaranteed wage employment in every financial year to every household whose adult members volunteer to do unskilled manual work.” It also aims to arrest out-migration of rural households in search of employment, simultaneously enhancing people’s livelihoods on a sustained basis, by developing economic and social infrastructure in rural areas, essentially addressing chronic poverty, migration, drought, deforestation, soil erosion, and water resources management, by building local capacities for generating productive assets.



BOX 2: NREGA AND LOCAL SELF-GOVERNMENTS

The functional arm of NREGA is called the National Rural Employment Guarantee Scheme, which is responsible for transforming the idea into reality. At the national level, the Ministry of Rural Development is the agency that all state governments are accountable to in their respective operations. Every state drafts its own scheme, with a state fund and office set up for the purpose. Officials and departments at the village and district levels implement these schemes.

The chief executing agency or the nodal point between different authorities is the village-level *Gram Panchayat* (GP). It is the GP’s responsibility to create awareness in the villages, seek applications and register interested candidates, issue job-cards to track progress, ascertain the infrastructural needs of the village through *gram sabhas* or village meetings, incorporate the voice of the masses, decide on which projects to undertake, allocate funds for sanctioned projects, and ensure that laborers receive their wages. Details about the key actors and processes involved in NREGA are listed in Appendix A.



BOX 3: INTEGRATED WATERSHED MANAGEMENT PROGRAM

The Integrated Watershed Management Program (IWMP) was launched in 2009/10 to enhance optimum use of resources, sustainability of outcomes and integration of planning. Three former programs – the Drought-Prone Areas Program, the Desert Development Program, and the Integrated Wastelands Development Program – were subsumed into one to create IWMP. At the national level, the program is implemented by the Department of Land Resources, and its main objectives are to restore the ecological balance by harnessing, conserving, and developing degraded natural resources such as soil, vegetative cover, and water to enable prevention of soil erosion, regeneration of natural vegetation, rainwater harvesting, and recharging of the groundwater table. This is expected to boost multi-cropping and the introduction of diverse agro-based activities to provide sustainable livelihoods to the people residing in the watershed area. It also focuses on scientific planning of the projects by using information technology, remote sensing techniques, and Geographic Information System (GIS) facilities for planning, monitoring, and evaluation.

IWMP in the states is implemented through a three-tier institutional setup managed by multidisciplinary professionals: a state-level nodal agency, a project implementing agency at the project level, and a watershed residents committee at the village level. Selections are made such that they promote an average watershed with a size of about 5,000 hectares and cost norms of Rs. 6,000 per hectare to Rs. 12,000 per hectare in the plains, and Rs. 15,000 per hectare in difficult or hilly areas. The project period is flexible – from four to seven years.

and degradation. However, the state has a unique opportunity to build on the success of the earlier World Bank-supported Karnataka Watershed Development Project (also known as, and referred to hereafter as, *Sujala*), which closed on March 31, 2009. *Sujala* generated positive lessons and best practices around integrated watershed management, agricultural intensification, rural livelihoods, monitoring and evaluation, and building resilience to climate change. In this context, there is a growing need for a new project model to successfully demonstrate and scale up convergence of the innovative *Sujala* watershed approach with NREGA-financed soil and water conservation activities.

In 2011/12, the NREGA budget in Karnataka was over US\$1 billion, with 30–40 percent of disbursements directly linked to soil and water conservation. Leveraging these investments is expected to result not only in social and economic safety nets, but also in strengthening democratic processes and mitigating the effects of climate change. It is against

this backdrop that the government of Karnataka sought assistance from the World Bank for a follow-on project, to demonstrate successful convergence with NREGA.

As part of the project preparation activities, the Watershed Development Department (WDD),³ government of Karnataka, responsible for managing watershed development throughout the state of Karnataka, planned a social assessment study to ensure that development initiatives contributed to inclusive development and poverty reduction. The specific objectives of the social assessment aimed at (a) identifying and analyzing key social issues and related factors that have a bearing on the achievement of project objectives; and (b) based on this analysis, providing suitable inputs to the project's design to ensure a sustainable and equitable flow of benefits to project populations in general, and vulnerable groups in particular. As a supplement to the social assessment, the World Bank's Trust Fund support was secured to conduct a comprehensive PSIA.

³ WDD is the state-level nodal agency in Karnataka for watershed management.



Pleasant Surprise !!- Villagers' intense involvement in PRAs

The PSIA explores the potential for convergence between two national programs – NREGA and IWMP – by looking at NREGA, its implementation in Karnataka, its effectiveness and shortcomings, and finally the benefits likely to accrue, as a result of the convergence, for both programs. The key elements of the PSIA included diversity mapping, beneficiary assessment, stakeholder analysis, institutional analysis, social impact analysis, participatory poverty assessment, risk assessment, and scenario analysis. The conceptual framework to study poverty and social impacts was based on the understanding that NREGA is likely to have three broad kinds of impacts:

- **Short-term or immediate impacts**, related to employment and wage earnings in a particular year that are direct, easily visible, and quantifiable;
- **Long-term economic impacts**, occurring as a result of asset creation, estimation of which is a difficult task as the assets promise a potential for income earnings but realization of the same is likely to be governed by a variety of factors, internal and external;
- **Human and institutional development impacts**, emanating from capacity-support and capacity-building received by local self-governments and communities as a result of the program and related aspects such as participation, transparency, accountability, procurement and financial management skills, and good governance.

STUDY AREA

There are three major interventions in Karnataka in recent times – World Bank-assisted *Sujala I*; National Bank for Agriculture and Rural Development (NABARD) – assisted *Sujala II*; and *Sujala III* which is currently under implementation.⁴ It aims to cover an area of about 400,000 hectares in 100 sub-watersheds⁵ spread across seven districts: Bidar, Gulbarga, Yadgir, Gadag, Koppal, Davanagere and Chamarajanagar. A comprehensive social assessment from a watershed perspective was conducted in representative sub-watersheds in these seven districts. Based on the results, seven GPs were selected for the PSIA study: Batagera (Bidar district); Srinivasa Saradagi (Gulbarga); Madhawar (Yadgir); Hatti (Koppal); Nidagundi (Gadag); Harve (Chamarajanagar); and Basavanakote (Davanagere) (Box 4). Accurate representativeness was achieved through criteria that ensured inclusion of (a) both poorly-performing and better-performing GPs with regard to NREGA; (b) remote and well-connected GPs; (c) GPs with both low and high rates of migration; (d) demographically small and large GPs; and (e) locations with varying levels of groundwater and surface water availability. Apart from deploying

4 *Sujala III* was approved by the World Bank Board on September 26, 2012.

5 For the purposes of operational and administrative convenience, a watershed is normally divided into smaller areas, each having its own drainage point. These are known as sub-watersheds (about 1,000 hectares) and micro-watersheds (about 100 hectares).

the normal instruments and processes,⁶ the study also included comprehensive interactions with the NREGA implementation agencies at district and *taluka* levels and semi-structured interviews with GP-level stakeholders such as NREGA job-cardholders, elected representatives, GP secretaries, and *panchayat* development officers. Secondary data was collected from various government departments (WDD and Rural Development and *Panchayat Raj* Department) and *panchayat raj* institutions such as *zila panchayats*, *taluka panchayats* and GPs, and from watershed management-related Non-Governmental Organizations (NGOs) and community-based organizations.

SAMPLING DESIGN, DATABASE AND METHODOLOGY

This study adhered to the scientific methods and protocols required of a holistic assessment and used both qualitative and quantitative research methods and tools. The study generated information from both primary and secondary sources. The former comprised household surveys and participatory rural appraisals. Secondary information was mostly based on desk research.

Household surveys were carried out employing the multistage stratified random sampling method. Four strata were used: (a) project districts;

BOX 4: PSIA PROJECT LOCATIONS

Sujala III project districts where PSIA was conducted



Gram Panchayat	Taluka	District
Batagera	Basavakalyan	Bidar
Srinivasa Saradagi	Gulbarga	Gulbarga
Madhawar	Yadgir	Yadgir
Hatti	Koppal	Koppal
Nidagundi	Rona	Gadag
Harve	Chamarajanagar	Chamarajanagar
Basavanakote	Jagalur	Davanagere

NREGA was implemented in all seven GPs by 2008. The major social groups inhabiting the sample area include the Lingayats, Marathas, and Kurubas. The number of poor and marginalized groups is particularly high in all these GPs, and the majority of households depend upon agriculture and allied activities for their livelihood. They are also heavily dependent on monsoon rains for irrigation as water assets or facilities either do not exist, if they do exist, suffer from poor functionality. All the sample GPs, except Srinivasa Saradagi and Harve, have extremely low connectivity, which implies a low level of integration with markets and urban centers. The villages are characterized by poor social and physical infrastructure, and the education levels of the inhabitants are low.

(b) project sub-watersheds; (c) sub-watershed GPs and villages; and (d) sample households. While the PSIA was focused on seven GPs, the social assessment study covered a sample of 32 GPs (107 villages) in



⁶ Transect, timeline, and seasonal calendar; resource and social mapping; occupation and wealth ranking; livelihood analysis; focus group discussions; community presentations; and stakeholder consultations and key informant interviews.

14 sub-watersheds. The PSIA benefited from this overarching social assessment study which generated primary information from 5,350 households.

PARTICIPATORY RURAL APPRAISAL

As part of the PSIA, comprehensive participatory rural appraisals were conducted in the sample locations to generate group-led qualitative information. The focus of the appraisals was twofold: watershed development and NREGA. In all, 28 participatory rural appraisal exercises were conducted in 14 sub-watersheds. A sub-watershed may have several GPs, and a GP in turn may comprise several micro-watersheds. Thus the primary management unit for watersheds is the micro-watershed, whereas it is the whole of the GP for NREGA (and the PSIA). In consequence, there was some degree of overlap between the PSIA and the watershed participatory rural appraisals (Table 1).



TABLE 1: PARTICIPATORY RURAL APPRAISAL (PRA) LOCATIONS

District	Sub-watershed	Gram Panchayat (PRA: NREGA)	Micro-watershed village (PRA: watershed)
Chamarajanagar	Bandhalli	Bandhalli	Anagalli
	Harve	Kumachaahalli (Hosahalli)	Kethahalli
Gulbarga	Hudunaik Tanda	Srinivasa Saradagi	Darek Tanda
	Gorakapalli	Nidagundi	Bedagapalli
Bidar	Belambi	Batagera	Atturu
	Sundal	Sundal	Jakanal
Yadgir	Turk Madhawar	Madhawar	Toranathippa
	Adawadagi	Suguru	Hemmadagi
Koppal	Vittalapura	Thavaragera	Vittalapura
	Bettageri	Hatti	Haidar Nagar
Gadag	Hosahalli	Nidagundi	Kalakapur
	Surangi	Dodduru	Ullatti
Davangere	Agasanahalli	Basavanakote	Agasanahalli
	Gullahalli	Garaga	Rangapura Tanda



Women with NREGA Job Cards

NREGA AT THE NATIONAL LEVEL

Reports in the last three years indicate that NREGA has benefited 52 million households across the country, generating 2,200 million person-days of employment. It was rolled out in three phases: it was implemented in 200 districts in 2006, in 130 in 2007, and in 285 in 2008. Over the years, activity under NREGA has picked up pace. While the initial phase of its implementation was characterized by low awareness about entitlements, resulting in low demand, it has become more functional as the numbers of job-cardholders, households, and individuals benefiting from the scheme have increased.

Interestingly, women account for 50 percent of the beneficiaries or participants in this program. One of the most important results is that NREGA's implementation has raised the wage rate bar from the market standard of Rs. 65 per day to Rs. 125 per day for unskilled labor, especially benefiting women and people belonging to scheduled castes and scheduled tribes. The scheme has had a positive impact on NREGA workers' income, with the average household earnings increasing from Rs. 2,795 in 2006/07 to Rs. 4,060 in 2008/09. The other major contribution has been its impact on the financial status of women and disadvantaged communities, such as the scheduled castes and scheduled tribes.

However, criticisms of NREGA's overall performance abound. On the administrative front, reports in the past have pointed out that the program is beset with problems – there are reports of fictitious job-cards, of wages not being paid in full and on time, and so on. At the financial level, economists have raised questions about the sustainability of the scheme, considering India's fiscal deficit is expected to reach 5.6 percent of its GDP, and the government of India has spent US\$ 9 billion on the program in 2011. Also, there are concerns that the location of the assets created under NREGA do not always follow science-based watershed planning, resulting in lower-than-expected impacts on soil and water conservation in catchments.

At the social level too, NREGA seems to have made little impact. It was found that any improvement in the financial status of communities did not have



NREGA has meant a lot to women

a direct relation with their social status: the poor continued to be seen as poor and the wealthier sections of society continued to exert control over the assets created. Also, the bureaucratic structure of NREGA's implementation departments has not enabled the poor wage laborers to acquire new skills; they are thus kept surreptitiously at the bottom rung of society.

NREGA IN KARNATAKA

The government of Karnataka notified the Karnataka Rural Employment Guarantee Scheme in February 2007. The following statistics⁷ provide an insight into its performance over the four years of its implementation:

- 5.21 million job-cards had been issued by the end of fiscal year 2010/11.
- In 2010/11, the Karnataka Rural Employment Guarantee Scheme utilized Rs. 25,103 million, providing employment to 2.24 million households, though only 1.32 million households (about 59 percent) completed 100 days of work.
- Women accounted for almost half (46 percent) of the person-days created.
- While the availability of funds has increased over the years, the percentage of utilization shows an uneven trend, with 2009/10 witnessing the highest level at 74 percent and 2008/09 showing the lowest utilization at 53 percent.
- As against a stipulated guarantee of 100 days of work, the average number of person-days has been much lower, ranging between 32 and 56.

NREGA PERFORMANCE ACROSS THE SAMPLE GPs

Across the seven GPs selected for the study, gaps were apparent between budget estimation and its allocation and utilization. The initial years saw inflated budget estimates being presented by GPs,

largely due to lack of experience, participation, and awareness; in recent years, the estimates have become more realistic. The estimates in the seven GPs for 2008/09 varied from a low of Rs. 200,000 to a high of Rs. 20 million, while, in 2011/12, they ranged from Rs. 5.6 million to Rs. 16.5 million per GP. The actual allocations, however, were generally lower than the estimates presented by the GPs. The utilization during 2010/11 aggregated to 26–56 percent. Each GP also has its specific constraints as far as planning and implementation of the program is concerned, ranging from unreliability of Internet connectivity for uploading fortnightly reports to low levels of coordination between departments, and other bureaucratic obstacles.

The promise of 100 days of employment has not been fulfilled for the larger part of the sample across four years. Households in only about 28 percent of the sample have managed to avail themselves of 100 days of employment; no household has secured 100 days in the remaining sample. The number of days of employment ranged between 15 and 90, with an average of 50, across the seven GPs. In this respect, Hatti, Madhwar, and Nidagundi have performed better than the others.

Wages received also often have not conformed to the provision made under NREGA. Local wage employment is available for about five months and migration to urban centers is a common phenomenon, although it is seasonal (summer is the peak season). It must be noted that market wages in the study sample are



Women out-numbered men in PRAs

7 Source: NREGA Directorate, government of Karnataka.

higher for men than those provided for under NREGA. However, such higher wage rates are normally not available within the village and accessing them may involve travel of 8–15 kilometers one way. While NREGA puts the ceiling at Rs. 125 per day, men can receive wages in the market up to Rs. 200 per day. So, NREGA wages may not be an attractive proposition for men in all areas. On the other hand, though women receive lower wages (Rs. 80 per day) than men, the fact that hired work is available within the village itself, and the wages received are higher than those normally offered locally, proves highly advantageous for women.

In general, there have been six to ten types of works undertaken through NREGA funds allocated to the GPs, including tank rehabilitation, creation of check-dams and gully-plugs, development of private land and plantations, recharging of pits, and construction of open wells, and roads. Clearly, most GPs have focused on watershed development and connectivity enhancement, implying a desire to develop better livelihood generation capabilities. The quality of the works undertaken on private lands has been largely good, but the same is not true for public works. While officials at the district and state levels mostly feel that the quality of both public and private assets has been good, women and members of scheduled castes and scheduled tribes are dissatisfied with the quality of public works.

ISSUES OF SIGNIFICANCE

The study brings to the fore the following issues requiring attention:

- ⚡ There is a lack of appreciation of a demand-driven, rights-based approach, both among communities and officials.
- ⚡ This, in turn, has led to inadequate community participation and consultation. Poorly attended *gram sabhas* result in an incomplete or inappropriate list of activities to be undertaken, which subsequently are firmed up by members of the GP. This has also resulted in GP ward members assuming prominence rather than *gram sabhas* or communities. The participation of women, scheduled castes and scheduled tribes in *gram sabha* meetings is low.

- ⚡ Over-reporting of job-cards was a feature in the initial years, and the same issue is now being revisited. While multiple cards being possessed by a single household is observed in some cases, the exclusion of several households is also quite common. It is not uncommon to see job-cards in possession of ward members and not households.
- ⚡ Some 20–30 percent of the job-card holders have not had a single day's employment under the scheme.
- ⚡ For many villages, employment generated by NREGA is the only source of livelihood, particularly during the non-farming seasons.
- ⚡ Delays in raising and approving bills and consequent delays in wage payments have also been quite common.
- ⚡ Poor capacity of GPs, and poorer capacity-support from official agencies, are common features.
- ⚡ Over-reporting of job-cards, inflated budgets, exclusion of some households, lack of adequate participation, and poor capacity all have a significant effect on the estimation of labor demand.
- ⚡ The norm that women should account for at least a third of the person-days worked is met throughout the state. However, there are some differentials in the wage rate. The wages earned through the National Rural Employment Guarantee Scheme were generally much lower than those available in agriculture or other wage labor. This has been particularly true for male workers in all regions.
- ⚡ Earnings of the poorer households are significantly lower than the earnings of those who are less poor.
- ⚡ Inadequate personnel – especially technical staff – has resulted in poor planning, deficient quality control, and delays in execution of works.
- ⚡ All of the above have also resulted in poor quality of works carried out, irregular updating of Management Information Systems (MIS), and missing entries in job-cards.

Based on primary and secondary information, it could be concluded that the pace of implementation of NREGA in Karnataka is more or less at par with

that across the country. Issues that require general attention in order to enhance the effectiveness of the program are also more or less the same.

Poverty and Social Impacts

POVERTY IMPACTS

The wealth ranking exercise undertaken by the local communities identified 11 attributes that could be used to determine the economic status of the households. The ranking indicates that, in the sample GPs, 35–50 percent of households fall into

the category of “poor” (Table 2). Households with an annual income of Rs. 15,000–20,000 per annum or less are considered as “poor.” Interestingly, regardless of their actual status, all households choosing to work (or actually working in the field) under NREGA are necessarily recognized as “poor,” even by local communities. Some attributes listed in

TABLE 2: ATTRIBUTES OF POVERTY

Rich or well-off	Middle or intermediate	Poor or very poor
5–10%	40%	35–50%
Relatively large landholdings Owns bore well(s) Milk animals – usually 2 or more Owns vehicles such as tractor and motorcycle Owns bullocks and other draft animals Good or spacious <i>pucca</i> house with facilities such as toilet, furniture Owns household durables such as color TV or fridge and valuables such as ornaments Relatively higher educational levels Household member(s) working in government or private sector Most upper castes belong to this category Relatively high level of livelihood diversification	Owns 4–6 acres (1.6–2.4 hectares) of land Medium-sized and semi- <i>pucca</i> house with fewer facilities Low levels of household assets and durables – usually black and white TVs Low levels of education Owns 1 or 2 milk animals Intermediate castes such as artisanal communities – barber, carpenter, washer folk, potter, etc. There are some skilled people among them Wage labor is not a major source of income Low level of migration for manual work Better access to government schemes Higher level of inclusion and participation in self-help groups Low level of livelihood diversification	Landless or with small holdings – either dry land or without assured irrigation Small and <i>kutchra</i> house without facilities A few small ruminants Without bore wells Illiterate or very low educational levels Wage labor is a major source of income Highest levels of migration Without milk animals Without household durables or valuables Without working member(s) in the formal sector Concentration of scheduled castes and scheduled tribes No or low skill levels Low level of access to government schemes Low level of inclusion and participation in self-help groups Absence of livelihood diversification

Table 2 including employment in the informal sector and the absence of livelihood diversification, probably contribute additionally to poverty. The lack of capacity-building initiatives has meant an inadequate skill base, which probably renders occupational mobility rather difficult. Lastly, it is instructive to note that the poor find it difficult to participate in group activities such as self-help groups.

SHORT-TERM IMPACTS

The one-time or short-term impact of NREGA has been assessed for both economic and social subgroups.⁸ Economic groups are categorized on the basis of the size of the holding – landless (zero); marginal farmers (0–1 hectare); small farmers (1–2 hectares); and others (more than 2 hectares). Social groups are scheduled castes and scheduled tribes, and women. Among the persons available for participation in NREGA in different economic groups, marginal farmers account for the majority of households in any GP (Table 2), followed by small farmers and landless households. In relative terms, landless persons have worked the most (25–70 percent), whereas marginal and small farmers account for 15–40 percent. No person from the “other” category has worked. The number of days of work too follows a similar pattern, with the landless working the most.

Income from NREGA per household per annum works out to about Rs. 2,000–7,000, which amounts to 5–15 percent of the total income (Table 3). In real

terms, except for Hatti, where NREGA has yielded Rs. 6,000 per annum, income is modest (between Rs. 2,000 and 4,000 per annum) in the remaining GPs. Except for the “other” category, there are migrant laborers in all categories, accounting for 5–15 percent of total NREGA participation. All study GPs have workers, a higher proportion in the poorer and marginalized segments, who are yet to be paid wages.

Study findings therefore indicate that NREGA does provide some income locally. It is also true that the situation has improved considerably over the years. However, given the current levels of performance, the larger question that emerges is whether NREGA can meet the employment demand fully.

ESTIMATION OF LABOUR DEMAND

Participatory rural appraisal techniques were also deployed to estimate the demand for work sought to be created under NREGA. Calculations for one GP, Tawaregeri (Koppal district), were made for illustrative purposes and are presented in Table 4. There are 2,350 households in the GP, of which 64 percent are landed and the remaining landless. Both categories have members migrating out of the village to eke out wage labor. Taking all the current available occupations into account, the total number of person-days available for NREGA works out to about 262,000, one third of which is from the landed and two thirds from landless households. The number

TABLE 3: SHORT-TERM IMPACTS OF NREGA

	Landless	Marginal farmers	Small farmers	Others
Persons available for NREGA work (range of GPs)	112–560	370–1686	192–754	0–52
Persons from the above category who worked under NREGA (%)	25–70	20–38	15–40	0
Average number of days of NREGA work	20–60	20–40	20–40	0
Income per annum from NREGA (Rs.)	2000–6000	3500–7000	3000–5000	0
NREGA income relative to household income (%)	6–15	7–15	5–13	0
Migrants available for NREGA work (%)	5–15	5–10	3–8	
Number of migrants willing to do NREGA work	80–150	100–350	80–160	0
Number of migrants who worked under NREGA	20–30	30–50	20–30	0
Number of migrants who gave up or postponed migration due to NREGA*	0–10	0–20	0	0

* Some migrant workers postponed their migration in Hatti and Madhwar GPs.

8 The two groups are not mutually exclusive.

SEASONAL LABOUR CALENDAR

	Jan	Feb	Mar	Apl	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
Rainfall					█	█		█	█	█	█	
Water Availability				oooo	ooooo	oooo	ooo	ooooo	0oooo	oooo	oo	oo
Fodder for livestock			
Sowing					Sesam	Jower Termeric	Termeric Jower	Ragi	Uruli			
Harvesting	***** *****	**** ****	****			*****						
Festivals	Sankranthi	Shiva Rathri	Ugadi				Ashada	Shravana	Vinayaka	Dasara	Deepavali	
AH Disease	F&M	F&M		Other						F&M		
Income	●●●	●●●	●●	●●●							●	●
Expenditure	Festivals	Festivals	Marriage Agri	Marriage Agri	Marriage				Festivals	Festivals		Festivals
	➔	➔	➔	➔	➔				➔	➔		➔
NREGA	↕	↕										↕ KERALA
Migration												
Work Availability	↕	↕										↕



Farm Ponds constructed under NREGA

of days of employment a household can secure is about 30 days per annum. On average, NREGA can meet 40 percent of the demand emanating from the non-migrant households. For the landless, it is about 20 percent. Likewise, estimations have been made for the seven sample GPs as well.

Therefore, on average, NREGA can meet the demand fully in about 40 percent of the non-migrant households demanding wage labor. The scenario, however, changes significantly if the demands of both migrant and non-migrant laborers are to be met locally. The financial implication of such an eventuality is large as current levels of budget allocation stand (maximum) at only about Rs. 20 million per annum. The actual amount required works out to Rs. 33 million (65 percent upwards). There are also concerns about the capacity and ability of the GPs to manage a larger program.

LONG-TERM POVERTY IMPACTS

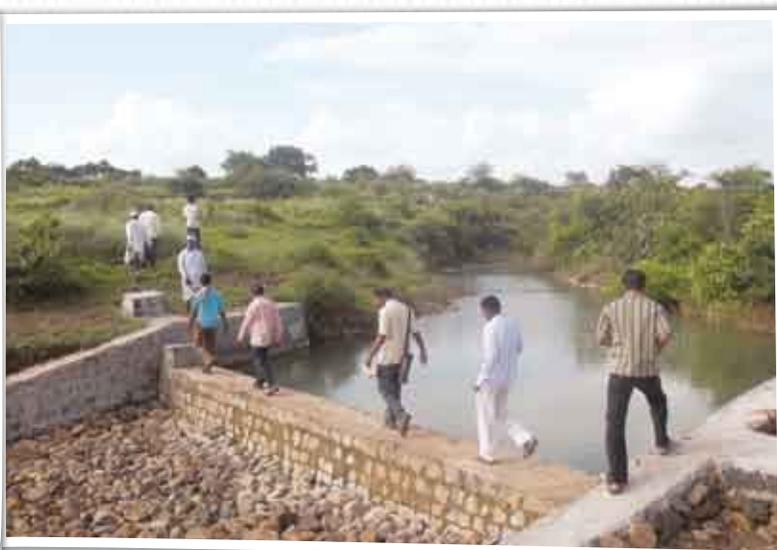
Long-term economic benefits are expected to accrue primarily due to land development activities and creation of assets. The study covers only those activities that contribute directly to enhancement of agricultural production, employment, and income, that is, direct economic benefits. However, both landed and landless households could be party to long-term benefits. Further, these activities could be either exclusively for an individual (private works) or for a common purpose (public works).

Private works. Types of works executed include land leveling, bunding, development of plantations, recharging of pits, fodder development, horticulture, sericulture, construction of farm ponds, check-dams and open wells, and laying irrigation pipelines. Investment made per work item or asset (except

TABLE 4: DEMAND ESTIMATION: AN ILLUSTRATION

Name of GP: Tawaregeri. Taluka/District: Koppal Sub-watershed: Vittalapura. Total number of households in the GP: 2,350			
Landed (farmers) households	1,500	Landless households	850
Total number of persons available for NREGA work	1,190	Total number of persons available for NREGA work	2,230
Total person-days required	89,250	Total person-days required	172,500
Budget (total person-days, Rs.)*	11,156,250	Budget (total person-days, Rs.)	21,562,500
Persons: 3,420	Person-days: 261,750	Budget estimation (Rs.): 32,718,750	

* Official minimum wage rate of Rs. 125 is used to make financial estimates, although NREGA workers do not get the official rate and the actual estimates by GPs are not always based on this rate.



Nala Bunds for soil and water conservation

on farm ponds and bunds), on average, is between Rs. 20,000 and Rs. 55,000. Farm ponds and bunds cost Rs. 3,000 and Rs. 8,000, respectively. Most of the works have been undertaken on the lands of marginal and small farmers. These activities are expected to increase farm production by 10–30 percent. In financial terms, this translates to Rs. 4,000–15,000 per annum per family.

Public works. Long-term impacts of the assets created on public lands are expected to enhance agricultural production by 10–30 percent. In financial terms, this works out to about Rs. 2,000–10,000. It

is instructive to note that public works do benefit all landed households, including “other farmers.” In fact, this last category derives a higher degree of returns from assets created under NREGA.

BENEFITS AND COSTS

On the whole, benefits are calculated in terms of the number of households securing employment from NREGA and the associated (cumulative) incremental incomes. The total number of households benefiting as a result of private works aggregate to 984, or 3.5 percent of the total landed households (Table 5). Incremental incomes work out to Rs. 6.9 million per annum. Similarly, landed households benefiting from public works aggregate to 4,266, or 45 percent of the total,, with benefits of Rs. 30 million. This apart, Rs. 0.87 million accrue to landless households (35 percent of the total) as a result of supplementary wage labor generated. Thus cumulative benefits work out to Rs. 38 million per annum.

Against these figures, expenditure incurred stands at Rs. 113 million. This would mean a payback period of about five to six years, which augurs well from a financial analysis perspective. But these estimations are based on the production potential created as a result of NREGA’s intervention. Translation of potential into reality, that is, sustainability of investments, depends on two critical factors: quality of the structures and post-construction operation and

TABLE 5: LONG-TERM BENEFITS

		GP 1	GP 2	GP 3	GP 4	GP 5	GP 6	GP 7	Total
No. of households	Total	2547	1892	2073	2308	1792	1389	1503	13494
	Landed	2328	1749	1966	2117	1591	1284	1235	12270
	Landless	219	133	107	191	201	105	268	1224
Private works beneficiaries	Direct (landed)	106 (5%)	127 (7%)	398 (20%)	123 (6%)	84 (5%)	41 (3%)	105 (9%)	984 (3.5%)
	Benefits (Rs./annum)	6.9 million							
Public works beneficiaries	Direct (landed)	1065 (46%)	603 (35%)	766 (39%)	453 (21%)	491 (31%)	638 (50%)	250 (20%)	4266 (45%)
	Benefits (Rs./annum)	30 million							
	Indirect (labor)	65 (29%)	85 (63%)	76 (71%)	60 (32%)	48 (24%)	70 (66%)	30 (12%)	434 (35%)
	Benefits (Rs./annum)	0.87 million							
Benefits	Total (Rs./annum)	38 million							
Investments	Total expenditure*	113 million							

* During the past four years.

maintenance. On the first parameter, it has been noted that quality is moderate, as it is satisfactory only in three or 40 percent of the GPs. Additionally, going by past experience, the GPs' operation and maintenance performance is usually below expectations.

SOCIAL IMPACTS

Stakeholder Analysis

Detailed consultations were carried out with various stakeholders at village or micro-watershed, GP, taluka, district, and state levels.⁹ An enquiry into who benefited the most is quite interesting (Table 6), reflecting not only the perceptions but also the expectations of different subgroups. It should be noted that the perceptions of participating or benefiting households and members and officials differ substantially. While the former feel that most of the gains are garnered by the managers of the program, the latter perceive that benefits have accrued (or should accrue) to the village community.

Participation in Implementation of NREGA

The institutional platform for enabling participation is the *gram sabha*. Its endorsements are required for all matters, including (a) development works; (b) budget



Irrigation Channels constructed under NREGA

estimates; (c) identification of the target groups of beneficiaries; (d) annual statement of accounts; and (e) utilization certificate for the development works.

Participation in gram sabhas has been uniformly very low. In general, the number of participants for identifying works ranges between 0 and 45, as against a total resident population of 1,500 to 2,650, and probably 500–800 qualifying members.

TABLE 6: WHO BENEFITED MOST FROM NREGA ASSETS?

Stakeholder	Who benefited most from public works?	Who benefited most from private works?
GP representatives	1. Farmers 2. The landless	1. Farmers 2. The landless
GP secretary/PDO	1. Job-cardholders	1. Job-cardholders
Landless	1. Contractors/GP members	1. Contractors/GP members
Landed (farmers)	1. Intermediaries 2. GP officials/representatives 3. Farmers	1. Intermediaries 2. GP officials/representatives 3. Farmers
Scheduled castes and scheduled tribes	1. Contractors 2. Large farmers 3. Officials	1. Contractors 2. Large farmers 3. Officials
Women/self-help groups	1. Farmers with relatively large holdings 2. Contractors 3. Officials 4. GP representatives	1. Farmers with relatively large holdings 2. Contractors 3. Officials 4. GP representatives
Taluka officials	1. Job-cardholders	1. Job-cardholders
Zila panchayat officials/CEO	1. Job-cardholders 2. Poor farmers	1. Job-cardholders 2. Poor farmers

⁹ Stakeholder analysis is done in the context of both NREGA and IWMP, as the study aims at a convergence between the two.

TABLE 7: DEGREES OF INCLUSIVENESS

	Landless	Marginal farmers	Small farmers	Scheduled castes/tribes	Women*
Persons available for NREGA work (range across GPs)	112–560	370–1686	192–754	328–1170	260–432
% of persons from above category who worked under NREGA	25–60%	20–38%	15–40%	20–50%	15–30%
Average number of days of NREGA work/annum	20–60	20–40	20–40	15–50	25–30
Wage rate received per day, actual in Rs.	60–125	60–125	60–125	60–125	60–125

* Economic and social groups are not mutually exclusive.

Participation in the execution of works seems to be confined only to the “other farmers” category. The landless, marginal farmers, scheduled castes and scheduled tribes, and women figure very low on this scale. The question, therefore, is less to do with why the participation is low, and more to do with ways of enhancing it.

Cardholder participation, in general, has been very low in the implementation of NREGA across the GPs. The pattern shows low representation on behalf of women at the gram sabhas. Other disadvantaged groups, that is, the landless and scheduled castes and tribes, also have very low participation levels, whereas the local elite, represented by the “others” category, has been best represented at the gram sabhas. This lack of participation by the poor and vulnerable households resulted in unsatisfactory identification of NREGA works by the *gram sabha*.

NREGA’s impact on social subgroups was assessed in terms of the extent to which women, scheduled castes and scheduled tribes could participate in the program (Table 7). The wage rate received depends upon a number of factors, chiefly on the level of awareness and participation in the community, GP leadership, managerial acumen of the GP secretary and extent of compliance with the agreed processes of payment. It is usually low when the payments are made by the GP in the village itself, rather than the worker collecting them from the bank or post office.¹⁰ In any case, generally, women do not go to either

place to collect their payments. Despite all these factors, wages received seem quite reasonable and the range remains more or less the same for all categories of subgroups (Table 7). On a positive note, NREGA seems to have succeeded in providing a fresh window of local employment opportunity.

Migration

The workforce in all sample GPs is mobile, with the proportion of households with migrant members ranging from 10 to 30 percent. Just around a tenth of migrants can be classified as permanent. The mobile workforce is predominantly unskilled or semiskilled. It is mostly men who migrate, largely representing the landless, marginal and small farmer households. Daily wage rates received by migrant workers for farm work is anywhere between Rs. 15 and Rs. 250, whereas non-farm workers get paid Rs. 200–350. Some skilled workers command wage rates of up to Rs. 500. Commuting – in contrast to migration – is also found in five of the seven study GPs. Unlike migrants, commuters are mostly women who go to neighboring villages for farm work during peak agricultural seasons. Women get Rs. 80–150 a day for farm work, while men are paid Rs. 100–200 for non-agricultural work.

The implementation of NREGA seems to have had little impact on reducing migration. Barring the “other” category, all groups have migrants in the range of 3–30 percent. The overlapping groups of landless and scheduled castes and scheduled tribes have a larger share of migrant workers, some of whom (20–50 percent) have worked under NREGA. The number of migrants who gave up or postponed migration due to NREGA is quite negligible.

¹⁰ As a rule, it is expected that payments should be made into the job-card holder’s account in a bank. But, given that wage workers are poor and illiterate, and that the banks in some cases may be far, the GP representatives make the payments themselves within the village.

Social Audit

Social audit is an integral part of NREGA, embedded in its implementation process. According to NREGA guidelines, the social audit must be conducted once in six months and can be held at any stage of program implementation. Of the seven sample GPs, social audits have not been conducted

so far in Srinivasa Saradagi and Nidagundi. They have been conducted once in Basavanakote and Harve, and twice in Batagera, Madhavar, and Hatti. In general, social audits are conducted at GP meetings with little participation from ordinary job-cardholders. The average attendance has been around 30–40 (5–6 percent of the total job-cardholders).

HAS NREGA CREATED MORE EMPLOYMENT?

In Karnataka, the implementation performance of NREGA has improved over the years. Yet, labor demand (emanating from non-migrant households) has been met in only three out of seven or 40 percent of the GPs. Additionally, the workforce that migrates out of their habitation areas has not been considered as part of this exercise – the financial implications of their inclusion are quite heavy, and perhaps unattainable, given the current methods of performance that NREGA is witnessing. Nonetheless, substantial scope exists for further improvements in both “widening” (number of households) and “deepening” (number of days of employment by a household) the reach of the program. Unless efforts are made to deepen and widen, and should current levels of performance continue, it will not be possible to meet the demand fully. While NREGA has, without doubt, increased the capacity of rural households to earn a supplementary income, there are several shortcomings hindering realization of its full potential. Key factors that could contribute to the success of the program relate to (a) political leadership at the GP level; (b) community participation and community-based organizations; (c) external technical help from different government agencies; (d) district leadership, that is, the chief executive officer (CEO); and (e) GP secretary. In fact, several of these factors influence each other.

ISSUES REQUIRING ATTENTION

Even as the benefits of NREGA percolate down to the grassroots, albeit slowly, there are implementation- and accountability-related issues that hinder effective implementation:

- // **Budgets and expenditure.** In the majority of cases, budgets are inflated and funds under utilized, resulting from a general lack of awareness, low community participation, under-preparedness of the supporting agencies and inadequate capacity – especially at the GP level – to implement NREGA in accordance with guidelines and other basic processes and requirements.
- // **Local participation.** The landless, marginal farmers, scheduled castes and tribes, and women figure very low in terms of representation at gram sabhas. Equally similar and dismal is the status of participation in social audits. The situation is exacerbated by the lack of resources and efforts under NREGA for providing capacity support to GPs and individuals.
- // **Job-card issuance.** In all the GPs, there are some households waiting for job-cards. Each household has some proportion of job-cardholders who have not worked even a single day. The possession of more than one job-card per household is not uncommon. The time taken for payment of

wages is quite considerable. All study GPs have workers who are yet to be paid wages; the proportion of such workers is slightly higher among the poorer and marginalized segments.

- /// **Employment days.** Only two out of seven or about 30 percent of the GPs have households that have secured 100 days of employment; no household has secured 100 days in the remaining five GPs. In the former, the number of households availing themselves

of 100 days of work is 1–4 percent of the total number of job-card households. Wages received are not necessarily at par with the statutory minimum.

- /// **Migration.** Barring the “other” category, all groups have migrants, ranging between 3 and 30 percent. The overlapping groups of the landless and scheduled castes and tribes have a larger share of migrant workers, some of whom (20–50 percent) have worked under NREGA.

Convergence between NREGA and IWMP

CASE FOR CONVERGENCE

Watershed development activities constitute a major portion of NREGA (Table 8). Thus, the contents of both NREGA and IWMP are aligned more or less to the same objectives, providing an opportunity for convergence. Transformation of this opportunity into reality demands, as a first step, a comparison of the impacts likely to occur due to each program. The analysis, presented in Table 8, draws on the results of the PSIA of NREGA and the findings of an independent post-project impact assessment of the World Bank-assisted *Sujala* project. The results are explicit in indicating that the *Sujala* approach can offer three distinct advantages:

- /// **Asset creation.** *Sujala* has a larger canvas of investment activities (table 8), reflecting a higher level of technical expertise.
- /// **Accrual of benefits.** *Sujala* benefits a higher number of households and, in particular, the landless, marginal farmers, and scheduled castes and tribes (Table 9).
- /// **Income benefits.** *Sujala*'s intervention generates more wage days and higher production and incomes.

In addition, *Sujala* I has a well-defined institutional arrangement for program delivery that provides ample participation opportunities for local communities. Communities are expected to share or contribute to capital costs, which induces a sense of ownership. *Sujala* also has some income-generating activities

aimed at enhancing the livelihoods of the poor and vulnerable households. All these are complemented with a range of capacity-building, technology transfer, and community outreach activities. The two schemes have a great deal of common ground, and convergence will realize the synergies and complementarities between them.

COMPARATIVE ANALYSIS FROM A CONVERGENCE PERSPECTIVE

Similarity of Development Objectives

The main goal of IWMP is to improve and ensure sustainable livelihoods by enhancing productivity and incomes. It seeks to do this by restoring the local ecological balance through harvesting rainwater in situ, conserving soil, and developing vegetation in degraded ecological habitats using a watershed development approach. The objectives are to reduce and prevent soil erosion, regenerate natural vegetation, increase rainwater impounding, and recharge the groundwater table. This improves the quality of life of local communities, as it enables multi-cropping and the introduction of diverse agro-based activities, increased availability of natural resources for livelihood intensification and diversification, and improvement in livestock holdings, all of which contribute to providing sustainable livelihood opportunities.

NREGA has the twin objectives of employment and rural development. The process outcomes also include strengthening the grassroots processes of democracy and infusing transparency and accountability in governance.

TABLE 8: TYPES OF WORKS GENERATED UNDER NREGA AND SUJALA I

Indicator	NREGA	Sujala I (KWDP I)*
Major types of works executed	Tank rehabilitation works such as desiltation Nala bund/revetment Bunding Farm ponds Recharge pits (open/bore well) Check dams Boulder checks Percolation tanks/structures Land leveling Horticulture Open wells Irrigation pipeline	Desiltation of tanks Nala bund/revetment Bunding Farm ponds Recharge pits (open/bore well) Land leveling Horticulture Check dams Boulder checks Percolation tanks/structures Sunken ponds Rock-filled dams Ravine reclamation Rainwater harvesting Diversion channel Vegetative checks Pasture development

* KWDP = Karnataka Watershed Development Project (alternative name for *Sujala* project).

TABLE 9: LONG-TERM IMPACTS OF SUJALA I AND NREGA

Indicator	NREGA	Sujala I
Proportion of beneficiary households (by land category)	Landless: 15–20% Marginal farmers: 25–30% Small farmers: 30–35% Others: 30–40% Scheduled castes and scheduled tribes: 22%	Landless: 40% Marginal farmers: 60% Small farmers: 50% Others: 30% Scheduled castes and scheduled tribes: 50%
Increase in cultivated area	15–35%	3–42%
Cropping intensity (% of additional area cultivated)	Around 10% overall mean	22% overall mean
Crop diversification toward high-value crops	Moderate	High
Increase in farm production resulting from assets	6–30%	28–42%
Per hectare incremental increase in employment	Low, around 15 person-days	High, 45 person-days
Incremental income per annum: landed category	15–25% range for all farmers (landed category)	65% average for all farmers (landed category)
Impact on income of the poor/landless	Rose by 20–25%	Rose by 40–45%
Increase in milk yields	Low: NREGA does not support	High: minimum of 20% gain in milk yields

Scale has three points: (1) poor or low; (2) moderate; (3) high.

It is well recognized that leveraging the huge funds available under NREGA requires inter-sectoral convergence. As NREGA is decentralized and its funds are untied, developmental works can be planned to suit local needs. Thus, the effective convergence of two similar programs such as IWMP and NREGA, which share the same overall goal and objectives, will not

only help realize them more easily but also generate significant value and benefits, including optimal use of public investments; enhanced economic opportunities; strengthened democratic processes; mitigation of climate change effects; and sustainable improvements in livelihoods. Convergence will also be supported by the fact that, though the approaches

used by the two programs may differ, the works and activities implemented by each have commonalities.

Approach and Activities

NREGA is an entitlements-based, demand-driven program, restricted to being undertaken within GP boundaries. IWMP adopts a sub-watershed approach consisting of geo-hydrological units (clusters of micro-watersheds generally of about 500 hectares each), normally averaging 5,000 hectares, cutting across several GP jurisdictions. There may be more than one micro-watershed within the revenue boundaries of a GP. Generally, only areas within the watershed boundaries are treated in IWMP. In hilly or difficult terrain areas, smaller-sized sub-watershed projects (1,000 hectares and above) are also sanctioned. Thus, IWMP's interventions take into account the natural geophysical delineations cutting across administrative boundaries, thereby not only rendering the planning holistic, but also contributing to long-term sustainable management of natural resources.

IWMP funds all soil and water conservation measures – mechanical, hydraulic, and vegetative – on all lands within the watershed, irrespective of land ownership and socioeconomic restrictions, while NREGA funds works with the objective of creating durable assets and strengthening the livelihood resource base of the rural poor. It can thus be seen that NREGA covers all the natural resource-based interventions included in IWMP while providing farm-based productivity – enhancing infrastructure (such as wells, pump sets, and water delivery mechanisms) to defined social and economic groups. The latter is generally not undertaken by IWMP, nor is building of rural roads and community infrastructure such as meeting halls, office space for public agencies, and resource centers. On the other hand, IWMP provides funding for off-farm-based livelihoods through self-help groups, thus prioritizing women.

Provided there is community consensus on what is to be done, dovetailing the two programs could make substantial resources available for overall village development, and enable greater benefit realizations to villagers through enhanced production, wages, and incomes. Furthermore, given the common will and purpose, it could enable IWMP to accomplish saturation treatment of micro-watersheds, optimize the productive potential of created assets, and also

be able to treat those areas falling within the revenue limits of the GPs but outside the micro-watershed boundaries– thus allowing for inclusive and comprehensive development at the project level.¹¹

Augmentation of Human, Technical, Financial, and Organizational Resources

Effective convergence between IWMP and NREGA will provide supplementary and complementary resources to both programs.

Life cycle approach. IWMP is a well-structured, sequenced program with clearly defined phases (preparatory: one to two years; works: two to three years; and consolidation phase: one to two years) that correspond with the life cycle requirements of an integrated watershed-based developmental project. To this are matched the requisite resources and measures necessary to realize the overall goal of the project. Such a systemic approach, applied consistently over a period of seven years, has a reasonable chance of facilitating the acquisition and consolidation of, at least, basic social, technical, organizational, and institutional competencies at the individual, household, and community levels, essential for catalyzing and sustaining a broad-based developmental momentum for poverty reduction.

On the other hand, NREGA, which seeks to develop a portfolio of assets that can generate value streams and livelihood opportunities for poor rural households, only has an annual perspective. This is too short a period to develop the set of underlying resources and competencies necessary to achieve this objective. Dovetailing NREGA into the IWMP project cycle, with its accompanying provisioning (particularly in regard to capacity-building and institutional development), provides a sound framework to realize the long-term objectives of NREGA in a sustainable manner.

¹¹ States such as Madhya Pradesh and Andhra Pradesh have issued guidelines that actively seek convergence between various schemes. In the former, for instance, repairs of minor tanks, bunds and minor irrigation canals, flood control, and river management works are taken up. In the latter, a drought adaptation initiative involving 10 initiatives for up-scaling in 100 villages has been taken up; a common property resource management project in two districts with NGOs is being implemented; a community-managed sustainable agriculture initiative involving non-pesticide management, silt application, and vermicomposting components is under way; and a plantation program with the Rubber Board, Coffee Board, and Tribal Welfare Department is under implementation.

Personnel and competencies. Of the nine work items currently eligible for funding under NREGA, seven are related to nature-based assets on which communities, especially the poor, depend for their sustenance and livelihoods. The successful implementation of these activities requires reasonably competent and technically sound personnel, a resource that is in acute shortage under NREGA, more so, given the scale and magnitude of operation. This has resulted in a large number of works that are of poor quality, incomplete, or both, thus rendering much expenditure technically ineffective. Convergence with IWMP could resolve many of these problems.

IWMP, on the other hand, despite being inadequately staffed, has access to a large pool (in-house and external) of qualified and competent individuals and agencies experienced in providing technical support and social facilitation. Over the years, they have acquired the requisite know-how, established systems and processes, and secured the necessary infrastructure, equipment, and policy enablement needed to implement or facilitate technically sound and socially accepted measures.

Planning and proposal formulation at the project level. IWMP allows for the deployment of sophisticated social and technology-assisted planning tools (such as GIS, remote-sensing, net planning) to ensure that works undertaken yield the desired and optimal results over the long term. This requires comprehensive and detailed resource-mapping, planning, selection of interventions, and their sequencing and phasing, right down to the farm level. In NREGA, works are selected by popular consensus to address the current felt needs of the participants, and largely reflect a “wish list.”

Dovetailing NREGA funds into IWMP at the GP level would necessarily require application of the tools and planning processes deployed under IWMP as well as adopting a multiyear perspective to planning and implementation. This would result in assets of better quality and longer shelf-life than at present, leading to long-term benefits for a larger number of people.

Capacity-building. Karnataka’s Watershed Development Department (WDD) has, over the years, developed and tested comprehensive modules and pedagogies for training and capacity-building of persons and groups at all levels from the village or

watershed upwards across related natural resources and production areas. It also has access to facilities for mass communication. Capacity-building is a major objective of NREGA but the concerned agencies are not equipped to handle this core requirement. By way of reciprocal arrangement, WDD could also commit to train and qualify capable and willing people in the numbers required to support GPs implementing NREGA-funded works. This would greatly improve the performance of NREGA and strongly contribute to realizing its objectives. It would also advance a sub-objective of NREGA, which is to create the conditions for a “transformative empowerment process for democracy.”

While a comparative analysis of IWMP and NREGA makes a strong case for convergence, the two programs have specific potential benefits for each other that further strengthen the need for such a convergence.

WHAT NREGA CAN OFFER TO IWMP

Assurance of Long-Term Supplemental Funding

NREGA adopts a rights-based approach that is demand-driven, whereas IWMP exists by administrative fiat and is allocation-led. In the case of NREGA, the central government contributes 100 percent of unskilled labor costs, 75 percent of material costs, and administrative costs equivalent to 6 percent of overall costs. The state contributes 25 percent toward material costs. In the case of IWMP, the central share is 90 percent, whereas the state’s is 10 percent. Thus, if the state does not allocate its share of resources for IWMP on time, streamlined implementation can suffer, as has happened on occasion in the past, in some states (not Karnataka). In the case of NREGA, laborers are assured of continuous work as per the Act, or unemployment allowance in lieu thereof.

The quantum of central government funds allocation to states under IWMP is determined by specific criteria, which put a ceiling on the total funds available to the state and which extend downwards to district-level fund allocations. In NREGA, fund allocation is notionally determined by the number of valid job-cards in existence, multiplied by the maximum allowable days of employment per household (100 days per year) into the notified minimum wage rate.

With the scale, quality, and speed of implementation of watershed development interventions critically dependent on the amount and timely flow of funds, NREGA, besides providing essential funds, can also serve as a stabilizing and bridging resource, thus allowing works to continue when funds from IWMP are delayed or inadequate.

As the government has recently launched a campaign to weed out bogus cards, the amount of funds available to GPs on an annual basis may proportionately reduce. In addition, the priorities of elected GP members may not focus on watershed development and, even where they do, the sequencing and location of structures may be determined by considerations other than need and outcome efficiency. Such a situation can well repeat itself year on year, as planning is done on an annual basis.

This has a direct bearing on the pace of implementation and length of the project period. The Works Action Plan under NREGA has an annual cycle, which, in turn, affects the choice of works implemented. IWMP, on the other hand, has a seven-year perspective and can choose and sequence measures that, while meeting some immediate eligible needs of the people, are primarily focused on realizing the overall objectives of the project. Even within this period, a maximum period of three to four years is available for implementation of physical measures. The need to harmonize different temporal perspectives as well as manage expectations will be a challenge that will need to be addressed on a continuing basis throughout the project period.

Unit Cost Allocations and Cost Norms

IWMP prescribes a unit cost of Rs. 12,000 per hectare (Rs. 15,000 for hilly areas) for undertaking integrated watershed development activities, inclusive of management, mobilization, capacity building, livelihoods promotion, and production system development in accordance with prescribed proportionate allocations. Sixty-three percent of the unit cost is allocated for watershed and production enhancement interventions, which effectively works out to between a cost of Rs. 7,560 and Rs. 9,450 per hectare. Given the increase in the minimum wage rate and material costs, these amounts are roughly less than half those

required to undertake comprehensive and sound conservation- and production-enhancing measures. With likely increases in minimum wages in the near future (given the overall inflationary pressures in the economy) and the unlikelihood of these cost norms being correspondingly revised upwards in the short term, effectively, much less work (or work of inferior quality) will get done within these norms, thus undermining the overall goals of the program. While this is a problem for IWMP, it also provides an opportunity for leveraging funds from NREGA for soil and water conservation activities that can be carried out with manual labor.

Under NREGA, there is neither a cost norm for the area nor a unit cost for each activity. In fact, as minimum wage rates increase, the effective costs per activity undertaken also correspondingly increase. Thus, converging NREGA with IWMP will address the issue of under-financing of eligible activities and enable IWMP to undertake measures in the required quantity and quality, subject to the caveats mentioned above.

The wages paid under NREGA are substantially higher than those paid under IWMP because, while the same Minimum Wages Act is followed in both programs, the output norms per activity are lower under NREGA. Currently, soft soil work is paid at Rs. 94 per cubic meter, whereas under IWMP it is paid at Rs. 50 per cubic meter. While this works in favor of laborers, it also has the potential to cause problems for IWMP-funded works being undertaken in areas where NREGA funds are also deployed. One way out is to harmonize the former's output norms with those under NREGA. The fear of being able to undertake fewer works if nominal wages go up, given the existing ceiling, is largely obviated as NREGA, which is computed on the basis of activities and not per hectare costs, can also be drawn upon to augment resources.

NREGA has a 60:40 labor to material ratio, which limits its use in activities that have a high proportion of material inputs (including semiskilled or skilled labor). IWMP, on the other hand, has no such restrictions. Under such circumstances, in a watershed project, it is preferable that labor-intensive works be financed through NREGA and material-intensive works be included under IWMP, or a combination of the two in the case of specific activities having both labor and material inputs.

Sustainability, Contribution, and Post-project Maintenance

Under NREGA, no contribution is expected from the community as it is a rights-based program and, until recently, works on private lands could not be undertaken. In IWMP, works on all categories of lands can be taken up. As it is a development program, people are expected to contribute 10 percent of works carried out on private lands (5 percent in the case of scheduled castes and scheduled tribes) and varied amounts for farming system intensification activities on private lands (no contribution is expected from works undertaken on common lands). The proceeds collected (together with fines, fees, donations, and so on) go into building up the Watershed Development Fund. The fund, however, is often insufficient for the task and, in the majority of cases, is beset with problems of capture, leakage, and dormancy. Furthermore, it cannot be used to repair works taken up on private lands.

As NREGA offers assured funds on an annual continued basis for maintenance of common and certain classes of private assets, the need for the Watershed Development Fund is, to that extent, reduced. However, the developmental benefits of securing buy-in from beneficiaries, expressed through their contributions, still argues a case for mandating some amount of physical or monetary contribution. In any case, if contributions have to be secured, these can be obtained from IWMP-funded private landholders and not NREGA.

WHAT IWMP CAN OFFER TO NREGA

Inclusion, Equity, Transparency, and Accountability

NREGA has evolved a detailed and impressive suite of mechanisms and processes to foster transparency and accountability at all levels. However, these are less than effective in practice. There is no external agency deployed (NGOs, for instance) to mobilize and organize people on a sustained basis to hold functionaries accountable, as in the case of IWMP. The methods adopted by IWMP to raise awareness, increase participation and engagement, and enhance transparency and accountability, such as engaging NGOs, organizing a variety of needs-based training

programs for capacity building, exposure visits to successful projects, interaction among participating villages, and use of innovative media (folk media, wall paintings, OK cards), together with the additional complement of technical personnel from WDD, would go a long way in realizing the accountability objectives of NREGA.

Apart from the normal methods of evaluation and monitoring that are prescribed and variedly followed in NREGA, it might help to have the additional oversight of satellite-based remote-sensing for monitoring and planning, which WDD successfully used in *Sujala* and which can readily be deployed in projects that draw upon funds from both programs (“converged projects”). Remote-sensing would help verify targeting against planned locations for many soil and water conservation works, for both IWMP and NREGA.

Management Information System (MIS) and Reporting

Under NREGA, reporting is done on a regular basis (at least on a fortnightly basis) by uploading data on a web-enabled MIS platform directly from the GP level. Such a system is not followed under IWMP at present. While this is desirable and IWMP should move in this direction, nevertheless, due to connectivity, software, and hardware problems and power outages frequently experienced at the GP level, uploading data on time, without which payments are not released, can be a significant challenge. WDD will have to strengthen its communication infrastructure. Apart from enhancing transparency and making real-time data available, such facilities would open up a world of possibilities for the villagers in terms of access to market information, employment opportunities, crop advisories, and access to government schemes and its e-governance programs. Developing more community-based monitoring under IWMP would be a positive step, which could extend to soil and water conservation work financed through NREGA in project areas.

INSTITUTIONAL TRIGGERS FOR CONVERGENCE

Both programs have clearly defined and separate institutional structures and mechanisms stretching

from the village upwards to the *taluka*, district, and state levels, and thereon to the related department in the government of India ministry. A notable feature in both programs is the central role played by the GP at the project level and the fact that the administrative and technical sanction of the action plans or detailed project reports, as applicable, is done at a level no higher than that of the district. Despite seemingly different institutional mechanisms, there are common administrative and operational arrangements that facilitate convergence of the two programs.

At the project level, in both cases, the GP is the final project implementing agency. In the case of IWMP, an executive committee, chaired by the president of the GP, is set up as a subcommittee of the GP. Funds, in both cases, are routed through the GP. Common to both programs at the district level is the anchoring, sanctioning, and coordinating role played by the *zila panchayat* headed by a CEO. The consolidated overall and annual plans of both programs,¹² as well as of several other government programs, are accorded administrative approval by the CEO. This focusing of

administrative powers in the office of the CEO makes possible coordination, leveraging, and dovetailing of resources from various agencies and programs so that synergies and sustainable livelihood opportunities are created – a common goal of both programs.

As space exists for NGOs in both programs (and IWMP has used them to great effect), they can also be engaged to play an important intermediation, relationship-building, and facilitating role between different related agencies.

By effectively combining the two different institutional mechanisms deployed for project implementation, namely the GP in the case of NREGA and an empowered subcommittee of the GP (executive committee) in the case of IWMP, a wider space could be created, allowing for greater representation and leadership opportunities. It also creates a platform that affords both political (electoral and contest driven) and developmental (consensus-driven and accommodative) engagement, necessary for inclusive and sustainable growth.

12 The “shelf of projects” in the case of NREGA and the watershed plan or detailed project report in the case of IWMP.

Analyses of IWMP-NREGA Convergence

SCENARIO ANALYSIS

Based on the deliberations so far, a scenario depiction can be made between IWMP and NREGA by comparing “with convergence” and “without convergence” situations (Table 10).

TABLE 10: SCENARIO ANALYSIS: WITH AND WITHOUT CONVERGENCE

Criterion	IWMP+NREGA (with convergence)	IWMP (without convergence)
Objectives	Objectives will be achieved more effectively through synergy between converging departments and agencies. Leveraging funds from NREGA leads to wider coverage and higher impact, as NREGA is demand-driven. IWMP interventions incorporate entitlements of NREGA workers, leading to enhanced livelihood security for workers.	Similar to those of NREGA but within a watershed context. Watershed interventions make up around 60 percent of works executed under NREGA. IWMP interventions lack the legal guarantees of those of NREGA.
Funds	No dearth of funds as NREGA is demand-driven. Experience shows the implementing agencies are unable to utilize the available funding due to constraints.	Allocations are limited and divided between several components. Allocations are not adequate to meet all the needs of target groups and areas.
Employment	The mean person-days provided under NREGA are much higher than those under IWMP. Convergence will create more person-days and provide more work to NREGA workers, improving the chances of delivering on the 100-day promise.	The primary focus is not on employment generation and related guarantees and payment of statutory minimum wages. The mean person-days provided under IWMP are much lower than those provided under NREGA.
Implementation	NREGA is implemented through annual action plans and budgets. Approved works are executed within the financial year. Enmeshing a holistic life cycle with that of annual action plans will be challenging.	IWMP is implemented in phases and the project cycle spans 4–7 years. Execution of watershed treatment activities begins later in the cycle. Plans prepared are holistic and science-based.
Human and institutional development	NREGA has no institutional development activity, so convergence would help strengthen the local institutions and democratic processes.	Human and institutional development is an integral part of the project activities. Institutional platforms are well-defined.
Impact on poverty	Impact on poverty is more direct as NREGA tries to provide basic employment and livelihood security backed with legal guarantees.	Impact on poverty is largely indirect as IWMP executes a combination of household and community-level interventions.

SWOT ANALYSIS

A scenario depiction with a deeper understanding of the strengths, weaknesses, opportunities,

and threats that can emanate as a result of convergence will help in rolling out models of convergence and the way forward (Table 11).

TABLE 11: SWOT ANALYSIS OF CONVERGENCE BETWEEN IWMP AND NREGA

Strengths	Weaknesses
<p>Excellent track record of IWMP implementation in Karnataka, particularly <i>Sujala</i></p> <p>No funds constraints from NREGA</p> <p>WDD is already working with <i>panchayat raj</i> institutions and NREGA as an executing agency</p> <p>WDD will provide technical expertise</p> <p>WDD will be exposed to rights-based implementation</p> <p>Government of Karnataka has provided a conducive policy environment by issuing guidelines</p> <p>WDD will be expected to adopt transparent, participatory, and accountable processes</p> <p><i>Sujala</i> project design ensures effective and impact-oriented implementation</p> <p>Improved IWMP coverage on account of funds availability</p>	<p>Operational details of convergence are yet to be finalized</p> <p>WDD staff prefers autonomy from <i>panchayat raj</i> institutions</p> <p>WDD staff have reservations about the 100-day guarantee</p> <p>Inadequate field-level staff to implement convergence</p> <p>Inadequate infrastructure and equipment to operationalize convergence</p> <p>Capacity of WDD to implement convergence will need to be tested</p> <p>Convergence may not have the backing of WDD staff at all levels</p>
Opportunities	Threats
<p><i>Panchayat raj</i> institutions are positively disposed to convergence</p> <p>Government of India has provided the right policy environment by issuing convergence guidelines</p> <p>Unprecedented levels of funding available under NREGA</p> <p>NREGA has political support that cuts across party lines</p> <p>Convergence provides opportunities to WDD to adopt bottom-up approaches</p>	<p>IWMP will have to align and accommodate itself with the political and social dynamics of <i>panchayat raj</i> institutions</p> <p>Conflicts are likely between works identified by IWMP and GPs' priorities</p> <p>Decreased levels of cardholder participation in NREGA</p> <p>Wage payment delays to be resolved to regain cardholder confidence</p> <p>WDD will come under public scrutiny through social audits and ombuds person</p>

IWMP-NREGA Convergence: The Way Ahead

CONSIDERATIONS TO BE TAKEN INTO ACCOUNT

There are similarities between NREGA and IWMP in goals and objectives as well as, to an extent, institutional arrangements. The dissimilarities (with respect to approach, cost norms, nature of funding, planning and project formulation, implementation horizons, beneficiary contributions, transparency, and accountability), however, throw up challenges that must be addressed if synergistic convergence is to be achieved. The following considerations might help in ameliorating the differences, streamlining joint implementation, and setting the ground for the evolution of a workable model for large-scale adoption.

Need for piloting. Given the challenges inherent in any joint venture, while joint implementation may begin in all projects to various degrees, it is advisable that a limited number of watersheds or GPs be selected on a pilot basis for focused attention.

Selection criteria. Those GPs should be selected, according to predetermined criteria, that have the highest potential for success. These criteria should help the project co-ordinators to assess the quality of social relationships and institutional capital, both of which are predictive of the likely “success quotient” of a project. A matrix to assess villages for inclusion in a pilot program of intensive convergence could be developed in consultation with leaders in villages where good works have been done, either under NREGA or *Sujala*, involving experienced and effective

NGOs and proactive government functionaries with experience in handling both these programs.

Multi-dimensional mobilization and planning effort. Once villages are selected, an intensive mobilization effort on the lines of IWMP should be undertaken and competent NGOs engaged for this purpose. Comprehensive resource and social mapping using physical and technology-assisted means, situation and problem analysis using participatory rural appraisal methods, village envisioning, and stakeholder analysis may be employed for project formulation.

Effective and harmonious integration of GP and the executive committee. The GP and the executive committee play a crucial role in both projects; they should get their relationships adjusted, from the very beginning. Harmonization efforts should be such that they result in a comprehensive multi-year village development plan consisting of all measures that would be needed to meet the developmental needs of the village, and of its poor households, in particular.

Activity selection and prioritization. The proposed activities and works must then be prioritized, sequenced, and planned such as to be implemented at an appropriate time in the project cycle and corresponding to the scheme or program (NREGA, IWMP, or other) from which resources can be drawn. The concerns and needs of poor women and poor households must be included and prioritized in these discussions, which must take place at the habitation

level, aggregating upwards to the village level and, finally, the GP level. Activities that are best funded by NREGA and IWMP, respectively (as also other schemes), should be identified. Once the village detailed project reports are finalized and ratified by their respective gram sabhas, they would then have to be consolidated, prioritized, and ratified by the GP and its general body (general *gram sabha*) and forwarded to the concerned authorities for sanction and resourcing.

Multi-year perspective and commitment. Villagers must be educated on the need to commit to a multi-year program, wherein activities are implemented in a way that immediate requirements are addressed on a priority basis. While project authorities may have to balance the need for technical efficiency with social and political compulsions and accept less-than-optimal decisions in regard to choice and sequencing of activities in the overall interest of the project, this can be offset to the extent that alternative funding for preferred activities from other ongoing programs is accessed. This would ensure that the required and planned-for funds would be available as envisaged, and result in harmonization of different temporal perspectives and effective management of expectations of all stakeholders.

Harmonization of norms. WDD would need to harmonize its output norms (relatively higher) with those under NREGA. This would bring about wage parity across works resulting in their being seen by the people and laborers as equally desirable. This would ensure that prioritization and desirability of works would be wage neutral and determined more by considerations of efficiency and effectiveness.

Works financing. As NREGA has a 60:40 labor to material ratio, whereas IWMP has no such restrictions, it is preferable that labor-intensive works be financed through NREGA and works where material inputs are high be included under IWMP, or a combination of the two, in the case of specific activities having both labor and material inputs.

Adequate personnel provisioning. As adopting a joint, convergent, and effective approach is a human resource-intensive process, WDD would have to equip itself with the necessary professional staff. Planning in this regard and necessary action would have to be undertaken well in advance of the project roll-out.

Capacity-building and capacity-support. Capacity-building, especially at the local community level, including among representatives of panchayat raj institutions and NGOs, would be the key to the success of a jointly implemented program. Modules would have to be specifically designed for the purpose by WDD (in addition to existing ones), drawing upon its considerable experience and resource and communications networks built up during the *Sujala* years.

Local ownership. Stakeholder participation and buy-in is the key to long-term sustainability of created assets. Efforts should be made to secure beneficiary contributions on private lands, at least from works funded under IWMP. Besides this, works that can be undertaken through community contributions should be encouraged and periodically undertaken so as to foster a sense of solidarity, fellowship, and co-responsibility.

Transparency. Methods adopted by *Sujala* to enhance transparency and accountability should be deployed in any converged projects.

Monitoring and evaluation. NREGA has a web-based MIS operationalized at the GP level, thus making real-time data available at all levels. IWMP is yet to establish and operationalize such a system at the GP level. Though IWMP's documentary and procedural requirements for work measurements and payments are different from those adopted under NREGA, harmonizing operational systems at the field level would not present a significant challenge. This would become especially important when WDD is approved by the government as an implementing agency under NREGA— a role WDD seeks to play.

Information, education, and communication campaign. Given the keen attention NREGA attracts, successes achieved should be documented and widely disseminated, especially among the developmental community and the general public, in order to secure and attract political and administrative support.

ALTERNATIVE MODELS OF CONVERGENCE

Based on extensive enquiry and investigations, the following four models emerge as possible options:

- /// **Collaborative or synergistic, in terms of works and activities.** Once a watershed (sub-

watershed or micro-watershed) is prepared with due cognizance of the aspects raised above, an activity breakdown matrix can be drawn up detailing works to be accomplished and assigning roles and responsibilities to different institutions or agencies, for example GP, GP committee, WDD, NGO, and so on. Roles are to be defined depending on relative strengths. In this manner, NREGA and IWMP would retain the institutional (including financial management) identity, but would require an overarching coordination mechanism as well as oversight bodies.

- ⚡ **WDD as a facilitator rather than provider.** In this scenario, WDD transforms itself completely to a “facilitator” from the existing “provider cum facilitator” role. In this model, WDD will assume full technical assistance

responsibility, right from selection of watersheds or villages, through planning and implementation, and including capacity-building, and monitoring and evaluation. All decision-making, including managing funds and procurement of goods and services, will rest with the GP.

- ⚡ **WDD as a service provider.** Here, the GP entrusts complete responsibility to WDD and the payments are made as per mutually agreed terms and conditions with detailed schedule and work accomplishments.
- ⚡ **WDD to act as a depository.** WDD will perform all activities, including procurement and financial management, and will share the reporting from time to time with the GP, but finally be accountable to the higher echelons.

Appendix: Key Actors and NREGA Processes (as Adopted in Karnataka)

KEY ACTORS

- At the village level, the *gram panchayat* is the principal authority for planning and implementation of the scheme. It is responsible for identification of works available in its mandated area as per the recommendations of the *ward sabha* and *gram sabha*, and for executing and supervising such works.
- The *panchayat* secretary is responsible for issuance of job-cards. Each *gram panchayat* has a technical assistant (or data entry operator) to assist the *panchayat* secretary in maintaining the records and also to assist the respective executing agencies.
- At the *taluka* level, the *taluka panchayat* is the principal authority for planning and implementation of the scheme. The executive officer of the *taluka panchayat* is the program officer, and he or she assists the *gram panchayats* and the *taluka panchayats* in carrying out their functions under the scheme.
- The program officer plays a critical role in coordinating implementation processes at the *taluka* level. He or she is responsible for scrutinizing the *gram panchayat's* plans for the Karnataka Rural Employment Guarantee Scheme, ensuring that they are in tandem with demand for employment. The program officer also ensures that implementing agencies operate punctually, that the demand

for employment is met within time, and that workers receive their due entitlements. Other functions of the program officer include ensuring that the social audit by the *gram sabha* is carried out, addressing and dealing with complaints, and effecting grievance redressal. The program officer functions under the superintendence of the district program coordinator.

- At the district level, the *zila panchayat* is the principal authority for planning and implementation of the scheme. The *zila panchayat* approves the district rural employment guarantee scheme plans, which include the consolidated *taluka* rural employment guarantee scheme plans, its own proposals, and project proposals received from other line departments and executing agencies.
- The chief executive officer of the *zila panchayat* is the district program coordinator. At the state level, the principal secretary, Rural Development and *Panchayat Raj* Department, is the coordinator. He or she is assisted by the Director (NREGA), other subject specialists, and support staff.

NREGA PROCESSES

- Any adult person of a household may apply to the *gram panchayat* for registration of

their household under the scheme and for issuance of a job-card. A household job-card with a unique ID number is issued by the *gram panchayat*. The wage-days provided and the wages paid to the workers shall be reflected in the job-card.

- /// The *gram panchayat* shall direct the applicant or group of applicants, in writing, to join any ongoing work or to work in a new work which might be starting, within fifteen days of receiving applications.
- /// If an applicant is not provided employment within fifteen days of receipt of the application, he/she can apply to the *panchayat* secretary for unemployment allowance. The secretary shall forward such applications to the program officer who shall, after due enquiry, sanction the unemployment allowance or reject the application, as the case may be.
- /// The annual planning process for the next financial year should be completed by the end of December every year, including approval of the plan by the *zila panchayat*. The district program coordinator prepares a labor budget for the next financial year, containing details of anticipated demand for unskilled manual work in the district, which would be the basis for planning.
- /// *Panchayat raj* institutions (*gram panchayat*, *taluka panchayat*, and *zila panchayat*) are responsible for maintaining the 60:40 ratio between the wage and material components of the budget then allocated with regard to works proposed by them.
- /// The *gram panchayat* facilitates the conduct of ward *sabhas* and *gram sabhas* for

identification and prioritization of works within the monetary allocations indicated to it by the district program coordinator.

- /// The district program coordinator scrutinizes the plan proposals of all the *taluka panchayats*, examining the adequacy and appropriateness of works in particular. The district program coordinator accords administrative sanctions for all the works approved under the district employment guarantee scheme plan. Each work administratively sanctioned is assigned a unique identification number. The list of works administratively sanctioned is forwarded to the program officer, who will send it to the executing agencies concerned for technical sanctions. The technically sanctioned works are sent back to the program officer, who maintains these as a shelf of works.
- /// Based on the demand for employment, the *gram panchayat* secretary requests the program officer to issue letters for commencement of works, line departments or other recognized agencies.
- /// Workers are to be assisted to open an account in a bank branch or a post office so that their wages can be transferred to their accounts. The *panchayat* development officer introduces the job card holder to the local bank or the post office, with a request to open a “no frills” account.
- /// Payments are made at the *gram panchayat* level itself with the *panchayat* development officer and *gram panchayat* president as the co-signatories of the check. The bank or post office disburses the money to workers based on the list supplied by the *gram panchayat* or *taluka panchayat*.



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