

Infrastructure Development and Beyond: Exploring the scope for Sustainable Livelihood Support under NREGA in Chainpur Block, Gumla District, Jharkhand



Ministry of Rural
Development ,
Government of India



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Exploring the scope for Sustainable
Livelihood Support under NREGA***

**A Study of Schemes implemented under NREGA in
Chainpur Block, District - Gumla, Jharkhand**

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Action for Food Production (AFPRO)

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EXECUTIVE SUMMARY

1. The 'right to work' is a 'directive principle' in the Indian Constitution which was formalized through the enactment of *NREGA* (2005). The scheme provides a legal guarantee for one hundred days of employment in every financial year to adult members of any rural household willing to do public work-related unskilled manual work at the statutory minimum wage of Rs.100 per day.
2. Under the *NREGA* district agencies have taken the initiatives to create employment for those people who have got job cards. The work carried out in the villages is varying from place to place and mainly depends upon the local requirements for infrastructure like link road, water harvesting facilities, soil conservation work etc. The emerging trends from three years of implementation of *NREGA* have been evident in the increase of employment opportunities as compared with earlier wage employment programmes, increase in minimum wages, stemming of distress migration, implementation of large number of works related to soil and water conservation, afforestation and plantation.
3. Considering the potential of works carried out under *NREGA* for strengthening the livelihood resource base of marginalized groups of people provides good linkages with other development initiatives so that the coordinated work can lead them for sustainable livelihood support. Long term benefits and sustainable development are however possible only when multiple inputs converge and impact the life of people and its environment holistically. Recognizing the need to learn from work carried out under the *NREGA* in one of the tribal dominated Blocks through systematic assessment of its effectiveness in the context of sustainable livelihood support at community level, AFPRO has carried out this study in Chainpur Block, District Gumla, and Jharkhand.
4. Under the study, assessment has been made of thirty-seven schemes covered in twenty-eight villages of ten Gram Panchayat in Chainpur block. Schemes covered are – eighteen Ponds , six Wells, three sites of Mitti Murram Roads, three Check Dams, two Earthen Bunds, three Land Leveling sites and two Guard Walls. Schemes were selected on random basis from different years. Twelve schemes were selected from the year 2006-07, seventeen from 2007-08 and eight from current year 2009-10.
5. The study team of AFPRO collected records and relevant documents from district headquarter to carry out desk review of the schemes implemented in Block Chainpur. Subsequently consultation was held with Block level functionaries who were involve in the implementation of *NREGA*, this was followed by field assessment at the sites in 28 villages. The focus of study was on assessment of schemes and the processes of execution of work under the *NREGA*.
6. The observations from the study have contributed in drawing the inference to make recommendation for action at different level. There are areas for improvement at village level

- institution: these are mainly related to effective participation in decision making process, selection of need based schemes, and increasing the ownership of infrastructure created under the scheme.
7. As per the guideline the gender aspects have been taken care while selecting the president and secretary of the worker committees constituted for the implementation of schemes under NREGA. Women member is selected either as president or secretary in the committee, and also as mates.
 8. Assets have been created in the land of farmers belonging to Scheduled Tribes (ST), Schedule Castes (SC), Below Poverty Line category (BPL) and marginal farmers. The progress of implementation of individual scheme in general was very slow, as in many cases the schemes could not complete in the same fiscal year and took longer time, even two to three years in some cases. This has resulted in lack of interest from the beneficiaries' side as it took longer time for the beneficiaries to realize the importance of work for improving the livelihood condition.
 9. The payment system for wages is in transition stage from payment through President and Secretary to payment through bank into the individual accounts. Considering the low level of awareness about the banking system and literacy among the beneficiaries, facilitation/support to the community is necessary for understanding banking procedures so that all job card holders can open the bank account.
 10. The work carried out under the schemes is more as target oriented than the community centric in term of sustainability of benefits in long run. The infrastructures created do not have any linkages with beneficiaries beyond the employment generation during the execution of particular scheme. Alternatively, the groups of beneficiaries could have been formed to explain their responsibility of future repair & maintenance of infrastructure.
 11. The district/ block level functionaries are to take more responsibility on creation of awareness among the beneficiaries, build up the capacity of users and local functionaries for proper selection of scheme and its execution. There are areas like technical feasible studies, selection of the appropriate technical intervention; surveying and cost estimation are the specific hardware requirements, which need to be met by the technical support group at block level. There is also need to take proactive role by block level functionaries in facilitating the decision making process for selection of schemes and its execution.
 12. Almost fifty percent of the schemes are found incomplete, even though many of them started during the year 2006 - 07 & 2007-08. This raises a serious concern, not only because these are not serving the purpose for which envisaged, but these cases negatively impact through soil erosion as the soil gets exposed and is left loose without proper dressing & compaction. Therefore special attention is to be given for completing the schemes in all the aspects so that the purpose is served and community is benefitted from it.
 13. Availability of better tools with the workers always makes the job easy. In this context an observation from the field is that very common types of tools are being used by the people. There is need to give thought on

- improving the efficiency of work by providing the better tools which would make the work convenient and at the same time output increases. It is also recommended that while planning the schemes, a financial provision should be made of the implements required for accomplishing the task. Normally the poor family does not keep the tools at home and this becomes an additional cost for them.
14. The need of giving priority for selection of smaller structures for soil and water conservation has been highlighted in the recommendations for bringing the change in the policy guidelines. This is mainly to avoid the losses of the land of marginal and small farmers for infrastructure development and also to direct the benefit towards the targeted population.
 15. NREGA has given ample opportunity for infrastructure development at the community level. However, there is a need to look beyond the infrastructure development. It should look into the sustainability aspect by emphasizing on quality of physical work and capacity building of users. Hence there is need of proper orientation of functionaries involve in execution to understand the comprehensiveness of the scheme and design the suitable interventions. The coordination among the different line departments is required to make use of the opportunity provided under NREGA for better service delivery by pooling the resources available.

INTRODUCTION

The National Rural Employment Guarantee Act, (NREGA) was notified on September 7, 2005 with the objective to enhance livelihood security in rural areas by providing at least 100 days of guaranteed wage employment in a financial year to every household whose adult members volunteer to do unskilled manual work. The Act came into force on February 2nd, 2006 and was implemented in phased manner. In the first phase it was introduced in 200 most backward districts of the country. It was then extended to additional 130 districts in the financial year 2007-2008. From the current financial year, the Act was extended to cover all the districts, with the exception of districts that have a hundred percent urban population.

The NREGA is the first ever law internationally, that guarantees wage employment at an unprecedented scale. The works which have been taken up under this act rejuvenate the natural resource base and address the causes of chronic poverty, such as drought, deforestation, soil erosion, floods, poor rural connectivity etc. In the year 2008-09 scheme has generated over 4 crore person days. Women constitute 48% of the work force, and 54% are schedule tribes and schedule caste. Over 23.28 crore works were under taken in the year 2008-09 of which 45% were water conservation, 20% were micro irrigation and 15 % were land development and 18% rural roads as reported by Ministry of Rural Development (MoRD).

Significant emerging trends in three years of implementation of NREGA have been evident from the increase in employment opportunities compared with earlier wage employment programmes, increase in minimum wages, stemming of distress

migration, implementation of large number of works related to soil and water conservation, afforestation and plantation resulting in increased productivity.

The potential of NREGA for strengthening the livelihood resource base is thus making itself manifest and there is a need to identify its linkages with other development initiatives so that their coordinated energies can be leveraged for sustainable development. Long term benefits and sustainable development are however possible only when multiple inputs converge and impact human life and its environment holistically. The ministry of rural development recognizes the need of convergence of various schemes for optimal utilization of resources for enhancing the productivity of natural resources and improving the quality of life. NREGA with its inter-sectoral approach opens up opportunities for convergence.

Recognizing the need to learn from work carried out under the NREGA in tribal dominated area, it was realized to conduct a systematic assessment of its effectiveness in the context of sustainable livelihood support at community level. MoRD in coordination with UNDP engaged the services of AFPRO for assessment of work implemented under NREGA in Chainpur Block, District - Gumla, Jharkhand with the following objectives;

- *Technical value addition of works carried out under NREGA*
- *Identify opportunities for convergence of activities under schemes of various departments.*
- *Identify Capacity Building requirements of the community to bring the effectiveness of schemes.*
- *Assess the cost effectiveness and sustainability aspect of the works.*

district. The birth rate of Gumla district as per 2001 census is 32.6 per thousand and death rate is 16.0 per thousand.

The main economy of the district depends upon agriculture, forest produce, cattle development, mining activities and other

against demand. Women person days in block are 28.6%. Works carried for water conservation is 80.54 % and 18.97% on rural connectivity against total works. Provision of irrigation against total works is 48.25%. Average wage paid per person

NREGA STATISTICS (Current data)

Particulars	Jharkhand	Gumla
Employment provided to households:	9.63661 Lakhs	0.45349 Lakh
Person days (in Lakh)		
Total:	400.3 Lakhs	14.43 Lakhs
SCs:	59.75 [14.93%]	0.95 [6.59%]
STs:	166.41 [41.57%]	10.23 [70.93%]
Women:	129.54 [32.36%]	4.12 [28.56%]
Others:	174.14 [43.5%]	3.24 [22.48%]
Total fund	1552.2 Crore.	32.74 Crore.
Expenditure	656.37 Crore.	23.52 Crore.
Total works taken up:	118292	7876
Works completed:	35606	2197
Works in progress:	82686	5679

Source: NREGA website.

commercial activities. Agriculture is in very primitive stage due to lack of irrigation, marketing, infrastructure facilities and scientific inputs. Out of 3.296 lakh hectare of cultivable land only 22056 hectares (6.7%) is irrigated. District receives an annual rainfall of about 1000-1100 mm, however, due to lack of adequate rain water harvesting facilities, rain water is not fully utilized for agriculture purpose.

Given adjacent is a comparative overview of the work implemented till date under NREGA in Jharkhand as a whole and in Dist. Gumla including details of beneficiaries, works and the total expenditure.

In Gumla district 73.55% rural households are issued job cards. Employment demanded as percentage of Job card issued is 25% and 100% employment provided

days is Rs. 98.56 and the cost of one day employment is Rs.162.96. Expenditure on unskilled wage is 60.48%, 36.08% in material and 1.74 % in contingencies. Total expenditure against the total fund is 71.83% in Gumla district. (Source NREGA website)

Chainpur Block

Chainpur block is situated at about 55 km west from district headquarters at Gumla. It is surrounded by Gumla & Ghaghra Block at its East, Dumari Block at the west, Bishunpur & Ghaghra at the North and Raidih Block at its south respectively. This block is tribal dominated; mainly Oraon & Munda tribes reside here.

The total area of the Block Chainpur is 46608 hectare. Out of this total area the land available for agriculture is only 12625

hectare ie 27% of the total area. The irrigated area is only 2145 hectare ie 17% of the total agricultural area. Subsistence agriculture is practiced in the region. Agriculture is the main occupation of the villagers. Farmers depend on monsoon for irrigation and mainly engage in the Kharif season for agriculture related work.

There are eighty-three revenue villages under ten Gram Panchayats. The study covered all ten gram panchayats and selected twenty-eight revenue villages.

A total of thirty-seven schemes were assessed namely eighteen Ponds , six Wells, three sites of Mitti Murram Roads, three Check Dams, two Earthen Bunds, three Land Leveling sites and two Guard Walls. Schemes were selected on random basis from different years. Twelve schemes were selected from the year 2006-07, seventeen from 2007-08 and eight from current year 2009-10.

METHODOLOGY ADOPTED FOR THE STUDY

1. Desk Research

The secondary data and reports related to NREGA work were collected from district head quarter, Gumla and block office at Chainpur. The review of the collected data has been done by the team to study the process followed for deciding the schemes, appropriateness of technical plans, records, reports and other related documents at different level. As an outcome of this study, villages and schemes were selected on random basis for the detail assessment.

2. Consultation with Block Level Functionaries

After the selection of villages / schemes for the study, a consultation was organized with Block level functionaries who were directly involved under NREGA work as the technical support group. This consultation was held on 21st August 2009. The purpose of this consultation was to share the observation of desk review and plan of field visit to the selected villages/schemes.

3. Field Assessment

During the field visit, work sites were visited and discussions/ meetings held with the community regarding the process followed from planning to implementation and the impact of the structures. Rapid

/Participatory Rural Appraisal exercise was carried out for data collection. Technical feasibility, social adaptability and economic viability of the structures were assessed. Personal interview and focus group discussions with beneficiaries were organized to generate information regarding the implementation of schemes.

4. Documentation

Data and information have been analyzed based on the broad criteria set for this study. The qualitative and quantitative information have been used for drawing inferences on the process adopted for implementation of various schemes. The contribution of NREGA work in the overall approach of sustainable livelihood support was assessed, based on the initiative taken either from the District/Block Officials or /and by the community, to draw long term benefit from the particular interventions.

5. Feedback on Draft

The draft report has been shared with the district administration as well as block level officials and feedback has been received during finalization of this document.

ASSESSMENT OF SCHEMES

LOCATION MAP OF VARIOUS SCHEMES STUDIED UNDER NREGA, CHAINPUR BLOCK, DISTT-GUMLA, JHARKHAND



Assessment of a total of thirty-seven representative samples of the schemes was conducted covering all the Gram Panchayats of Chainpur Block. The list of schemes visited is provided as Annexure.

Schemes were selected on random sample basis representing implementation during different financial years. Twelve schemes selected from the year 2006-07, seventeen schemes from 2007-08 and eight schemes from current year 2009-10. Of the eight schemes planned for current year, five are found under execution, and appraisal was carried out of the remaining three schemes.

The different schemes assessed are listed below:

- (I) Ponds/Earthen Bunds
- (II) Wells
- (III) Masonry Check Dams
- (IV) Mitti Murram Roads
- (V) Land Leveling
- (VI) Guard Walls

The assessments were conducted with reference to standard norms (as presented in Boxes in this chapter) and observations have been made against each group of schemes. Tables have been presented for

each group of schemes containing details of the individual schemes appraised.

(I) Ponds/Earthen Bunds

Ponds are very appropriate water harvesting structures as they are simple technology that can be easily managed by the local community. The construction of ponds provides opportunity to generate unskilled employment for earth work, as it is labour intensive.

Depending upon the Topography, two types of ponds are possible – embankment type and excavated (dug out) type. Embankment types of ponds are feasible in hilly and undulating topography where by constructing a small length of embankment (or barrier) across a watercourse, maximum storage of water can be affected. In relatively flat areas, construction of embankment is not feasible. In such areas, excavated ponds are constructed advantageously.

Under the present appraisal study, eighteen ponds sites and two nala bunds were visited for the physical assessment. The schemes were mostly undertaken from the year 2006-07 and 2007-08. Four schemes (three ponds and one bund) have been taken from the year 2009-10.



Prakash Minj's pond at Natapol

Table 1: Ponds & Earthen Bunds

Sl. No.	Gram Panchayat	Village	Dimensions in metres (L - B - D) *	Year	Status	Owner
1	Chainpur	Chainpur	27.4 - 27.4 - 4.6	2007-08	Incomplete	Herman Lakra
2		Chainpur	30.4 - 30.4 - 3.04	2006-07	Incomplete	Paskal Toppo
3	Bardih	Roghadih	60.9 - 60.9 - 4.6	2006-07	Incomplete	Jagarnath Munda
4		Kalda	27.4 - 27.4 - 4.6	2007-08	Incomplete	Deepak Khes
5	Kating	Somlabartoli	60.9 - 60.9 - 3.04	2006-07	Incomplete	Upendra Pd Bhagat
6		Natapol	27.4 - 27.4 - 4.6	2007-08	Incomplete	Prakash Minj
7		Chitarpur	30.4 - 30.4 - 4.6	2009-10	New Scheme	Miluram Lohra
8	Barwenagar	Harradipa	30.4 - 30.4 - 3.04	2006-07	Incomplete	Lenjinius Kujur
9		Bhelwatalab	27.4 - 27.4 - 4.6	2007-08	Reportedly not constructed under NREGA	Jerome Toppo
10		Silphari	60.9 - 60.9 - 4.6	2009-10	Ongoing	Ebartus Kujur
11	Bamda	Kurumgarh	30.4 - 30.4 - 4.6	2006-07	Incomplete	Bhakdu Baiga
12		Darkana	15.2 - 15.2 - 3.04	2006-07	Complete	Mangu Kherwar
13		Darkana	15.2 - 15.2 - 3.04	2006-07	Complete	Puna Kherwar
14	Malam	Dahudadgaon (Ratangarha)	Bund	2009-10	New Scheme	Fardinand Lakra
15		Dahudadgaon	21.34 - 22.8 - 4.6	2006-07	Complete	Fardinand Lakra
16	Chhichhwani	Chachali	Pond construction (21.3 - 27.4 - 4.6)	2007-08	Incomplete	Kalyan Minj
17	Rampur	Bukma	27.4 - 27.4 - 4.6	2007-08	Complete	Ramnath Bhagat
18	Janawal	Besnapath	Bund (Garha toli)	2007-08	Not found	
19		Mahuatoli	27.4 - 27.4 - 4.6	2007-08	Incomplete	Bhincant Ekka
20		Dokapath	30.4 - 30.4 - 4.6	2009-10	New Scheme	Alexius Asur

*L = Length B = Breadth D = Depth

Observations

Out of the twenty sites visited, the work at ten sites is incomplete. That means the construction is not carried out as per the planned dimensions. At four sites, the work has been completed on all aspects and community is drawing benefits from the structures. Four sites were selected for visit from the current year. Out of these works at one site has commenced, while remaining three sites work is not started as yet. There are two sites which are controversial. One was not constructed under NREGA but under a district scheme of 1990. It is reported by Mr. Jerome Toppo, owner of one of the sites as presented in the table (serial no. 9), that the pond at Bhelwatalab village under Gram Panchayat Barwenagar was not constructed under NREGA but under some district scheme in the year 1990.

- Out of the two Bunds proposed for construction, one at village Dahudadgaon, Gram Panchayat - Malam is planned for the year 2009 – 10, while at the other site in village Besnapat, Gram Panchayat- Janawal there is no information to the community about the scheme planned



Pond of Deepak Khes at Village Kalda

in 2007-08.

- Ponds constructed are of varying size viz. large size ponds of dimensions 60.9mtr x 60.9mtr x 4.6mtr, medium size ponds of dimensions 30.4 mtr x 30.4 mtr x 4.6 mtr and small size ponds of dimensions 15.2mtr x 15.2mtr x 4.6 mtr. Large size ponds can be made only in the fields of farmers having large land holding. Hence it can't address pro-poor issues. Small farmers can be only person, who are not able to get adequate benefit. Pond of dimension 15.2mtr x 15.2mtr x 4.6mtr can address the needs of poor farmers properly. 30.4mtr x 30.4mtr x 4.6mtr size is also good from the point of view



Incomplete ponds, at village Kurumgarh (left) and Roghadih (right)

of socio- economic aspects and cost effectiveness. Small farmers find it more comfortable to construct small farm ponds of size 15.2mtr x 15.2mtr x 4.6 mtr which they also find useful for moisture conservation, fishery etc. Side slopes of 1:1 (in cutting) has been adopted which is suitable in the local context.



Ongoing pond construction at village Silphari

- Sometimes construction works starts in the months of June - July. This period is not suitable for construction of water harvesting structures.
- Most of the sites are selected either in the middle or lower catchments. This is technically feasible for pond construction.
- Many ponds have been constructed on the river/streams banks. Selection of such locations for construction of pond

Box 1

Parameters to be considered while constructing dugout ponds

- *The dugout ponds should be constructed to expose a minimum water surface area in proportion to the volume.*
- *The catchment must be sufficient and capable of furnishing the annual runoff sufficient to fill the dugout. The low point of a natural depression is often a good location for a dugout pond.*
- *The soil type at the site should be thoroughly investigated to determine the permeability. In case the seepage rates of ponds are excessive, suitable lining may be resorted to like puddling and compacting the bed and the sides of the pond etc.*
- *At locations where water table rises to within a few meters of the ground surface, the ponds may be constructed to intercept the water table. Locations of this type may furnish supplies all the year round.*
- *Excavated ponds may be constructed in any desired shape. However, rectangular or square shape is usually common and convenient.*
- *Drainage from septic tanks, house drains, animal shelters etc are a source of pollution and should not be allowed to drain into the pond.*
- *The size of the pond depends upon the expected runoff into the pond, catchment of the pond, extent of area that can be put in the pond and its surrounding bund of excavated soil, the amount of money for investment, the soil type and the nature and amount of rainfall.*
- *The side slopes of a dugout pond should not be steeper than the natural angle of repose of the material (i.e soil) being excavated.*
- *The excavated soil should be disposed properly. The excavated soil should be placed in such a manner that rainfall will not wash the soil back into the pond. A suitable berm may be provided. Grass should also be planted on the tank bunds.*
- *Suitable inlet and outlet provisions may be made for the safety of the pond*

- is for ensuring availability of water. This is always beneficial in case the purpose of construction of pond is to meet the requirement of protective irrigation and fisheries activity. In case the need is to meet only the irrigation requirement, even constructing intake wells at the rivers / streams banks would be sufficient. This will also help to avoid the loss of productive paddy fields of the farmers, who in general are holding very small piece of land.
- At some places attempts have also been made to harvest the sub surface water i.e the depths of the ponds have been extended to intercept the ground water table. This is also a good sign for ensuring water availability during long dry spells.
 - In almost all the ponds visited, a common observation was that the excavated earth was not stacked properly, neither compacted nor grass turfing provided. Usually, it is disposed randomly in a haphazard manner adjacent to the pond. The consequent soil erosion turns to be the major cause of siltation in the pond.
 - In almost all the ponds, berm has not been provided. This would eventually mean the carrying of the soil particles by rain back into the pond. Thus the storage capacity of the pond would reduce significantly over a lesser period of time.
 - Provision for spillway has not been properly made. In few cases the lower side bund has been left open for allowing the excess runoff to pass through. This is adversely affecting the storage capacity of the pond.
 - In most of the ponds water can be taken for irrigation by lifting (by pumps etc). Site specific mechanisms can be made for drawing water by gravity.



The pond at village Mahuatoli

Table 2: Wells

Sl. No.	Gram Panchayat	Village	Dimensions in metres (Diameter & depth)	Year	Status	Owner
1	Chainpur	Chainpur	6.09 - 9.14	2007-08	Incomplete	Isdore Toppo*
2	Bardih	Kukrunja	3.04 - 10.7	2007-08	Not found	Bandhu Oraon
3		Kukrunja	6.09 - 9.14	2006-07	Complete	Shahdeo Oraon*
4	Barwenagar	Kerabar	6.09 - 9.14	2007-08	Incomplete (parapet constructed and collapsed)	Xavier Minj***
5	Banda	Darkana	3.04 - 9.14	2006-07	Complete	Babulal Oraon**
6	Chhichhwani	Sukhadi	3.04 - 10.7	2007-08	Complete	Nilima Toppo*

* – The purpose of these wells is only irrigation

** - The purpose of these wells is only drinking (However it is also irrigating 10 decimal of land)

*** - The purpose of this well is both irrigation and drinking

(II) WELLS:

In the present appraisal study, we visited 6 wells in total. The schemes were mostly undertaken from the year 2007-08. The wells are constructed to meet the requirement of drinking water as well as irrigation. The status of the schemes

undertaken as well construction is given in the table above.

Observations

- It is observed that many of the well sites, the lining has been done by stacking boulders temporarily. This appears to be a common practice in Jharkhand to make use of local material for affordability.
- There is no uniformity regarding the compaction and puddling of the back fill soil. In many places it is observed that compaction has been done and parapets are maintained. However, due to improper back filling, the parapet has been damaged at Kerabar and Kukrunja.
- It is observed that the pump platform is not provided in any of



Babulal Oraon's well at village Darkana

Box 2

Parameters to be considered while digging wells

- Open wells may be constructed with an impervious lining (such as masonry lining) or with pervious lining (such as dry brick or stone lining) or no lining at all i.e a kachha well depending upon the strata and the budget available for well construction.
- In case the well is constructed for irrigation purpose, then provision for pump platform should be made to lower the pump and install at the appropriate depth to lift the water in summer season.
- RCC rings must be provided at the bottom of the wells. However, in case hard rock formation exists below the overburden of murum / soil cover, then PCC ring would be sufficient to protect the layer of soil cover.
- Provisions for well recharging must be considered. For example, the catchment may be treated with farm bunding, gully plugging, trenching etc as per site location.
- Wells constructed near residential areas in villages must be provided with drainage lines and soak pits with cover. This would prevent the stagnation of water.
- Lifting frame with pulley must be provided for easy lifting of water.
- The wells constructed for drinking purpose should be covered with a wire mesh to prevent the entry of unwanted debris or any waste material that would contaminate the water in the well.

- the well sites visited. At the site of drinking water well, the provision of pulley and platform was not provided.
- Wells mostly found in the villages are those with diameter 6.09 mtr. 6.09 mtr x 9.14 mtr size well cost much more than 3.04 mtr x 10.7 mtr sizes. Yield of the well is not considered during size fixing. Diameter of 3.04 mtr is more feasible and cost effective.
 - Materials used in the well are boulders and cement mortar. Pointing work has been found in some places.
 - The wells constructed have no provision for recharging through various soil and water conservation measures like construction of contour trenches, field bunds etc.



Left: The well of Isidore Toppo at Chainpur village

Right: The bottle gourd field irrigated by water from the well



Table 3: Check Dams

Sl. No.	Gram Panchayat	Village	Location	Year	Status
1.	Bendora	Chhatarpur	Putusjharia Nala	2006-07	Complete
2.	Malam	Ratu Gamharia	Bengnala	2006-07	Complete
3.	Rampur	Bhathauli	Nagra Nala	2009-10	Proposed Near the field of Parmeshwar Rautiya

(III) CHECK DAMS

Check Dams are permanent structures built across streams or gullies where other temporary and semi – permanent structures are ineffective due to the high quantity and velocity of runoff. Check Dams are adoptable in streams of moderate slope/ lower reaches of the watershed basin for water harvesting.

In the present appraisal study, three check dam sites were visited, as given in the table above.

Observations

- The sites of the two completed Check Dams were visited and found not in use

presently. The check dam at village Chhatarpur, GRAM PANCHAYAT – Bendora is not in use because of the location of site. The dam is located in village Chhatarpur, whereas the command area falls in other village Chainpur. The productive land of the Farmers of Chhatarpur will be submerged if the gates of the dam are closed whereas the benefit will go to other Panchayat i.e. Chainpur, that is the reason why villagers of Chhatarpur have not closed the shutter of the gate and water has not been used for irrigation purpose.



Different views of the check dam constructed at Chhatarpur

- It has been noticed that the community organization and required capacity building work is not carried out for the interest groups of downstream side farmers and even the sensitization of the upstream farmers is lacking.



The check dam at village Ratu Gamharia

- Considering the complexity of such locations, it is essential to carry out a systematic planning by involving the primary stakeholders so that interest of each group is taken care. This would also require the software activities to build up the users group for the maintenance of the infrastructure and compensate the affected farmers. In the check dam at village Ratu Gamharia, the gate has never been installed resulting in no storage of water and neglect of structure by the community
- The third site of check dam was visited, is a scheme proposed for year 2009-10. While conducting the field appraisal, it is noticed that there are two check dams close to the proposed site. One is around 350 m upstream and the other one at 500 m downstream from the proposed site. The guard wall of the upstream structure is broken and the dam is not in use. The downstream dam is in good condition and serving the community.
- In the given situation a check dam is not required at all at the proposed site. Instead, irrigation can be provided by constructing intake well at the proposed site of check dam. This well will get recharged due to the back water of check dam in downstream site.

- It has also been observed at the third site that productive land of one farmer, Mr. Ramu Oraon, has been eroded because of breakage of a guard wall of an existing check dam due to a technical fault immediately after the first rains. While the check dam is not in use, the river has changed its course and now flows through the productive paddy field making it unfit for cultivation.

Box 3

Some facts about check dams

The design parameters of check dams are the catchment area, intensity of rainfall, peak discharge, general gradient of the catchment and foundation condition.

Functions of a check dam

- Storage of water
- Recharge of ground water table.
- Stabilizing the bed of gully

Type of Check Dams

1. Overflow structure
2. Check Dam with the provision of gates
3. Check Dam with the provision of spillway

Table 4: Mitti Murram Roads

Sl. No.	Gram Panchayat	Village	Length Proposed	Year	Status
1.	Bendora	Bendora	3.5 KM	2009-10	Ongoing
2.	Kating	Natapol	1 KM	2009-10	Ongoing
3.	Janawal	Besnapath	3 KM	2009-10	Ongoing

(IV) MITTI MURRUM ROAD

Three sites were visited in three villages to assess the Mitti Murram road construction under NREGA. All three schemes are under construction. The table given above presents the status:

Observations

The dimension of the proposed road's width is 5.5 m at bottom and 5 m at top. Height of the road is ranging from 30 cm to 50 cm. as per requirement at site. The Murram is not applied on the track that has already completed the earth work. It has also been noted that the proper dressing of the side slopes and compaction of the road is not given

due attention. This would result in early damage to the road.

- During the site visits, it was noticed that at many places there is a need of crossways and culverts, however, the provision for the same is not under NREGA, as informed by Panchayat Sevaks. This opens up the opportunity for the convergence with other line departments like Rural Engineering Organization, for identification of sites for crossways and culverts and construction of the same.
- It has been observed at many places, that there was no provision to drain out the excess water near the roads. As a result there was damage to the road and stagnation of water.



The mitti murram road being constructed at Village Besnapath

Table 5: Land Leveling

Sl. No.	Gram Panchayat	Village	Proposed Area	Year	Status	Owner
1.	Bendora	Bamhni	3 Acre	2007-08	Complete	Shilash Minj
2.	Chhicchwani	Katkahi	3 Acre	2007-08	Completed (1776 sqm)	Arun Toppo
3.	Rampur	Rampur	2 Acre	2007-08	Work stopped after 1.5 acre	Bonifas Lakra

(V) LAND LEVELING

The land leveling activity is an important intervention for providing benefit to the marginal farmers who own small piece of degraded land which are often undulating. These types of land conditions are quite common in the study area. There is need of mechanical

intervention of changing the land slope by cutting and filling to create cultivable land by leveling it. The material excavated from the upper part of the land is used in filling the lower part. Small shoulder bunds of about 30 cm height (vary with location specific condition) are constructed along the boundary of land.

Three sites were visited (as given in the table above) to assess the land leveling work carried out under the NREGA during

the year 2007-08

Observations at land leveling sites

- Land leveling has been done mostly in the year 2007-08. It has been reported that the ongoing work was stopped as per instructions received from higher

Box 4

Functions of land leveling

- Land reclamation for cultivation
- Makes soil and water conservation possible in severe situations
- Harvests eroded fertile topsoil
- Retain manures that is being carried away
- Facilitates application of irrigation if available
- In-situ moisture conservation

Parameters to be considered for land leveling

- Soils shall be deep enough so that after leveling an adequate, usable root zone remains that will permit satisfactory crop production with proper conservation measures. Limited areas of shallower soils may be leveled to provide adequate irrigation grades or a better field arrangement. The finished leveling work must not result in exposed areas of highly permeable materials that can inhibit proper distribution of water over the field.
- All leveling work shall be planned as an integral part of an overall farm irrigation system to enhance the conservation of soil and water resources. The boundaries, elevations, and direction of irrigation of individual field leveling jobs shall be such that the requirements of all adjacent areas in the farm unit can be met.
- Land leveling may be “table top” or sloping outward or inward with or without a slight longitudinal grade, according to the rainfall of the tract –medium, poor, or heavy, and the soil and the sub soil are fairly absorptive or poorly permeable.



Left: Land leveling work taken up on Bonifas Lakra's land at village Rampur
Right: The guard wall at village Ratu Gamharia

authorities. It was reported to us by the Gram Rozgar Sevak and Panchayat Sevak that there was an order from the District Collector to stop the work, even the ongoing ones. The reasons could not be known.

- Land less than one acre have been not taken under this activity which is the draw back of the scheme. This activity can be taken in individual lands of the marginalized and poor farmers.
- Reclaimed lands are being used for mainly paddy cultivation. It has been reported that the productivity of the newly created land through leveling is low. The reason quoted was the removal of the fertile top soil from the field.
- At some places excess seepage loss from the new field is noticed after land leveling due to sandy and murrum soil strata. Soil strata is highly permeable which results in water loss due to percolation.

(VI) GUARD WALLS

Guard walls have been constructed to control the soil erosion and protections of fields near the streams / rivers from

damage due to flood. They are useful to protect the fields from erosion.

The two sites named in the table below were visited to study the guard wall construction:

Observations at Guard Walls

- At the site of village Ratu Gamharia, the guard wall was found in good condition. It is constructed with stone masonry which is found of good quality of work. However, scouring is taking place from side at the foundation. This requires immediate attention from the community to fill up the soil and provide proper water ways to protect the guard wall.

Table 6: Guard Walls

Sl. No.	Gram Panchayat	Village	Location	Year	Status
1.	Malam	Ratu Gamharia	Near school in Jam toil	2007-08	Complete
2.	Malam	Malam	Near Gunutala	2007-08	Not found

- With regard to the guard wall at village Malam, the Panchayat Sevak, Gram Rojgar Sevak and villagers have no information about the construction of guard wall near Gunatata. Till now, it seems that the guard wall has not been constructed in Malam village.

PROCESS ASSESSMENT

1. Gram Sabha

According to the normal procedures, Gram Pradhan is the constitutionally accepted village leader in Jharkhand and Gram sabhas are chaired by him/her. Gram sabha selects Gram Pradhan and Treasurers in each village. The schemes proposed by the beneficiaries are approved in the Gram sabha and proposal is submitted to the Block. The Gram sabha is normally called on the 16th day of every month in all the villages. These meetings are facilitated by the Supervisors assigned by the block to each gram panchayat. However, as the gram sabhas are planned on the same date in each village and non-availability of sufficient Supervisors for the facilitation many gram sabhas go unsupervised.

It is reported that due to lack of information (of the Gram sabha date) and interest (among villagers) there is usually less participation by the community in gram sabhas. Women participation is also normally less as compared to the men in the Gram sabha. Meetings are called by Gram Pradhan in consultation with Panchayat Sevak and Gram Rozgar Sevak.

Decision making in the gram sabha is mainly done by influential persons of the village. The gram sabha does not always reflect the needs of the poorest. In some villages beneficiaries have been selected based on the poor socio-economic condition. But in some villages comparatively better off beneficiaries are being selected twice under NREGA scheme, such as Shilash Minj (village Bahmni), Fardinand Lakra (village Dahadargaon).

According to the normal procedure, the prioritization of the selected schemes need to be done at the Gram sabha level, but it was noticed that often gram sabhas avoid the shouldering this responsibility and leaves it on the higher authorities.

2. Process of Implementation

After the scheme is sanctioned, a worker committee (Beneficiaries samiti) is formed for implementation. Worker committees are headed by president and secretary who are selected by gram sabha.

Nigrani Samiti constituted with the representation of workers employed under NREGA and other members of the village. The number of members in the Nigrani Samiti (VMC – Vigilance and Monitoring committee) is varying for each scheme. Nigrani Samiti, secretary and president jointly supervise the works. Work measurement, maintenance of attendance and preparation of muster roll was the responsibility with President and secretary of the worker committee.

This practice continued till the time a system of appointing the Mates was introduced. After selection of Mates, this work is being carried out by them. The appointment of Mates started in July, 2009 and almost in all villages mates have been selected. After the system of mate became operational, the selection of president and secretary has stopped. Now Nigrani samiti is being formed to supervise the work. The current practice, as reported, is that the number of members in the Nigrani Samiti are the same as the number of people working under the scheme.

The muster roll and progress of work is verified by the Gram Rozgar Sevak and Panchayat Sevak before submission of documents to the block. After the submission of muster roll it is verified by Gram Panchayat supervisor, Block Programme Officer and then finally by Block Development Officer (BDO). Money is released from the block on the basis of muster roll.



Verification of the Job Card of Keshwar Munda at village Roghadih

In most of the cases land owner of the schemes have been selected as president of the beneficiary committee.

All workers must have their job cards and account for payment in bank or post office. Without these two documents they can't work under the programme. Now there is provision of one job card per family. Initially job cards entry was not so proper but now it is gradually strengthening.

3. Mode of Payment

Initially the payment used to be released through bearer cheques in the name of President and Secretary of the worker committee, who then made cash payment to the unskilled worker employed for a particular scheme. The rate of payment varied as per state government orders issued from time to time.

Now account payment system is in force. However accounts for all job card holders have not been opened. Gram Rozgar

Sevaks and Panchayat Sevaks are trying to open account for all job card holders.

Without account job card holders are not in position to work due to bank payment mode. In such cases the workers who do not have bank / post office accounts and are working in any NREGA scheme, their payment is being done through the accounts of the other fellow workers in the same scheme. But account holder doesn't know how much amount has to be paid to fellow worker against the quantum of work carried out by him/her.

First installment of the schemes is released just after signing of MoU. But for release of second installment, measurement book is required from Jr. Engineer (JE). In some cases it is found that work has been done but measurement book is not being prepared by JE and so beneficiaries are unable to receive the second or further installments. JE requests for conveyance charges and Gram Rozgar Sevaks & Panchayat Sevaks have no other option but to carry the JE to work site to measure the

work for measurement book preparation on their own cost.

4. Gender

Women are participating in Gram Sabha but proportionately their number is generally less than Men. Gender aspects have been considered in president and secretary selection for the worker committees. One male and one female have been selected as president and secretary in most of the villages. Women have also been selected as mates. There are cases where one-third of the mates in the villages are women.

The engagement of women in the schemes is found to be very less. Even in the ongoing schemes it has been observed that the participation of women is very less at the work site as compared to the male workers. In some places women can't work because soil was too hard to dig. Equal wage payment has been done for male and female worker. Work site child caretaker (maid/ dai) have not been deployed.

5. Convergence

NREGA provides opportunity to carry out the work on the private land belonging to families belonging to Scheduled Tribes (ST), Schedule Caste (SC), and Below Poverty Line (BPL) category. This opens the window of options for natural resource development in a contiguous area where such target group own the degraded land which requires investment for increasing productivity. In absence of such support, the land remains unproductive consequently families who own the land depend on wage related employment. The convergence approach further provides flexibility to design the intervention as per the requirement of treatment in the given area. The advantage of such flexibility is to direct the programmes for resource

degraded regions which are dominated by tribal and schedule caste population for improving the resource base.

In two villages Kerabar and Sukhri, convergence examples were found during the study. All the schemes required to be converged with other schemes or departments for sustainable development. Assets created like pond, well, bandh check dam need convergence with agriculture, horticulture, fishery and other related department to harvest the maximum benefit of the structures.

Fishery & duck rearing are very potential activities in the ponds created. Training in this area is required to the beneficiaries of NREGA for optimal utilization of the structures. This year block has requested for supply of good quality fingerlings from fisheries department. But they have not received till date and this is too late for fingerling stocking in the ponds created.

6. Facilities at Worksite

1-2 % of the scheme cost is being utilized for contingencies. Shed for relaxation and shelter at day time, drinking water, medical facilities previously not provided. Now emphasis is being given for these amenities. Work site maid (dai) for children not found anywhere in the study. After the selection of mates condition is improving.

Tools are not provided under the scheme and workers are using their own tools. The tools used are the common implements like spade, pickaxe, shovels for digging soil and chisel and hammer for breaking rocks. There is need to give thought on improving the efficiency of work by providing the better tools which would make the work convenient and at the same time output increases.

7. Sustainability

NREGA from its inception has been focused solely on creating of jobs for the poor. The huge amount allocated and invested through this programme mainly reflecting transfer of income. The infrastructure created under the scheme could not get the due attention of longevity in terms of resource development and contributing to the sustainable livelihood of the beneficiaries. Given adequate thought in the planning stage itself to development of sustainable resource support systems at the farmers level would have decreased the dependency on employment oriented schemes and the beneficiaries could get engaged in production related activities.

The key observations during the study related to issues of sustainability are as follows:

- Little or no attempt has been made to form the users groups and capacity building of the users for maintenance of created infrastructure. Farmers usually have a mindset that all repair and maintenance work is the responsibility of the Government. Awareness to change this mindset would have improved the situation and brought about a feeling of ownership of infrastructure among the users.
- There are cases where farmers have converted ponds into paddy fields.

This is indicating that the felt need of the farmer taken into consideration while deciding the technical interventions.

- It has also been observed that there are many structures which have been constructed but never used at all. Example may be cited of the check dam at the village Ratu Gamharia or at village Bhathauli. Similarly there are structures that have been left incomplete. Example may be cited of the ponds at the village Chainpur or at village Kurumgarh. (For details please refer Table no. 1)

8. Measurement of Earthwork

The earthwork is measured in terms of chowka (*a rectangular/square pit dug out with specific dimensions for work measurement*). Initially the size of a pit was 2.8 cubic meter (3.04 mtr. x 3.04 mtr. x 0.3 mtr). In 2007-08 the size of chowka was 2 cubic meters but the size has been reduced to 1.5 cubic meter (2.7 mtr. x 1.8 mtr. x 0.3 mtr.) without lift with effect from July 2009. The result is that the workers are digging 2-3 chowkas and sometimes even 4 chowkas in a day. The muster roll is being adjusted by increasing the number of days corresponding to the work done by the particular person i.e if four chowkas are dug by a person, then it will be shown in four days.

RECOMMENDATIONS

The study commissioned by the Ministry of Rural Development under the support of UNDP to assess the performance of NREGA in a block has been very useful in gaining experience and learning from the grassroots. The study provided an opportunity to interact with different stakeholders (district, block, Gram Panchayat, village, and the beneficiaries) which brought about several observations which had been discussed earlier chapters. The experience, ground realities and learnings provides ample scope for improvement in the physical execution of the work as well as the processes adopted for implementation. The recommendations are categorized mainly by considering the requirement of action for improvement at different levels namely community level, block & district level and the National level for incorporation in the broad guidelines.

Community

1. The strengthening of Gram Sabha is found a primary requirement for effective decision making for various aspects related to selection of scheme to the execution. The effective participation of members of Gram Sabha in meeting is still a dream to be fulfilled. The local leadership play key role in mobilizing community and listening the voice of unheard. To ensure the participation of maximum members, announcement should be made in advance about the date and venue of gram sabha.
2. The composition of Nigrani Samiti (Village Monitoring Committee) should be such that it is represented by the independent members who do not

have direct benefit from the scheme. The Nigrani Samiti also needs to be capacitated on their roles and functions so that they are able to improve the effectiveness of the schemes.

District/Block

1. The study reveals that the proposal of any intervention placed by the members in gram sabha is normally accepted. It is never weighted against the alternative schemes. To introduce the system of prioritization of scheme and selecting the needed one first would require better awareness among the decision makers at Gram Sabha. The block level team needs to facilitate this process so that the selected schemes provide the benefit to marginalized groups.
2. The villager, where scheme under NREGA is under implementation, should be aware about the selection and implementation of scheme. For this, special efforts are required through awareness campaign and adopting the appropriate strategy regarding IEC (Information Education Communication) like wall writings, pamphlets and booklets etc.
3. For every scheme, a detail survey should be carried out regarding the expected benefits of the structure, the number of beneficiaries, design & cost estimation, together with the socio-economic status of the beneficiaries. The purpose of the structure should be clear in the beginning and a Management Information System (MIS) should reflect on actual results after the implementation. The technical

- support group at block level should be trained and given responsibility for this activity, including maintaining the MIS.
4. Out of 37 schemes assessed, only two cases of convergence with other agencies are visible. For judicious resource utilization, district authorities/block level officials need to give special thrust on identifying the scope of involvement of different departments/programs to any particular scheme proposed under the NREGA for achieving convergence leading to maximum benefit.
 5. During the planning stage itself, the users group needs to be identified and involved in the planning and execution of the scheme so that the ownership of the created infrastructure remains with them. The users group should be oriented and trained on repair and maintenance of the schemes with an appropriate mechanism of financing. The system for benefit sharing is also suggested to be established in the initial stage itself to avoid any conflict.
 6. Based on the observations of the check dam sites, it is noticed that the appropriate designs were not adopted which have resulted in not utilization of the structures. To avoid such cases, systematic survey and the proper design which suits to the local condition need to be adopted. For example, instead of constructing a check dam with the provision of gates, which requires the regular maintenance from the users for installation of gates after the monsoon and removal of the same before next monsoon to allow water to flow, an overflow structure would have been better option which does not require constant attention from the users.
 7. In many cases deficiency in construction of water harvesting structures has been noticed. It is suggested to adopt the standard construction practices like compaction, dressing, plantation of grasses on the slopes etc. to increase the efficiency of structures created. Proper drainage is required to protect the road from soil erosion and water logging. The passage of surplus runoff through the road should be ensured to prevent erosion. Pipe Culverts / RCC crossways need to be provided at appropriate locations wherever road construction to be planned.
 8. Almost fifty percent of the schemes are found incomplete, even though many of them started during the year 2006 - 07 & 2007-08. This raises a serious concern, not only because these are not serving the purpose for which envisaged, but these cases negatively impact the soil erosion as soils get exposed and left loose without proper dressing & compaction. Therefore special attention is to be given for completing the schemes in all the aspects so that the purpose is served and community is benefitted from it.
 9. Awareness programmes to be conducted for community to understand the provisions within the scheme, work measurement and cost assessment practices (lead and lift), payment entitlement and procedures, banking system.
 10. The Gram Rojgar Sevaks and mates should be given orientation on the concept of the water harvesting structures, the basic principles involved in the site selection, measurement of earthwork, preparation of muster rolls and first-aid treatment.

Policies

1. Guidelines should explicitly mention about the priority for selection of smaller structures for soil and water conservation (like the farm ponds, dug wells, gully plugs, small plots less than 1 acre for leveling etc). This is mainly to avoid the losses of the land of marginal and small farmers for infrastructure development and also to direct the benefit towards the targeted population.
2. It is a normal practice that tools for earthwork are not provided to the workers and they are using their own tools. It is observed that the tools used are very common implements like spade, pickaxe, shovels for digging soil, and chisel and hammer for breaking rocks. There is need to give thought on improving the efficiency of work by providing the better tools which would make the work convenient and at the same time output increases. In this regard the specialized institutions on agricultural tool development at Bhopal, M.P. and Bardoli, Dist. Valsad, Gujarat can be contacted for seeking their expertise for introducing the appropriate tools to make the job easy for workers under NREGA.
3. It is also recommended that while planning the schemes, a provision should be made of the implements required for accomplishing the task. Normally the poor family do not keep the tools at home and this becomes an additional cost for them.
4. NREGA has given ample opportunity for infrastructure development at the community level. However, there is a need to look beyond only infrastructure development. It should look into the sustainability aspect by emphasizing on quality assurance of physical work and capacity building of users. In the context of improving the quality of work the specific observations and suggestions have been enlisted in the above section. There is need to give thrust on capacity building at different levels. At the community level, there is need to provide input on the proper repair and maintenance of the infrastructure created, monitoring & supervising the work as per the standard norms/practices.
5. The technical support group at block level has to be oriented in understanding the comprehensiveness of the scheme and design the suitable interventions. The coordination among the different line departments is required to make use of the opportunity provided under NREGA for better service delivery by pooling the resources available.

TRANSFORMING LIFE THROUGH CONVERGENCE: A CASE STUDY

Kerabar village presents a good example of convergence. A pond has been constructed under NREGA in the land of Premlal Minj at Kerabar village, in Barwenagar Gram Panchayat. The pond was proposed as a means for improved irrigation and a site for fishery development. Construction work has been completed in 2007. While the size proposed for the pond was 50'x50'x15', the pond eventually constructed measures 60'x60'x10'. The flexibility was provided for the beneficiaries to adopt the dimensions as per local condition.

Smiles have come on the faces of Premlal Minj and other farmers who benefit from this pond.

Firstly, the pond has helped thirteen farmers irrigate their paddy crop grown on eight acres of land.

Secondly, Premlal has also reaped a fishery harvest. Premlal was trained on fishery activities by GVT, another NGO implementing a watershed programme in the village. He harvested 12 kg of fish which was used for family consumption. Next year he plans to take up fisheries more rigorously so as to be able to market fish.

But surprisingly, the pond has helped promote a third sustainable livelihood option – sericulture. A local NGO AROUSE has been promoting sericulture in this village. Based on his training, Premlal cultivated mulberry plants on one

acre of land for rearing silkworms. He irrigates these plants by using water from the pond constructed under NREGA. This year Premlal has harvested good cocoons and made sales of Rs. 6000/-.

Premlal is not the only one who is using the pond water for irrigating his mulberry crop. Other farmers too have adopted this livelihood option and are reaping its benefit. Kerabar village has 55 households, of which 20 households are engaged in mulberry cultivation. On an average, each family has planned to cultivate one acre of land each with mulberry plants. This will provide each such family with an additional income of about Rs. 5000 - 6000/- per year.

A well has also been constructed under NREGA in the land of Xavier Minj, which provides additional irrigation to the mulberry crop of five farmers.

Further, mulberry provides scope for poultry farming. Based on the substantial quantity of mulberry fruit produced, farmers now plan to take up commercial poultry farming.

The case reflects on how NREGA has managed to give a thrust to sustainable livelihoods beyond the envisaged aim of employment generation. It also reflects on the giant potential of NREGA in creating sustainable livelihood systems at the grassroots level through well-planned convergence to bring synergy in development programmes.

ANNEXURE: LIST OF VILLAGES COVERED UNDER APPRAISAL STUDY

Sl. No.	Gram Panchayat	Village	Activity (Dimension in Metres)	Year	*Govt. Sanction Letter / Scheme	Owner
1	Chainpur	Chainpur	Well (6.09 - 9.14)	2007-08	74/07-08	Isdore Toppo
2		Chainpur	Pond (27.4 - 27.4 - 4.6)	2007-08	1652/11-12-2007	Herman Lakra
3		Chainpur (Madaikona)	Pond (30.4 - 30.4 - 3.04)	2006-07	88/2006-07	Paskal Toppo
4	Bendora	Chhatarpur	Check dam (Putusjharua Nala)	2006-07	957(II)/07-11-06	PIA-Spl Division
5		Bamhni	Land Leveling	2007-08	1652/11-12-2007	Shilash Minj
6		Bendora	Mitti Murram road	2009-10	12/09-10	Community
7	Bardih	Roghadih	Pond (60.9 - 60.9 - 4.6)	2006-07	248/06-07	Jagarnath Munda
8		Kalda	Pond (27.4 - 27.4 - 4.6)	2007-08	1652/11-12-2007	Deepak Khes
9		Kukrunja	Well (3.04 - 10.7)	2007-08	1478(A)/15-11-2007	Bandhu Oraon
10		Kukrunja	Well (6.09 - 9.14)	2006-07	113/06-07	Shahdeo Oraon
11	Kating	Somlabartoli	Pond (60.9 - 60.9 - 3.04)	2006-07	04/ 06-07	Upendra Pd Bhagat
12		Natapol	Pond (27.4 - 27.4 - 4.6)	2007-08	1652/11-12-2007	Prakash Minj
13		Natapol	Mitti Murram road	2009-10	1064/20-06-09	Community
14		Chitarpur	Pond (30.4 - 30.4 - 4.6)	2009-10	-	Miluram Lohra
15	Barwenagar	Harradipa	Pond (30.4 - 30.4 - 3.04)	2006-07	117/06-07	Lenjinius Kujur
16		Kerabar	Well (6.09 - 9.14)	2007-08	1478(A)/15-11-2007, & 119/07-08	Xavier Minj
17		Bhelwatalab	Pond (27.4 - 27.4 - 4.6)	2007-08	1652/11-12-2007	Jerome Toppo
18		Silphari	Pond (60.9 - 60.9 - 4.6)	2009-10	02/ 09-10	Ebartus Kujur

Infrastructure Development And Beyond – under NREGA

Sl. No.	Gram Panchayat	Village	Activity (Dimension in Metres)	Year	*Govt. Sanction Letter / Scheme	Owner
19	Bamda	Kurumgarh	Pond (30.4 - 30.4 - 4.6)	2006-07	72/2006-07	Bhakdu Baiga
20		Darkana	Well (3.04 - 9.14)	2006-07	1478(A)/15-11-07 & 84/06-07	Babulal Oraon
21		Darkana	Pond (15.2 - 15.2 - 3.04)	2006-07	38/ 06-07	Mangu Kherwar
22		Darkana	Pond (15.2 - 15.2 - 3.04)	2006-07	39/2006-07	Puna Kherwar
23	Malam	Ratu Gamharia	Check Dam	2006-07	225(II)/25-05-06	PIA-Minor Irrigation
24		Ratu Gamharia (Jam toli)	Guard Wall	2007-08	50/2007-08	Community
25		Malam	Guard Wall (near Gunutala)	2007-08	1652/11-12-2007	N. A.
26		Dahudadgaon	Bund (Ratangaarha)	2009-10	Could not get	Fardinand Lakra
27		Dahudadgaon	Pond (21.3 - 22.8 - 4.6)	2006-07	44/2006-07	Fardinand Lakra
28	Chhichhwani	Chachali	Pond (21.3 - 27.4 - 4.6)	2007-08	1652/11-12-2007	Kalyan Minj
29		Katkahi	Land Leveling (3 Acre)	2007-08	1652/11-12-2007	Arun Toppo
30		Sukhadi	Well (3.04 - 10.7)	2007-08	68/2007-08	Nilima Toppo
31	Rampur	Bukma	Pond (27.4 - 27.4 - 4.6)	2007-08	1652/11-12-2007	Ramnath Bhagat
32		Bhathauli	Check Dam (Nagra Nala)	2009-10	Could not get	Parmeshwar Rautia
33		Rampur	Land Leveling	2007-08	1652/11-12-2007	Bonifas Lakra
34	Janawal	Besnapath	Bund (Garha toli)	2007-08	1652/11-12-2007	N. A.
35		Besnapath	Mitti Murrum Road construction	2009-10	881/07-06-09, & 10/09-10	Community
36		Mahuatoli	Pond (27.4 - 27.4 - 4.6)	2007-08	1652/11-12-2007	Bhincant Ekka
37		Dokapath	Pond (30.4 - 30.4 - 4.6)	2009-10	1908/29-09-09	Alexius Asur

**Based on information provided, the table lists either the reference number & date of the sanctioning letter, or scheme reference number with the year of sanction.*

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