



Department  
for International  
Development

## Mainstreaming 'Disability' in MGNREGA

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## Infrastructure for Climate Resilient Growth in India (ICRG) Programme

Submitted By:



### **IPE GLOBAL LIMITED**

IPE Global House,  
B - 84, Defence Colony,  
New Delhi - 110 024, India  
[www.ipeglobal.com](http://www.ipeglobal.com)

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## 1. Introduction

This position paper aims to make recommendations on how to incorporate disability considerations into all aspects of infrastructure provision under the Mahatma Gandhi Rural Employment Guarantee Act (MGNREGA). The information contained in this paper has been generated through a rapid assessment of people with disabilities and reduced mobility through a primary survey conducted by the ICRG programme in select areas of the three project states of Bihar, Chhattisgarh and Odisha.

MGNREGA is the world's largest State-led public works programme and has invested ₹53,024 million and created about 28 million assets in rural areas of India since 2006. While MGNREGA assets include a variety of works such as water harvesting structures, plantations, flood control measures, rural infrastructure etc., water related structures that address issues of domestic use and irrigation have the greatest influence on the social and economic well-being of people with disabilities living in the rural areas of India. If such infrastructures ensure universal access, including for users with disabilities, it will enable them to participate in social and economic life and fully realize their capabilities.

Universal access to infrastructure is particularly important with respect to the Sustainable Development Goals, which emphasize the need for inclusion of all people, including people with disabilities. Disability is referenced in several SDGs, specifically in relation to education, growth and employment, inequality, accessibility of human settlements, as well as data collections and monitoring of the SDGs.

As per Census 2011, the total number of 'disabled' people in India is 26.8 million, which is 2.21% of the total population - 69% of the disabled population resides in rural areas. The Census data also reveals that 20% of the disabled people have disability in movement, 19% have disability in seeing, another 19% have disability in hearing, and 8% have multiple disabilities (MOSPI 2016).

Irrespective of the numbers, however, it is important that people with disabilities be consulted, along with other users and stakeholders, and infrastructure be designed for universal access, with focus on the full realization of potential for people with disabilities.

There are several Acts and Legislations in India that promote the welfare of persons with disabilities (PwDs). *The Persons with Disabilities (Equal Opportunities, Protection of Rights, and Full Participation) Act, 1995* provided for education, rehabilitation, employment, non-discrimination and social security to PwDs. This Act was replaced by the *Rights of Persons with Disabilities Act, 2016*, which is the disability legislation passed by the Government of India (GoI) to fulfil its obligation to the United Nations Convention on the Rights of Persons with Disabilities ratified by India in 2007. The Act lays stress on non-discrimination, full and effective participation and inclusion in society, respect for difference and acceptance of disabilities as part of human diversity and humanity, equality of

*Disability results from the interaction between persons with impairments and attitudinal and environmental barriers that hinders their full and effective participation in society on an equal basis with others..... Persons with disabilities include those who have long-term physical, mental, intellectual or sensory impairments which in interaction with various barriers may hinder their full and effective participation in society on an equal basis with others.*

***UN Convention on the Rights of People with Disabilities (UN CRPD)***

***SDG # 10*** strives to reduce inequality within and among countries by empowering and promoting the social, economic and political inclusion of all, including persons with disabilities.

opportunity, accessibility, and equality between men and women. The principle reflects a paradigm shift in thinking about disability from a social welfare concern to a human rights issue (Narayan and John, 2017).

In addition, there is a *National Policy Statement, 2006* that recognizes that persons with disabilities are valuable human resource for the country and seeks to create an environment that provides them equal opportunities, protects their rights and full participation in society.

It is, therefore, imperative that all government policies and programs, including MGNREGA are inclusive of people with disabilities and other vulnerable groups that may be marginalized because of traits over which they have little or no control, including caste, gender, income, age, etc.

## 1.1 Purpose and Intended Users

Although there are existing guidance documents on integrating measures for PwDs in the infrastructure sector, they are not particularly relevant for the kind of infrastructure that MGNREGA implements. There has been some work done in the water, sanitation and hygiene (WASH) sector, however, it is also recognized in the literature that those studies may not be immediately applicable in rural and peri-urban areas of low-income countries where infrastructure is poor, and resources scarce (Unicef 2016).

Integrating the principle of '*universal design*' in MGNREGA infrastructure, therefore, requires a better understanding of the barriers faced by people with disabilities and their perspectives on appropriate measures so that the infrastructure can be used by people of all ages and abilities without the need for adaptation or specialized design.

This paper is intended primarily for the Ministry of Rural Development (MoRD), the nodal Ministry for MGNREGA. The insights will also be useful for other Ministries and stakeholders that implement water related infrastructure in rural areas. It should be noted, however, that the regulatory, technical and financial feasibility of the recommendations presented here is beyond the scope of the position paper. The goal is to present user insights, which can serve as a basis for an informed dialogue with the MoRD. Some of the recommendations will also be integrated in the design of climate resilient works under ICRG<sup>1</sup>.

## 1.2 Structure

The paper has been structured as follows: Section 2: Rationale for considering disability in MGNREGA infrastructure; Section 3: Methodology; Section 4: Findings and Recommendations; and Section 6: Concluding Remarks.

## 2. Rationale for Considering Disability in MGNREGA Infrastructure

With the renewed focus on creating productive and durable infrastructure, more than 5 million assets annually are currently getting built under MGNREGA. At least 65% of all these assets are supposed to be in the natural resource management (NRM) sector, many of which are infrastructure that provides

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<sup>1</sup> ICRG is a bilateral cooperation project between the UK's Department for International Development and the Ministry of Rural Development (MoRD), Government of India. The program aims at integrating climate change considerations in the planning and design of MGNREGA infrastructure.

water for washing, drinking and irrigation needs of the rural population. Out of the 26.8 million people with disabilities in India, 18.6 million reside in rural areas. As per the Rights of Persons with Disabilities Act, 2016, people with disabilities have the same rights as other people, including the right to water for domestic and productive needs, and it is the responsibility of MGNREGA to ensure that such water infrastructures are accessible to all, including people with disabilities.

MGNREGA contributes to multiple goals under the SDGs. The Ministry of Rural Development (MoRD) has recently started measuring MGNREGA's contribution to various SDGs, including Goal #1: No poverty, Goal # 5: Gender equality, Goal # 6: Clean water and sanitation, Goal # 8: Decent work and economic growth, Goal # 15: Life on land, and Goal # 16: Peace, justice and strong institutions. The SDGs explicitly include disability and persons with disabilities, so it is



Figure 1: MGNREGA and SDGs

imperative that MGNREGA promotes disability inclusion in the provision of all these goals. Making water harvesting and irrigation structures more accessible for all by applying universal design principles benefits everyone in the community, including people with disability.

Provision of safe, inclusive and accessible infrastructure will ensure that everybody benefits from improved health and productivity outcomes, improves the protection of people with disability, and reduces the workload of families in caregiving tasks. When considering the provision of MGNREGA infrastructure, it is important to look at MGNREGA planning as well. Provision of information on MGNREGA works, location of and facilities at Gram Sabha meetings etc. may not be accessible to people with disability. Information as well as the way it is provided is important to ensure inclusion.

Although this paper has been written in the context of MGNREGA, findings and recommendations from the study will be relevant for similar infrastructure created under other programmes.

### 3. Methodology

This paper is based on a rapid assessment of people with disability to understand the barriers they face in accessing water related infrastructure and design modifications to such infrastructure that would improve the accessibility and use of those structures. A primary survey, using a structured questionnaire, was conducted in the States of Bihar, Chhattisgarh and Odisha where the Infrastructure for Climate Resilient Growth program (ICRG) is being implemented.

Because of time and resource constraints, convenience sampling technique was used. One gram panchayat from each of the 103 Blocks in which ICRG is being implemented was chosen and all people with disability in that panchayat were interviewed. These gram panchayats were selected because of the presence of ICRG community mobilizers working in those Panchayats. The list of people with disability in the gram panchayat was obtained from the Panchayat office. For each person with disability that was interviewed, at least one caregiver from the household was also interviewed.

Separate questionnaires were designed for people with disability and caregivers. Respondents were asked about two different kinds of infrastructure: (1) Drinking and washing related water structures that include community hand pumps, community ponds and community wells; and (2) Irrigation infrastructure. Except for community hand pumps, these are all MGNREGA structures.

The survey was conducted between July 1 – 20, 2018. ICRG community mobilizers conducted the interviews by visiting each individual respondent household, using a paper-based questionnaire that was manually filled during the interview. Data entry was done later using a pre-designed excel format. Completed questionnaires were collected and sent to the respective ICRG State offices where ICRG researchers cross-checked and validated the data.

The total sample size for the study includes 1838 people with disability and 2135 caregivers.

### **Definition of Terms**

**Infrastructure** refers to the basic physical and organizational structures and facilities (e.g. buildings, roads, power supplies) needed for the operation of a society or enterprise (OD, 2018).

**MGNREGA Infrastructure/assets** include a variety of permissible works which can be taken up by the gram panchayats. These include water conservation and water harvesting structures such as earthen dams, stop dams, underground dykes, watershed management works such as contour trenches, terracing contour bunds, micro and minor irrigation works such as maintenance and renovation of irrigation canals and drains, plantation works such as afforestation, horticulture, and creating infrastructure for promotion of livestock and fishery.

**Universal Access** provides for ease of independent approach, entry, evacuation, and/or use of services and facilities by all potential users regardless of disability, age or gender with an assurance of individual health, safety and welfare during these activities (International Standards Organization, 2011).

**Universal Design** is for everyone. It is about creating facilities, built environments, products, communications, and services accessible to people of all abilities, and as far as possible, without adaptations. Universal design makes everything usable for as many people as possible from the beginning, so that changes are not required later (vic.gov.au).

## **4. Findings and Recommendations**

This section presents the findings and recommendations from the survey, in terms of barriers in accessing specific MGNREGA infrastructure and recommendations to make them more inclusive, particularly for people with disability. As has been pointed out earlier, although MGNREGA infrastructure was the focus of the study, the recommendations are relevant for all local infrastructures. Results are presented separately for people with disability and caregivers.

## 4.1 People with Disability

### 4.1.1 Sample Description

A total of 1839 people with disability responded to the survey, 34% of whom are female and the remaining 66% are male. Figure 3 provides the percentage distribution of respondents by age group.

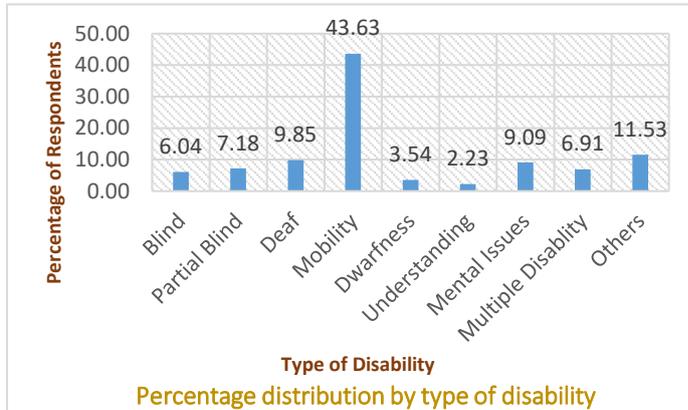


Figure 2: Percentage distribution of respondents by disability

Among the different types of disability, mobility represents the highest percentage of people followed by other kinds which include polio and paralysis.

There are a large percentage of respondents (~49%) that are illiterate. Figure 4 shows the distribution of respondents by their educational qualifications.

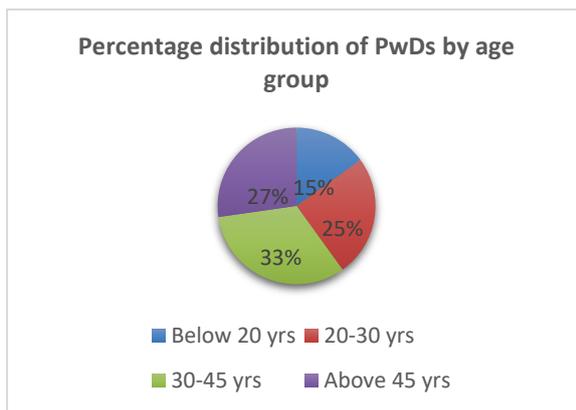


Figure 3: Percentage distribution of respondents by age group

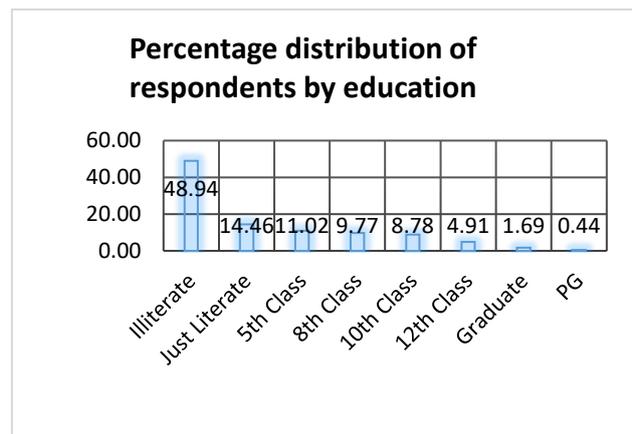


Figure 4: Percentage distribution of respondents by education

### 4.1.2 Participating in MGNREGA Planning – Barriers and Recommendations

#### Major Barriers

Respondents receive information on annual planning of MGNREGA works from Panchayat workers, Panchayati Raj Institution (PRI) members, or through announcement by the Panchayat. 28% of the respondent's face difficulty in understanding such information because of their specific disability, whereas another 37% reported not receiving such information on time. Other reasons cited for difficulty in accessing the information include lack of mobility, poor hearing or vision, and lack of interest in participating in the MGNREGA planning process.

MGNREGA follows an extensive planning process for the preparation of the annual labour budget. This includes a series of Gram Sabha meetings where people from the gram panchayat participate and place their demand for works. Majority (52%) of the respondents said that they have problems participating in the Gram Sabha meetings.

Among the ones having problems participating in Gram Sabha meetings, 67.6% reported mobility and 42.5% reported distance as the major problem. The other reasons cited were inadequate seating arrangements at the meeting venue (22%) and lack of landmarks on the way to the meeting venue (14%).

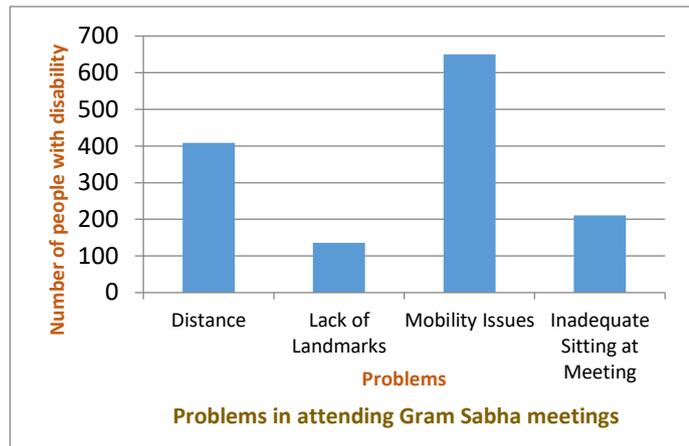


Figure 5: Barriers in attending Gram Sabha meetings

## Recommendations

Respondents were asked to suggest ways in which disabled people can participate more effectively in MGNREGA planning. Following are the recommendations provided by the respondents:

- Individual notice for Gram Sabha meetings should be provided for PwDs;
- Posters and leaflets at various places as well as announcement through loud speakers should be used to disseminate any information regarding MGNREGA planning;
- Other non-traditional and modern communication mediums such as short drama, videos, films, messages and calls on mobile phones should be used to disseminate information;
- Specific information camps for PwDs should be organized to disseminate information about MGNREGA and other government schemes;
- All MGNREGA information, regarding works, meeting notices etc. should be made available in braille;
- Individual aid devices such as walking stick for people with limited or no vision, hand driven or automatic rickshaws and tricycles, and hearing aid devices should be provided;
- Transport facilities should be arranged for PwDs to attend Gram Sabha meetings;
- MGNREGA should come up with a separate list of activities/works that are 'disability friendly;'
- Special treatment should be given to PwDs at Gram Sabha meetings. This may include separate seating arrangements and chance to speak first in the meeting, so they can leave early in case they choose to;
- PwDs should be represented in Panchayati Raj Institutions and they should be trained on MGNREGA, so they can play a greater role in increasing the participation of PwDs in MGNREGA;
- There should be special volunteers/MGNREGA workers for PwDs.

### 4.1.3 Design of MGNREGA Infrastructure – Barriers and Recommendations

#### Washing and Drinking Related Infrastructure

##### *Major Barriers to Access*

Typical water sources used for washing needs in rural areas include community ponds, community hand pumps, community wells, farm ponds and individual water sources, whereas typical water sources for drinking needs include community hand pumps, community wells, piped water and individual water sources.

Among the respondents that face problems accessing the water sources, 52% reported mobility as the major barrier, whereas 26% mentioned distance to the water source as the major barrier. Bad roads (10%) and other reasons (12%) such as caregiver also being handicapped are the other barriers PwDs face in accessing MGNREGA infrastructure.

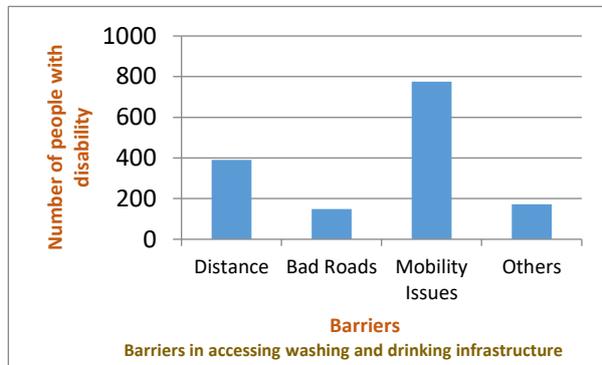


Figure 6: Barriers in accessing washing and drinking

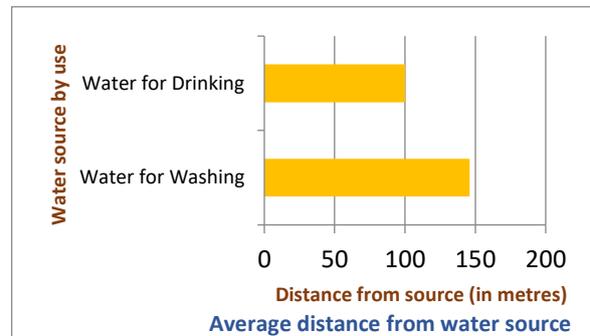


Figure 7: Average distance of households from water source

## Recommendations

Respondents were asked to suggest specific design modifications that will help them access and use the water infrastructure. Following are the recommendations provided by the respondents:

- Piped water should be supplied to the households;
- Bore well along with hand pump should be installed within the residential premises;
- Hand pumps should be low in height and should have long handles. There should be a concrete platform with steps near the hand pump and the hand pump should be easy to use;
- There should be water tanks with taps near the hand pumps;
- Solar pumps should be installed at all water sources to provide tap water;
- Concrete platform with steps should be built around dug wells and bore wells;
- Rope and pulley should be attached to all wells;
- Low rise steps and rails should be constructed for all community ponds;
- Bathrooms for PwDs should be constructed near hand pumps, community wells and community ponds;
- All water structures, including peripheral and access structures should be maintained properly and regularly to ensure they are clean, and not water logged or slippery;
- There should be better and well-maintained access roads to all water structures;
- There should be signs and way markers to all structures;
- Individual aid devices such as walking stick for people with limited or no vision, hand driven or automatic rickshaws and tricycles should be provided.

## Irrigation Infrastructure

About 28% of the respondents are engaged in farming and are directly linked with irrigation infrastructure for their farms. Irrigation infrastructures under MGNREGA include irrigation canals, minor irrigation works, and community micro irrigation systems.

## Major Barriers to Access

Among the respondents who are engaged with farming and irrigation infrastructure, 57% reported that distance from the irrigation source is a major barrier, whereas about 35% mentioned mobility as a major barrier. Bad roads (20%) and other reasons (3%) are the other barriers faced by PwDs in accessing irrigation infrastructure. The average distance of the irrigation infrastructure from the farm is 692 meters.

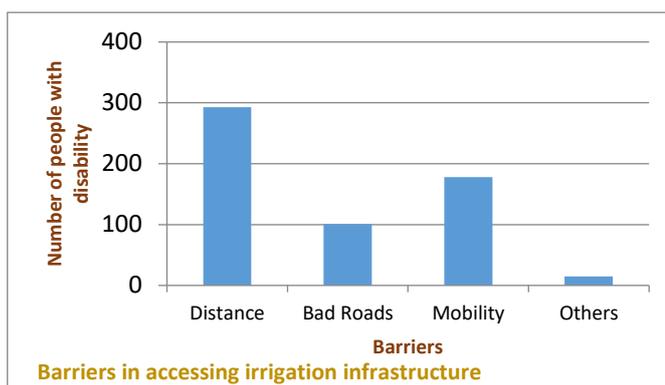


Figure 8: Barriers in accessing irrigation infrastructure

## Recommendations

Respondents were asked to suggest specific design modifications that would help PwDs better access and use irrigation infrastructure. Following are the recommendations provided by the respondents:

- Water from the irrigation source should be brought right to the farm through canals, pipes or other means such as extension of existing canals and field channels;
- Bore wells should be provided at the farm land;
- Lift irrigation facilities through solar pumps should be provided to bring water to the fields;
- Irrigation source should be near the farm land;
- Individual farm ponds and dug wells should be provided for PwDs.

## 4.2 Caregivers of People with Disability

### 4.2.1 Sample Description

A total of 2137 caregivers of people with disability responded to the survey. 47% of the respondents are female and the remaining 53% are male. Caregivers are typically family members including wife, mother, father, siblings, children and in-laws. Each caregiver on an average spends 170 minutes in a day caring for a family member with disability, especially his/her washing and drinking needs.

### 4.2.2 Recommendations for Design of MGNREGA Infrastructure

Caregivers of people with disability who were part of this survey were asked to suggest specific design modifications for water structures (washing, drinking and irrigation) that would help PwDs better use such structures. Following are the recommendations provided by the respondents:

- Piped water should be provided to households with PwDs;
- Hand pump and bore wells should be constructed either inside the house or water source should be very close to the house;
- Rope and pulley should be attached to wells;
- There should be a concrete platform with steps near all wells and hand pumps;
- There should be special bathrooms and washrooms near water sources for PwDs;
- There should be steps with railing for all community ponds;
- Solar pumps should be used to deliver water from different sources right to the houses;

- There should be better approach roads to all water structures.

## 5. Concluding Remarks

More than 5 million new infrastructures are built under MGNREGA every year. In addition, most of these are earthwork that requires maintenance and renovation. There is, therefore, a huge opportunity for mainstreaming disability considerations within MGNREGA infrastructure.

If such infrastructures remain inaccessible in any aspect, it can exclude certain individuals and groups and therefore, result in loss of productivity, welfare and ultimately degrading the quality of life and human rights. While this is true for all users, it creates a formidable barrier for people with disability.

It is not just people with disability that get affected, there is a much larger population whose welfare gets constrained because of their commitments to people with disability. In this study, for example, caregivers spend 170 minutes on an average per day on washing and drinking needs of PwDs. Integrating disability concerns in MGNREGA infrastructure will promote independence and increase in welfare for both PwDs as well as their caregivers.

This study provides some useful recommendations, based on user insights, on ways to mainstream disability within MGNREGA infrastructure, particularly water infrastructure for washing, drinking and irrigation needs. It is important to consider the entire MGNREGA cycle, including planning and design of infrastructure, while incorporating principles of universal design. Some of the recommendations on design modification of infrastructure will require further research on specific dimensions of the structures, suitable construction material etc. Relative costs and feasibility of different options, in terms of legal, regulatory and technical feasibility vis-à-vis MGNREGA will also need to be considered. Such analysis is beyond the scope of this position paper.

It is also important to note that in many cases technology solutions such as use of solar pumps may provide a more efficient way of ensuring universal access, and it is not necessary that design modifications follow a path that has been successful in other countries and contexts. Users of MGNREGA infrastructure live in rural areas and may not always possess the latest information on cutting edge technology and it is imperative that such information be shared with them.

Although this study has been done specifically for MGNREGA infrastructure, understanding of some of the barriers and recommendations will be useful for similar rural infrastructure constructed under various government and non-government programmes.

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