

Water Supply and Disability: A Case Area of Vijayawada

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Abstract-India and China are the two biggest economies in Asia which consists of 21 megacities but it has huge inequalities between urban and rural areas especially income based and water inequalities. The water poverty index of Asian sub regions tells us a different story of water injustice despite the fact that it has per capita availability of water is far more than the world average. Safe drinking water is the basic need as well as right of each and every individual irrespective of any form. This paper focuses on the water justice aspect related to disable people with the help of various cases identified in Vijayawada. The parameter of justice is analysed in comparison of usage of water of a normal human being to different kinds of disable people. This is sorted by type of disability with corresponding case person example. It is assumed that same type of disability person will face similar problems in the respective age groups. Efforts are taken to cover all the age groups possible with limited source of samples. Qualitative representation of cases are undertaken to highlight the issues of disabled people. The scoring logic is applied and rated as per the perspective of justice accepted by different agencies universally. This study will help to review water and disable people related concerns. The conclusion part discusses the improvements and flaws to be addressed by suitable suggestions in the given frame of justice.

Keywords- Asia, Disability, Rights, Water Access, Water Collection, Water Justice, Water Use

1. INTRODUCTION

Asia is a land full of diversified natural resources. Asia has 21 megacities in the world of population more than one crore. Delhi being the largest and four others of India and China cities count in top ten largest cities of the world. These are the two growing giants of economic powers in Asia [19]. But this is only one side. The other side is really contradictory to this. Despite all these abundances, it has poverty, slums as well as huge inequalities between the urban and rural areas, especially income based and water inequalities.

Almost 60% of the world's total population lives in Asia. Out of this, South Asia has 22% of Asia's total population and per capita availability of water for Asia is more than that of the world average [7]. The water poverty index of east, south central and south east Asia ranges from 55% to 62% with an average of 58% [3]. According to the UNDP Human Development Report (2006), the global crisis in water consigns large segments of humanity to lives of poverty, vulnerability and insecurity [11].

Millennium Development Goals (MDGs) target no. 10 aimed to halve the proportion of people without

sustainable access to safe drinking water and sanitation by 2015 [10]. Sustainable Development Goals (SDG's) target no: 6 aimed to achieve universal and equitable access to safe and affordable drinking water for all, by 2030 [10]. As per 2010, the per capita water availability in India was 1588 cubic metre [9]. In a working paper of WASH project, it was mentioned that the per capita water availability in India as per 2001 was 1750 cubic metre while for Andhra Pradesh it was 1400 cubic metre [13]. Thus, water accessibility study over these areas may prove to be really significant.

WHO report states that around 10% population of world is disabled. And according to 2011 census data, 2.21% of the total population was disabled; whereas according to 2001 census, this figure was 2.13% (2.19 cores). Particularly in context of Andhra Pradesh, according to 2001 census, the percentage of disabled people was 2.68% [5].

Furthermore, the disabled have very few or no access to the public services many a times. The community development initiatives do not consider the problems and needs of the disabled. Disabled are the 'hidden poor' and mostly the marginalized sections of the society [17]. Due to their existence in a very low percentage, the issues of the disabled are mostly not considered while preparing plans for a public supply or any developmental activity.

In case of poor families, the access to water for women sometimes becomes doubly disadvantaged due to the household's poor access to facilities or resources and

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also due to the ignorance and disrespect towards women [6]. In low income communities, the most common complaint is the lack of specialized facilities, systems of support, aids and equipment for disabled people and their families [4].

This paper focuses mainly on the problems faced by the disabled, in situations related to water like water transportation, collection and usage, affordability to water supply, attitude of officials towards them. Barrier to terrain, distance for transporting water is considered [15]. Sometimes the greatest barriers for disabled people are negative attitude and behaviour of family, community and service providers (government officials) [12]. The second part discusses about rights and justice aspects of water given by different agencies. The third part is the methodological case study of Vijayawada revealing the issues of different categories of disable people. Lastly, the paper gives some views about some possible modifications in the existing schemes of the government so that water justice can be achieved.

2. UNDERSTANDING THE PERSPECTIVE

UN convention rights talks about the rights of people with disabilities and recognises the removal of barriers explicitly for them so that they can enjoy access to equality in all forms of life including water. It also recognises that women and children with disability are more prone to violence. Thus, appropriate legislative measures and guidelines should be developed for safeguarding their freedom, provisions of accessibility, safety and rights [18].

Water justice refers to right to use of water and right to enjoy it with connection to nature. The concept is consistent with concept of environmental ethics and nature rights applied to water [2].

Indian constitution tells about the right of access to 'safe drinking water' as a part of 'Right to Life' under Article 21. Article 15 enjoins on the Government not to discriminate against any citizen of India (including disabled) and shall not be subjected to any restriction or condition on any of the grounds in the matter of their access to shops, public restaurants, hotels and places of public entertainment or in the use of wells, tanks, bathing ghats, roads and places of public resort maintained wholly or partly out of government funds or dedicated to the use

of the general public. On 23 July, 2001, recognising the right to food, the Supreme court of India said "In our opinion, what is of utmost importance is to see that food is provided to the aged, infirm, disabled, destitute women, destitute men who are in danger of starvation, pregnant and lactating women and destitute children" [14].

Persons with Disabilities (equal opportunities, protection of rights and full participation) Act, 1995 provides for education, employment, creation of a barrier free environment, social security, etc. for the disables Section 47 this act defines "Person with disability" (PWDA) means as a person suffering from not less than forty per cent of any disability as certified by a medical authority [16].

And "Disability" means-

- 1) Blindness;
- 2) Low vision;
- 3) Leprosy-cured;
- 4) Hearing impairment;
- 5) Loco motor disability;
- 6) Mental retardation;
- 7) Mental illness

Though the definition doesn't cover all types of disability and there is room for improvement but disability has been backed up by Indian constitution and laws for their rights; also, related to food and water. This will be reflected in the case study detailed out from following sections.

3. DISABILITY AND THEIR CONCERNS

3.1. Blind – Jyoti is a 26 year old completely blind unmarried full time working employee in public sector bank. She is M.A. graduate from a



normal schooling background. She travels daily on her own without a care taker and stays with her family. She faces problems to get acquainted with a new place initially but later tracks the nearby turns and objects located in the mind once set. She faces few or no concern especially while carrying water and walking with water related activities like drinking, bathing, washing, collecting, etc. and takes about 10 to 15 minutes

more in water transportation as compared to normal person. For example, she touches the brim of water to check whether the bucket is full or not. She uses a blind stick for assistance sometimes. She walks slow and do all course of activities including water a bit slower than a normal human being. She accepts the technological intervention in her daily routine.

3.2. Deaf and Mute–

Saikrishna is a 12 standard 17 year Annamma Special School going boy in Ibrahimpatnam near



Vijayawada. He uses sign language to converse with people. In case of asking for help related to water or else he can show gestures by his hands. As he has no other sort of disability, he seems absolutely capable of handling daily tasks with water.

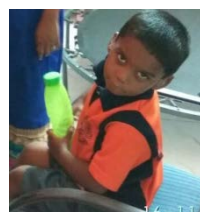
3.3. Maim –

Manish is a 30 year old married man who is 95% blind with no left hand stays with her visually impaired wife doing a clerical job. He behaves same as Jyoti when taken the matter of his blindness. He does all his work with his one right hand and has adapted all works of his left hand to it. He also uses blind stick for assistance while walking. He believes in learning and adapting things as quick as possible rather than depending on others.



3.4. Old Age Impairment –

Kantham is 80 year old lady staying in Suraksha Home Care and Old Age Home in Vijayawada. She requires a full time assistance and care for food, bath, water, etc. She speaks and hear slightly low. She does a very few courses of her own. She takes much time for bathing, eating and walking than others ranges from 30 minutes to one hour. She sometimes uses wheelchair or walker for assistance.



3.5. Mentally Retarded –Varesh is a 4 year old pre-primary school going kid undergoing therapy sessions in Tejas Speech and Hearing Clinic in Vijayawada. He requires a complete care under his parents being a kid but can do some of the work like drinking and collecting water of his own. As informed by his parents that he will learn things like bathing and other daily activities once he grows up and completes his therapy sessions.

The following table shows rated indicators of water where water access means water available safe for drinking and other household courses [19], water collection means collecting water from one place for some purpose either drinking or filling, water transportation means transporting water from one place to another with the help of bucket of jug or glass and water use is direct contact of water for use after one or more processes above with respect to justice perspective explained earlier.

Table 3.1

Water Justice and Disability Ratings			
Type of Disability	Indicator	Justice	Total Rankings
Blind	water access	5	24
	water collection	4	
	water transportation	3	
	Terrain	1	
	Attitude of officials	3	
	Affordability to water supply	4	
	Specialized facilities, systems of support	-	
Deaf & Mute	water use	4	35
	water access	5	
	water collection	5	
	water transportation	5	

Maim	Terrain	5	14
	Attitude of officials	5	
	Affordability to water supply	5	
	Specialized facilities, systems of support	-	
	water use	5	
	water access	5	
	water collection	2	
	water transportation	-	
	Terrain	-	
	Attitude of officials	3	
Old Age Impairment	Affordability to water supply	4	16
	Specialized facilities, systems of support	-	
	water use	2	
	water access	5	
	water collection	2	
	water transportation	-	
	Terrain	-	
	Attitude of officials	4	
	Affordability to water supply	2	
	Specialized facilities, systems of support	-	
Mentally Retarded	water use	3	23
	water access	5	
	water collection	4	
	water transportation	-	

collection	
water	5
transportation	
Terrain	3
Attitude of officials	1
Affordability to water supply	1
Specialized facilities, systems of support	-
water use	4

Most affected group
 High end problems
 Low end problems

4. DATA ANALYSIS

The water is accessible to all class of society and people except those live in slums by means of municipality piped connections or bore wells within the premises of the house and thus five number (where 5 is given for most suitable and 1 is for least suitable) is given to all category of disable people within our reach of study. There is sufficient water supply to their houses.

Blind persons face the difficulty in walking and it's a time consuming process for them as compared to others and so rated three in water transportation. Deaf and mute has no problem and being physically fit rated five in all aspects of water. Maim if assumed with both hands than will have more difficulty than one handed. Here, we assumed both handed maim and cannot carry (denoted as dash in the table) container or bucket full of water while handling or transporting from one place to another. Also, they will face maximum problems in water collection and use with double or triple the time than normal human being. Old Age peoples with impairments require a 24 hour care so they will not be carrying or transporting water for any purposes. They will take time to walk and reach the water source, collect and drink or use and so rated low. Mentally retarded people ones trained may not face much problem with physical work, i.e. of water but can face with mental work.

The analysis shows that the blind and mentally retarded people do not have any problem related to water

collection and water use, in other words water collection and water use are suitable (ranking 5) for blind and mentally retarded people in common. Maim and old age impaired people do not transport water on their own, they depend on other members for the transportation of water. Blind people have less suitability when it comes to the terrain, where as Deaf and mute people has full suitability, where as the maim and old age impaired people has no influence on the terrain. Attitude of officials and affordability to water supply is less in case of mentally retarded people, where as deaf and mute people has no problem related to these parameters. Specialized facilities, systems of support, these kind of provisions are not provided for any kind of disability.

5. CONCLUSION

The overall analysis concludes that training and skill up gradation of disable people by the help of government measures will be a key feature taken into consideration for justice. After analysing the situations the results shows that maim people are most affected in collection, transportation and use, followed by the old age impairment people. Both the maim and the old age impaired disabled people are having problems related to water collection in common. Development of Old Age Homes, Deaf and Mute Schools, Blind Schools, Therapy Centres, etc. with the help of NGOs according to the demand of an area should be taken into planning process. The database management systems regard to disable people is also poor in India. Even 3% quota for all posts and services under government jobs is available for them in India [1]. But, this should also be practice to water and other specific sector related provisions and schemes implementation [8]. If only we are able to count and consider them in our population needs for planning decisions, we will able to do justice to our systems.

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