Inclusion of Persons with Disability



In

Disaster Management



A Manual For Disaster Management Practitioners

STATE DISASTER MANAGEMENT AUTHORITY, MEGHALAYA, 2018

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Preparedness and planning for coping with disasters are very important aspects of disaster management. The resilience of the community depends on the scale of preparedness and planning of the community prior to any occurrence of disaster. There are persons who need special attention during disasters like the most vulnerable groups which includes the persons with disability or differently abled persons and others like women, children, old and the infirm. There is always a complaint that the needs of the persons with disability are not given so much of importance as expected during the times of disasters. This is because of either ignorance of the norms which have to be adopted or because of the lack of awareness on such aspects. The publication of Meghalaya State Disaster Management Authority on this very crucial topic "Inclusion of Persons with Disability in Disaster Management, A Manual for Disaster Management Practitioners" by Ms Maitreyee Mukherjee, a Disaster Management Consultant will offer much needed help to create awareness on this important aspect of disaster management.

The various mandates by both international and national agencies on the rights of persons with disability have been dealt with in brief in this book which will be a useful insight to all those disaster management practitioners who are called upon to render their duty in times of disasters. Various basic needs of the persons with disability at different stages of disaster management have been highlighted lucidly in this book. I am sure that this initiative will be a useful guide for all those who will be engaged in search and rescue, relief and rehabilitation operations. I congratulate Ms Maitreyee Mukherjee, the author, who has also written other books related to disaster management for Meghalaya State Disaster Management Authority, for writing this Manual and Meghalaya Disaster Management Authority and its officials for bringing out this useful publication.

(Shri H.B. Marak, IAS.,)

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Message



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The Rights of Persons with Disabilities Act, 2016 has mandated the State ▲ Disaster Management Authorities to include the persons with disabilities in the various disaster management activities. This Manual is a first step in that direction. The idea for such a manual came during SDMA's participation in the various workshops that were conducted by the Department of Social Welfare for the review of the Rights of Persons with Disabilities Act, 2016. Through this Manual, SDMA hopes to provide guidance to all the DM practitioners on the basic issues of inclusion and accessibility in disaster management activities and what measures can be taken to address the same. This Manual will aid the District Disaster Management Authorities as well who are currently engaged in the process of conducting training programmes on the inclusion of persons with disabilities in disaster management. I appreciate Ms. Maitreyee Mukherjee's contribution in this initiative of SDMA by bringing to light such a handy manual which we had conceptualized. I hope this manual will pave the way for further deliberations and initiatives for the inclusion of persons with disabilities in risk reduction efforts.

(Smt. I. Mawlong, MCS)

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am grateful to the State Disaster Management Authority (SDMA), Meghalaya **⊥** for conceptualising, organising and coordinating the preparation of this manual. The main objective of preparation of this manual is to provide a kind of a ready reckoner for disaster management practitioners who are mandated to take cognizance of and include the needs and voices of Persons with Disabilities in their various activities related to risk reduction and protection. I am grateful to Shri H. B. Marak, Secretary, Revenue and Disaster Management who has provided me an insight into the intersecting paradigms of disaster risk reduction and protection of the persons with disabilities. I express my sincere gratitude to Smt. I. Mawlong, Executive Director, SDMA, Meghalaya for taking up the pioneering initiative for preparation of this much needed manual. This manual would also not have been possible with the support of Shri. Surajit Bordoloi, Consultant, SDMA, Meghalaya, who helped me by providing various reference materials on the subject and connecting me to individuals and organizations who have thrown light on the different challenges that persons with disabilities face in the planning and implementation of disaster management activities.

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Persons with Disabilities and Disasters

Persons with disabilities (PWDs) make up 15% of the world population (2010 WHO report). Persons with Disabilities (PWDs) are those who have difficulty moving, hearing, seeing, communicating, and or learning and may include, for example, persons who use wheelchairs, persons who are blind or deaf, persons with intellectual impairments or persons with mental health conditions as well as persons who experience difficulties in functioning due to a wide range of health conditions such as chronic diseases, infectious diseases, neurological disorders, and as a result of the ageing process. Some persons may have more than one form of disability and many, if not most persons, will acquire a disability at some time in their life due to physical injury, disease or ageing.



There are several different definitions of disability and cultural and contextual factors affect the conceptualization of disability across different countries. The International Classification of Functioning, Disability and Health (ICF) regards disability or difficulties in functioning as neither purely biological nor purely social, but instead the interaction between health conditions and environmental and personal factors. According to Article 1 of the CRPD (Convention on the Rights of Persons with Disabilities), 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". Impairments are problems with bodily functions or alterations in body structure and may also include mental and intellectual impairments. Barriers can be visible or invisible such as thought and attitude barriers, physical barriers, information barriers, policy and institutional barrier etc. which restricts the participation of the PWDs in certain personal, social or community related activities or services which they should rightfully have access to.

The challenges that PWDs normally experience in society is exacerbated during situations of disasters and emergencies. A disaster is termed as any event, natural or manmade, which threatens human lives, damages private and public property, infrastructure and environment, and disrupts social and economic life. Disasters and emergencies can occur due to widely varying phenomena and exhibit their destruction in different forms. Disasters can be sudden-onset events such as earthquakes, tornadoes, and terrorist attacks or slow-onset events such as famines and droughts. Mass disaster and emergency situations are often unpredictable, not only in their occurrence but also in their scale and scope and they generally trigger panic and chaos.

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In situations of disasters and emergencies, persons with disabilities are considered as one of the most vulnerable groups. In disaster situations, not only persons with disabilities are affected but also persons who assist the persons with disabilities can be affected due to restrictions and limitations caused by disability. If such caretakers are taken into the overall percentage figure, persons who are affected by disability can be estimated to represent at least 25% of the world's population based on the WHO (World Health Organization) estimation of 15%.

environmental networks and support systems get disrupted which affect persons with disabilities much more than the general population. Disasters may also lead to discrimination on the basis of disability when mitigation and resources are scarce. This causes severe inequities in access to immediate response, as well as

long-term recovery resources for persons with disabilities. Individuals with disabilities are also disproportionately affected in disaster, emergency, and conflict situations due to inaccessible evacuation, response (including shelters, camps, and food distribution), and recovery efforts. Persons with Disabilities are very rarely included in any decision making processes and are very rarely invited to participate in committees to manage disasters nor is any funding earmarked for meeting their needs.

Therefore the inequality that the persons with disability normally experience in society is magnified during disasters because there is no recognition of disability differences and their specific needs. This calls for taking into consideration the special needs of persons with disabilities in every stage of the disaster management cycle, so that they are able to uphold their dignity at family and community levels, which take them forward to achieve their rights

So that
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levels

Emergencies also create a new generation of persons who experience disability due to injuries, poor basic surgical and medical care, emergency-induced mental health and psychological

problems, abandonment, and breakdown in support structures and preventive health care. Untreated or inadequately treated injuries can lead to unnecessary deaths and severe and long-lasting impairments. Estimates from some countries suggest that up to one quarter of disabilities may be associated with injuries and violence. Natural disasters can lead to injuries due to buildings and other structures collapsing, flooding, dust, broken glass, electrocution and flying debris. Violence and conflict can lead to injuries from rape, torture and the use of weapons such as anti-personnel mines, and cluster munitions.

3

Possible Consequences And Disabilities Resulting From Disaster			
Type of hazards/ Disaster	Immediate consequences	Possible Impairment/ disability	
All Natural Disaster	 Malnutrition Vitamin A deficiency Psychological shock Loss of medicines (for diabetes, epilepsy etc) 	 Development delay Visual impairment or blindness Psychological disorders Worsened existing disability Increased risk of developing new disability 	
Flood	 Drowning 	Respiratory complication	
Cyclone/ Earthquake/ Fire/ Landslides	TraumaBodily injuryHead injuryBurn	 Paralysis, spinal cord injury Limb loss/ amputation Physical/intellectualdisability Limb deformity 	

National and International Mandates to Support the inclusion of PWDs in Disaster Management

Since the late 20th century and start of the 21st century the vision of disability has become more comprehensive and holistic. The Human Rights Model is now adopted for all interventions related to PWDs. This model has been derived from the social model and is based on the principle that all persons must have equal opportunities to participate in society. The main goal is to empower PWDs and to guarantee their right to equal and active participation in political, economic, social and cultural activities and ensure their access to different services.

The Human C Rights Model is now adopted for all interventions related to PWDs.

Mainstreaming disability into emergency responses and preparedness, by making disability issues and persons with disabilities visible in national and international action plans and policies, is essential to ensure equality and human rights for all. The Convention on the Rights of Persons with Disabilities (CRPD),adopted by the UN General Assembly in 2006 is the first international human rights treaty that specifically addresses the rights and freedoms of persons with disabilities. The CRPD's direct mention of disasters and emergencies represented the first major global treaty to focus attention on the needs of persons with disabilities in disaster events.

The Convention is intended as a human rights instrument with an explicit, social development dimension. It adopts a broad categorization of persons with disabilities and reaffirms that all persons with all types of disabilities must enjoy all human rights and fundamental freedoms. The entire CRPD and its eight operating principles raise the need

to make all disaster and emergency planning accessible and inclusive. Many of the articles of the Convention intersect with different aspects of the disaster management cycle such as education and employment which are relevant in recovery and reconstruction.

Article 11 on 'Situations of Risk and Humanitarian Emergencies', pays particular attention to the obligation of State parties to undertake "all necessary measures to ensure the protection and safety of persons with disabilities in situations of risk, including situations of armed conflict, humanitarian emergencies and the occurrence of natural disasters." Article 32 on 'International Cooperation' focuses on the need to ensure that international cooperation initiatives, including development programs, are accessible and inclusive of persons with disabilities. Article 9 on 'Accessibility' requires State Parties to ensure that persons can access, on an equal basis with persons without disabilities, physical environments, transportation services, information and communications content, technologies, and systems and all public facilities and services which certainly apply to emergency services and facilities. Article 26 on 'Habilitation and Rehabilitation' focuses on organizing, strengthening and extending comprehensive habilitation and rehabilitation services and programmes which are important during the response and immediate recovery following serious injuries in disasters and emergencies, as well as for long term recovery and rebuilding.

Strengthening

and extending comprehensive habilitation and rehabilitation services and programmes

Other major declarations that raise the need for inclusive disaster and emergency management include the Yogyakarta Declaration on Disaster Risk Reduction in Asia and the Pacific 2012, the Phuket Declaration on Disaster Preparedness for Persons with Disabilities in 2009 and the Biwako Millennium Framework for Action 2003-2012. The Hyogo Framework for Action, adopted in 2005 at the World Conference on Disaster Reduction, is considered to be a blueprint to guide nations in their disaster risk reduction efforts until 2015. The framework which was signed by 168 countries did not address disability specifically, resulting in continuing exclusion of persons with disabilities in most DRR plans. However, the reiteration of the Hyogo Framework was the Sendai Framework for Disaster Risk

Reduction 2015–2030 (SFDRR) where persons with disabilities were referenced either directly or indirectly as part of the preamble, the guiding principles, the priorities for action, and the role of stakeholders. The SFDRR has firmly established persons with disabilities and their advocacy organizations as legitimate stakeholders and actors in the design and implementation of international disaster risk reduction policies.

The Millennium Development Goals (MDGs) have the potential to make life better for billions of persons in the world's poorest countries. Human and environmental recovery is vital for the achievement of MDG Goal 7, "Ensure Environmental Sustainability". Environmental dangers and natural disasters can lead to the onset of many types of disabilities, and inaccessible environments prevent persons with disabilities from taking part in economic and social activities. The MDGs cannot be achieved without the inclusion of all persons in society, including persons with disabilities.

India enacted the Persons with Disabilities (Equal Opportunities, Protection of Rights and Full Participation) Act of 1995 in fulfillment of its obligation as a signatory to the proclamation on the full participation and equality of persons with disabilities in Asia Pacific region. This Act did not refer specifically to disasters, but disability rights taken from a generic perception could be related to any situation including disasters.

Convironmental dangers and natural disasters can lead to the onset of many types of disabilities, and inaccessible environments prevent persons with disabilities from taking part in economic and social activities.

India, Persons with Disabilities(Equal Op-	Chapter V: Education: Appropriate Govern-
portunities, Protection of Rights and Full	ments and local authorities shall ensure that
Participation) Act, 1995	every child with disability has access to free
	education
	Chapter VI: Employment: Appropriate Governments shall identify posts in the establishments which can be reserved for Persons with Disabilities
	Chapter VII: Affirmative Action: make
	schemes to provide assistive devices.
India, National Policy for Persons with Pre-	Prevention of Disability
vention of Disability Disabilities, 2006	Train personnel to meet needs. Emphasis on education and training. Increased employment opportunities. Focusing on gender equality. Improving access to public services

The Rights of Persons with Disabilities Act 2016puts the onus of inclusion of the PWDs in disaster management activities on the National Disaster Management Authority and the State Disaster Management Authority

Subsequently, India framed the National Policy for Persons with Disabilities 2006 as well as the Rights of Persons with Disabilities Act, 2016. Section 8 of the 2016 Act specifically deals with the safety and protection of PWDs in times of disasters and emergencies. The Act puts the onus of inclusion of the PWDs in disaster management activities on the National Disaster Management Authority and the State Disaster Management Authority. The District Disaster Management Authority constituted under section 25 of the Disaster Management Act, 2005 shall maintain record of details of persons with disabilities in the district and take suitable measures to inform such persons of any situations of risk so as to enhance disaster preparedness. The Act also promulgates that the authorities engaged in reconstruction activities subsequent to any situation of risk, armed conflict or natural disasters shall undertake such activities, in consultation with the concerned State Commissioner, in accordance with the accessibility requirements of persons with disabilities.

3

Inclusion of PWDs in Different Phases of Disaster Management

In order to increase the effectiveness of government response and recovery efforts, it is important that the needs and voices of persons with disabilities be included in all phases of Disaster Management using a rights based approach. Disaster Management interventions have to take cognizance of disability issues across all programmatic aspects pertaining to education, health, employment and income generation as well as accessibility issues relating to transport, infrastructure, built environment, water and sanitation.

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Mainstreaming disability in Disaster Management would require a focus on the 'vulnerabilities' and 'capacities' of PWDs in the context of a disaster. Vulnerability is the extent to which a community, structure, service or geographical area is likely to be damaged or disrupted by the impact of a particular hazard. The areas and the infrastructures which are most likely to be affected by the disaster are the vulnerable places. Persons who are living in those areas/infrastructures are vulnerable persons. Capacity is a set of positive conditions or abilities which increases a community's / individual's ability to deal with hazards. This includes all resources and skills available that help in reducing the impact of a disaster. The objective of mainstreaming disability in DRR would be to reduce vulnerability and increase capacity of persons with disabilities in a given community, so that their disaster risk will decrease.

In order to reduce the vulnerability and increase the capacity of persons with disabilities, there will be a need to understand the needs of persons with different disabilities in a disaster or emergency situation. Persons with disabilities are not a heterogeneous group, and persons with different disabilities or different severity of a disability will have different needs in a disaster or emergency situation. For the purposes of inclusive disaster management, disabilities can be broadly classified into the following categories: sensory, mobility, cognitive, and psychosocial.

Table I: Barriers faced by persons with different disabilities in disaster or emergency situation

Disability	Disability Possible Conditions Example of barriers in a disas		Example of barriers in a disaster or emergency	
Category			situation	
Sensory D)is-	Total blindness or low	 Reading print warnings, evacuation and other 	
ability		vision	instructions, and documents on emergency	
			preparedness, relief, and other information	
			Emergency warnings, updates, and other crit-	
			ical information provided in text form only on	
			television	
			Navigating new surroundings in shelters and	
			temporary housing	
		Total deafness or dis-	 Hearing warnings, weather information and 	
		ability hearing	maps of impact areas, evacuation/safety	
			instruction, guidelines and updates on the	
			radio or television without captions or sign	
			language interpretations	
			Communicating with first responders, emer-	
			gency management personnel, and providers	
			involved in relief operations	
		Speech impairment	 Communicating with first responders, emer- 	
			gency management personnel, and providers	
			involved in relief operations	

ſ	Physical Dis-	This includes loss of	Loss of essential assistive devices like a
	ability	mobility, dexterity, and	wheelchair or durable medical equipment in
		control over some lev-	
		el of body functioning	 Lack of accessible transportation for evacuation Evacuation and rescue from high buildings when elevators stop functioning Being unable to enter or use shelters or temporary housing (including restrooms and toilets) due to accessibility barriers, or enter public buildings to access welfare and other assistance services Commuting between places (such as between home, aid camp, shelter) due to debris and
ł	Cognitive	Cognitive disabilities	destruction on roadsDifficulty understanding, remembering, or
	Disability	include many different	following instructions
	Disability	types of disabilities	ionowing mod decions
		which may impact	
		a person's memory,	
		thinking and prob-	
		lem-solving, visual,	
		math, reading and lan-	
		guage comprehension,	
		ability to pay attention	
		or follow instructions.	

Psychosocial Disability abilities, psychosocial disabilities may exist prior to a disaster or may result from the traumatic and distressing events surrounding a disaster or emergency situation (e.g. post-traumatic stress disorder).

- Need for screening and counseling services, especially when disaster causes onset of psychosocial disabilities
- Lack of awareness and empathy about the needs of persons with psychosocial disabilities
- Disruptions of established relationships with care providers.

These barriers would need to be identified and addressed in every stage of the Disaster Management Cycle so that the PWDs can rightfully have access to all the activities and services provided under the different phases.

Disaster and emergency management basically includes several stages before, during, and after the disaster/emergency event. The pre-event stage involves prevention and mitigation or risk reduction to either prevent the event from occurring or decreasing its severity and impact on populations. This stage also includes disaster preparedness which builds in the resources and mechanisms that will be put into action in a disaster or emergency with the aim to lessen the loss of life, injury, and damage to property. Preparedness, risk reduction, and mitigation occur after each disaster as well to be better prepared for future events. Immediate response and relief operations occur as soon as a disaster or emergency event begins and usually lasts until after the hazard/trigger subsides. Response and relief operations spillover into recovery and then into long-term reconstruction and rebuilding, most commonly after the disaster or emergency has passed.

Addressing Needs of PWDs at Different Stages of Disaster Management

4

Addressing Needs of PWDs at Different Stages of Disaster Management

DISASTER MANAGEMENT/ RISK REDUCTION PHASES:	ADDRESSING SPECIFIC/SPECIAL NEEDS OF THE PWDS:
Preparedness	Medical treatment/ Therapy/medications
Immediate response/ Recovery	Assistive/mobility aids
Mitigation/ Rehabilitation	Infrastructure/relief accessibility
Development	Community attitude towards PWDs



<mark>reparedness is necessary to reduce risks and losses due to disaster</mark>



Disaster Preparedness Phase

Preparedness is necessary to reduce risks and losses due to disaster. It is significantly concerned with effects arising from disaster, because it constitutes the actual circumstances, events and problems against which preparations need to be made. As social structures, public health and general health services are often disorganized during disaster and consequently the population has difficult or limited access to services. Therefore, potential causes of disability are increased, as minor problems are not identified; for example, pregnant women are not followed up, persons with chronic health problems do not have access to adequate services, etc. Therefore, including disability issues in disaster preparedness through appropriate measures to deal with these effects will prevent possible impairment and disability

Risk and Resource Mapping

Special protection measures should be identified and put in place for rehabilitation facilities/institutions

During disaster preparedness, a risk assessment is imperative to identify potential areas vulnerable in disaster situations such as floods or earthquakes. By involving PWDs in risk mapping, they can help to determine possible barriers they may face, should any of these risks become reality during an emergency situation. For example, a person who has difficulty walking or seeing may not be able to negotiate over rubble to reach the relief shelter following an earthquake. In addition to risk mapping, when resource mapping is carried out, resources specific to PWDs should also be identified. These may include: accessible drinking water and sanitation sources, accessible shelters, volunteers to provide physical support, rehabilitation centres, healthcare/hospital services for injured persons, special schools or schools that include children with disabilities, etc.

A database of disabled persons should also be prepared taking into consideration three areas of disability: physical, sensory (hearing, speech, vision) and intellectual. Persons with Disabilities in vulnerable areas should be identified and volunteers should be informed of what their needs will be during and after a disaster. This may be extremely helpful because in the event of a disaster, special equipment might be needed to transport PWDs out. Houses of persons with disabilities should be mapped for evacuation in the DM plans. Special protection measures should be identified and put in place for rehabilitation facilities/institutions (e.g. special homes, rehabilitation service centres etc.). A sizeable number of persons living in these facilities can be saved when confronted with a life threatening disaster situation. It would also be useful to prepare stockpiles of assistive devices such as wheelchairs, canes, hearing aids, healthcare supplies, extra batteries, chargers in advance at disaster management centers for quick use and deployment during response and recovery.

Early Warning

A comprehensive early warning system is very important in any community, however, even more so in a community with PWDs as they are frequently unobserved in disaster situations. An early warning system is effective only if all community members are reached by it. Therefore, include PWDs when designing warning signals/signs so they can help ensure methods used will be appropriate to meet their needs.

Types Of Impairments And Warning Systems		
Types of Impairments/	Warning systems	
Disabilities		
Visual Impairment	Auditory signals/Alarms	
	Announcement	
	Posters written with large characters and colour	
	contrast	
Hearing Impairment	 Visual Signal Systems Red Flag, Symbols 	
	• Pictures	
	Turn light off-on frequency	
Intellectual Impairment	 Special Signals-Red Flag, Symbols 	
	Clear and brief announcement by rescue workers	
Physical Impairment	Auditory Signal Systems/ Alarms	
	Announcement	

Awareness and Training

Training and exercises should be conducted on evacuation of persons with disabilities and should emphasise on special aspects such as emergency sign language and finger spelling, use of specialised mobility equipment, safe handling procedures for

persons with different kinds of disabilities etc.In the immediate aftermath of a disaster it is equally important that a person trained in assisting PWDs is included in every search and rescue team. Government as well as non-government agencies have to choose its level of involvement and accordingly obtain the appropriate education/training/skilled personnel.

Immediate Response and Relief Phase

Rapid Assessment

Response measures are taken immediately following a disaster, usually beginning with a Rapid Assessment of the entire context to determine damage resulting from the disaster and the needs of the community, including those of PWDs should be considered during a rapid assessment. If there are no databases/lists of PWDs available immediately after disaster, it is important to prepare a detailed list of PWDs during loss and damage assessment. It is also important to determine the specific needs of persons with disabilities (e.g. special food, specific medicines, urinary bags, mattress, etc.) as it will be important to ensure that these needs are met, particularly if without them, the person's health will deteriorate.

Search, Rescue and Evacuation

During immediate search, rescue and evacuation measures following disaster, it may be necessary to employ special techniques or procedures to safely and quickly evacuate PWDS. Evacuation is one of the most critical operations in any disaster or emergency response process to ensure that persons are taken away from a dangerous or toxic situation and transferred to a place of safety. Evacuation operations rarely take into account the needs of persons with disabilities and that first responders are not trained on the needs of persons with disabilities. Barriers to evacuation of persons with disabilities arise from inaccessibility of buildings and transportation. Some persons may depend on caregivers and family members, who themselves may be hurt, unable to physically help the person evacuate, or face conflicts such as having to save their own families in the case of hired caregivers. It is important that first responders and emergency personnel are trained to assist persons with disabilities to evacuate safely. Emergency personnel

have to be sensitized to the needs of persons with disabilities. Evacuations are usually rapid operations and often occur in chaotic and tense circumstances, where responders have to try and save as many persons as possible. In such cases, if there is insufficient sensitization, responders may prioritize evacuation of persons without disabilities. In the event of an early warning about an impending disaster, it would be useful to organize voluntary or mandatory early evacuations to get persons with disabilities and their families into safe and accessible shelters.

The second part of evacuations is transportation/infrastructure to take the evacuees to safe harbors. In the face of mandatory mass evacuations e.g. with impending tsunami or other natural disasters, persons with disabilities may simply not be able to evacuate if government authorities and disaster response personnel cannot provide accessible transportation. Accessible transportation is particularly essential for persons who use assistive devices such as wheelchairs.

In an emergency situation, where there is no access to public transportation, emergency personnel may carry the person out but may have to leave their wheelchair behind. This is a major problem for a person with a disability who relies on this device for independence and views it as an essential part of themselves. In such cases it would be necessary to provide the persons with disabilities other assistive devices to compensate for the ones left behind during the response and relief operations. It may also be difficult for persons to replace their assistive devices during recovery as some devices may have been very expensive and customized to user need (Roth, 2010). Disasters also cause major disruptions in supply and service delivery systems making it harder for some persons with disabilities to obtain a replacement in a timely manner. A rise in the number of persons with disabilities after the disaster can also lead to shortages in assistive devices such as artificial limbs and other mobility aids (Phillips, Estey & Ennis, 2010). Disaster budgets can include contingency funds to cover assistive devices or durable medical equipment lost or damaged in the disaster (NCD, 2009).

Shelter

All shelter or camp locations and facilities such as sanitation areas, food and water distributionareas etc., should be made accessible to all community members

(such as building ramps, installing handrails, modifying water and sanitation sources and making other modifications). Shelters and relief camps are usually the gateways to access other essential services such as food and water. Volunteers should note if the PWDs are unable to come to the central food distribution lines and in such cases the volunteers should go to the location of the PWD to provide their portion.

Persons with disabilities and other vulnerable groups are often more vulnerable to physical, sexual and emotional abuse when staying in shelters or camps due to their reduced ability to protect themselves or understand the situation. For this reason, it is necessary to orient relief staff and volunteers on ways to ensure their safety and privacy and safeguard them against abuse and violence, such as keeping them together with family members and caregivers, and using dividers and other resources to create private spaces to change clothes.

PWDs may be at greater risk of injuring themselves due to difficulty seeing, moving or hearing. To help prevent undue injury or prevent new disabilities, it would be necessary to:

- Fence the shelter compound or areas that are unsafe (open manholes, piles of rubble, etc) to prevent accidental injury.
- Ensure sufficient lighting in shelter areas so obstacles can be easily visualized.
- Install handrails where there are stairs, or install ramps.
- Provide clear signs using raised and big letters must be provided in the shelters so that persons get a sense of the facilities in the shelter
- Provide multiple modes of communication e.g. oral and written including alternative formats of communication within shelters and other physical spaces such as braille signage on the shelter walls, audible alerts, and written communications.

Food Security

Some PWDs are more susceptible to malnutrition in emergency situations due to difficulty in accessing rations, difficulty eating rations, insufficient food quantities

etc. The nutritional risks faced by PWDs and possible solutions are presented in the table as below:

Nutritional risk	Possible solution
Difficulty chewing and /or swallowing	Provide food ration which are
	easy to "puree" or mash
Reduced food intake	Provide high energy food items
Need for modified position/posture when	Ensure space to eat in privacy
feeding	
Reduce mobility affecting food access and ac-	Accessible food distribution spot
cess to sunlight (affecting Vitamin D status)	Placement near areas of sunlight
Discrimination affecting food access	Specific distribution spots, con-
	trol on rations, separate queues
Constipation (particularly affecting individu-	Vegetables or eggs in food ra-
als with cerebral palsy, spinal cord injury, etc)	tions
Separation from family members or usual	Try to unite with caregivers or
caregivers (anxiety, lack of physical assistance)	relatives

Water and Sanitation

It is also essential to ensure that the PWDs are able to maneuver around in a shelter and use the basic necessities such as latrines and toilets. Latrines should be designed, built and located so that they are easily accessible and can be used by anyone, including children, elderly, pregnant women and PWDs.

When constructing or repairing water sources, it would be necessary to keep in mind that they should be easily accessible for PWDs. Water sources should be built as close to the house as possible, and a clear access-way from the house should be ensured. The ground surrounding the water source should be cleaned up regularly to avoid falling/slipping; adequate drainage around the water source will also help minimize risk of falling on wet and slippery surfaces. If the person using the water source has difficulty climbing, a ramp may be needed to access

All individuals including PWDs should be informed about when and where the water sources and sanitation facilities are available in shelters or camps and should be provided with information on prevention of water and sanitation related diseases. For example, tube wells, hand pumps and water carrying containers should be designed or adapted for access to water quickly and easily. If PWDs are denied equal access to water sources or latrines due to discrimination, it may be necessary to monitor access or form separate queues.

Health Services

For persons with existing disabilities, without prompt attention towards securing medication, assistive devices or personal care assistance, their existing disabilities may worsen, even to a critical stage. For example, a person unable to move due to severe physical disability requires regular changes in position to prevent sores on his/her body from developing.

Reconstruction and Mitigation

After the immediate response and relief phase starts to fade, persons start

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looking towards getting back to normalcy such as getting back to their homes and work. Rehabilitation and reconstruction efforts must not only be inclusive and responsive to the needs of all persons, including persons with disabilities, but should include the participation of persons with disabilities, to ensure that their needs and rights are respected. Activities specific to PWDs may also need to be initiated. Women with disabilities are a particularly vulnerable group whose needs should be included at all stages of recovery and reconstruction efforts.

Developers, builders, government authorities, and emergency personnel should ensure that their communities are more resilient with regards to the vulnerability of persons with disabilities in future disasters. This should be a critical part of the mitigation and risk reduction process for the future. If building and facilities

are not made accessible there will be an additional population that will be excluded, i.e. the individuals who acquired disabilities in the disaster and are no longer able to return to education or employment because of inaccessible environments. Another important reason for inclusive reconstruction is that the lack of it will further cement the exclusion of persons with disabilities from educational, economic and vocational, and community participation further perpetuating their isolation and lack of opportunity.

The long-term process of building communities again, and getting all systems moving and operational is challenging, but also brings along with it the opportunity to 'build back better'. Building back better should not focus only on disaster response infrastructure but be ingrained in all reconstruction. Simple modifications to make houses disabled friendly during reconstruction will ensure houses are accessible to all, and should be considered not only for houses where a person with disability resides, but for all houses, in a preventative manner. Housing reconstruction should also take into account mode of access to the house. Schools that are being rebuilt can be built to have ramps, accessible classrooms, and accessible toilets. Government offices, especially those that expect citizens to come for services, can similarly be made physically accessible and also provide Braille signage.

Conclusion

Disaster Management would therefore be far from inclusive if the needs and voices of the most vulnerable like the persons with disabilities are excluded in the different risk reduction measures. Such efforts towards inclusion, in order to be effective, need to be guided by certain principles which uphold the rights and dignity of the persons with disabilities. These principles as enshrined in the Sphere Handbook and the United Nations Convention on the Rights of Persons with Disabilities emphasize upon (i) the equality and non-discrimination of the PWDs (ii) accessibility to all facilities' and services (iii) dignified participation in all planning and programmatic activities as well as (iv) acknowledging and using the existing resources and capacities of the PWDs to make meaningful contributions to emergency risk management.

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