



Ministry of Health and Sanitation  
Government of Sierra Leone

# **Priority Assistive Technology Products List of Sierra Leone**

**Ministry of Health and Sanitation**

## Contents

Foreword.....	ii
Acknowledgement.....	iii
List of Acronyms and Abbreviations .....	iv
List of Contributors .....	v
Executive Summary .....	vi
Chapter 1: Assistive Technology Services in Sierra Leone .....	1
Introduction .....	1
Current Situation .....	1
Demand exceeds supply .....	2
Unaffordability and sub-optimal quality .....	3
Limited private sector presence .....	4
Way forward .....	4
Chapter 2: Development of Priority Assistive Product List.....	5
Objectives .....	5
Process .....	6
Establishment of an expert panel .....	6
Development of qualification framework.....	6
Priority Assistive Product List .....	7
Priority Assistive Product List of Sierra Leone.....	8
Chapter 3: Next Steps.....	21
Chapter 4: Way Forward.....	22
References .....	23

## Foreword



Reading the *Priority Assistive Technology Products List of Sierra Leone Report*, I realize the incredible work that has gone into developing a comprehensive previously non-existent landscape for the provision of Assistive Technology (AT) products and services for the most vulnerable members of our society. One of the wishes of the Government of Sierra Leone, is to ensure that the country is inclusive for people with disabilities as clearly expressed in the Midterm National Development Plan (MNDP 2019 to 2023). This is also in line with many other frameworks including the Ministry of Health and Sanitation three key priority areas of Universal Health Coverage (UHC), Sustainable Development Goals (SDGs), and Equity.

As stated in the UHC, every individual and community, irrespective of their circumstances, should have timely access to the high-quality health services they need without risking financial hardship. To attain the SDGs requires the empowerment of communities to participate in the design, planning, implementation, monitoring and evaluation of interventions that improve their health outcomes. Communities should also receive feedback from respective duty bearers for their affirmative actions. Equity ensures that the needs of all people living in Sierra Leone are addressed in an equitable manner irrespective of one's ethnicity, gender, age, disability, religion, political belief, geographical location, or economic and/or other social conditions.

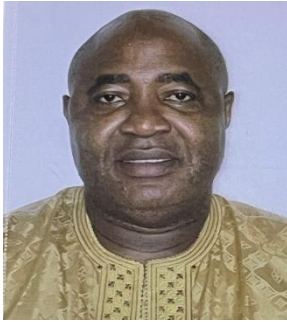
In addition, as Minister of Health and Sanitation I welcome this first guideline which seeks to list priority AT products based on the Sierra Leone context. This list is based on a qualification framework, which was developed by the technical team constituted by the MoHS; and is underpinned by the WHO ICF guidelines. This framework uses multiple assessment criteria to evaluate the AT product eligibility for priority devices for this country's context. All the products were thoroughly evaluated and reviewed severally before finalizing the list. The list will form part of the general MoHS essential list of equipment.

The report identified *70 Priority AT Products* for Sierra Leone and in doing so, makes a major contribution to the rehabilitation program in Sierra Leone in addressing gaps related to AT procurement and service provision by the MoHS. It will also go a long way to ensuring equitable access to AT products and services and ultimately improve the quality of life of persons with disabilities.

The report highlights AT market challenges in Sierra Leone including: the unmet demand of AT products, high out-of-pocket burden in accessing AT products, poor resource allocation to rehabilitation centers, a market driven by charity and donations, and more. To alleviate those challenges, the report makes strong recommendations for local manufacturing of AT products and allied services, allocation of sufficient funds for the AT program within the NRC, the development of a Management Information System (MIS) to capture delivery of AT products, building human resources capacity in rehabilitation and more. This calls for a systemic approach to developing system capacities from identifying the AT needs up to the delivery of quality AT services in the country and will certainly lead to improvement in assistive technology services and client satisfaction.

Dr Austin Demby  
Minister, Ministry of Health and Sanitation

## Acknowledgement



The *Priority Assistive Technology Products List of Sierra Leone Report* was developed by the Clinton Health Access Initiative under the AT2030 programme's Country Investment Fund. The AT2030 program is funded by UK Aid from the UK government and led by the Global Disability Innovation (GDI) Hub. According to the WHO, Assistive Technology (AT), is a subset of health technology, which refers to assistive products and related systems and services developed for people to maintain or improve functioning and thereby promote well-being.

We want to acknowledge and thank members of the Expert Panel Technical Working Group for their dedicated effort and technical support. We wish to acknowledge the support of Dr. Santigie Sesay (Director of NCDs, Mental Health and Rehabilitation), Mr. Ismaila Kebbie (National Programme Manager for National Rehabilitation Center), Mr. Francis Kabia (Director of Welfare Ministry of Social Welfare), Mr. Jonathan Conteh (Regional Coordinator for National Commission for Persons with Disability), Mr. Santigie Kargbo (President of Sierra Leone Union on Disability Issues) for their tireless support in the successful completion of this Product List.

We also wish to thank all the stakeholders in the disability community and other contributors in Sierra Leone who made the development of this AT product list possible.

A handwritten signature in blue ink, appearing to be 'Sartie Kenneh'.

Dr Sartie Kenneh  
Chief Medical Officer (CMO)  
Ministry of Health and Sanitation

## List of Acronyms and Abbreviations

<b>APL</b>	Assistive Product List
<b>AT</b>	Assistive Technology
<b>ATP</b>	Assistive Technology Program
<b>CCA</b>	Country Capacity Assessment
<b>CRPD</b>	Convention on the Rights of Persons with Disability
<b>DAAG</b>	Disability Awareness Action Group
<b>DPO</b>	Disabled Persons Organization
<b>DPPI</b>	Directorate of Policy, Planning, and Information
<b>ENT</b>	Ear, Nose, and Throat
<b>FCDO</b>	Foreign, Commonwealth and Development Office
<b>GDI</b>	Global Disability Innovation
<b>HAM</b>	Handicap Action Movement
<b>HRH</b>	Human Resource for Health
<b>INGO</b>	International Non-Governmental Organization
<b>LMIC</b>	Low Middle Income Country
<b>MDAs</b>	Ministry Department and Agencies
<b>MoHS</b>	Ministry of Health and Sanitation
<b>MRAT</b>	Medical Rehabilitation and Assistive Technology
<b>MSWGCA</b>	Ministry of Social Welfare, Gender and Children's Affairs
<b>NCDs</b>	Non- Communicable Diseases
<b>NDATR TWG</b>	National Disability, Assistive Technology and Rehabilitation Technical Work Group
<b>NGO</b>	Non-Governmental Organization
<b>NMSA</b>	National Medical Supplies Agency
<b>NRC</b>	National Rehabilitation Center
<b>PHC</b>	Population and Housing Census
<b>POPDA</b>	Polio Persons Development Association
<b>PWDs</b>	Persons with Disabilities
<b>SDGs</b>	Sustainable Development Goals
<b>SL</b>	Sierra Leone
<b>SLAB</b>	Sierra Leone Association for the Blind
<b>SLAS</b>	Sierra Leone Autistic Society
<b>SLPA</b>	Sierra Leone Physiotherapy Association
<b>UHC</b>	Universal Health Coverage
<b>UNICEF</b>	United Nations International Children's Emergency Fund
<b>UPBSA</b>	United Polio Brothers and Sisters Association
<b>WHA</b>	World Health Assembly
<b>WHO</b>	World Health Organization

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## Executive Summary

The purpose of the Priority Assistive Products List in Sierra Leone is to help improve access to appropriate, quality Assistive Technology (AT) products at an affordable price that will help enhance the functioning and independence of persons with disabilities, while facilitating their participation and integration in society.

WHO defines AT as a subset of health technology that “refers to assistive products and related systems and services developed for people to maintain or improve functioning and thereby promote well-being, such as eyeglasses, hearing aids and wheelchairs. Assistive products maintain or improve an individual’s functioning and independence, thereby promoting their well-being”. (WHO 2018).

The 2015 Population and Housing Census revealed the prevalence of disability in Sierra Leone is 1.3% (93,129) of which the Northern region has the highest number of persons with disabilities (32,849 - which represents 35.3% of all persons with disabilities in the country). The census reports disclosed that the major cause of disability in the country is disease or illness which accounts for 40.5% of cases of the 93,129 people with disabilities in the country. This is followed by congenital disability (16.2 %), other non-specified causes (10.5%), accidents (8.8%), and natural aging (8.1%). Other causes of disability, including traffic accidents, occupational injuries, injuries sustained in the war, and injuries that were not specified accounted for less than 5% of the total. The percentage of disabled people in Sierra Leone has been hit by the long and bloody civil war in 2002, which is a major contributor to a significant rise in disabled strata. The deadly Ebola Scourge in 2014, the devastating Freetown mudslide in 2016, and Covid19 in 2019 coupled with a weak healthcare system further added to the challenges of the PWDs.

AT products include any external product whose primary purpose is to maintain or improve an individual’s functioning and independence and thereby promote his or her well-being. They include (but are not limited to) wheelchairs, hearing aids, walking frames, spectacles, pill organizers, and prosthetic limbs, as well as assistive information and communication technology such as memory aids, specialized computer hardware and software, augmentative and alternative communication, and customized telephones. Assistive products are essential tools to compensate for an impairment/loss of intrinsic capacity, to reduce the consequences of gradual functional decline, to reduce the need for carers, for primary and secondary prevention, and to help to rationalize health and welfare costs.

This first report on the Sierra Leone *Priority Assistive Technology Product List*, seeks to list all AT products needed based on the Sierra Leone context. This list is based on a qualification framework, which was developed by the team; and is underpinned by the WHO ICF guidelines. This framework uses multiple assessment criteria to evaluate the AT product eligibility for priority devices for the country’s context. All the products were thoroughly evaluated and reviewed severally before finalizing the list. The list will form part of the general MoHS essential list of equipment.

The report identified *70 Priority AT Products* for Sierra Leone and in doing so, makes a major contribution to the rehabilitation program in Sierra Leone in addressing gaps related to AT procurement and service provision by the MoHS. It will also go a long way in ensuring equitable access to AT products and services and ultimately improve the quality of life of persons with disabilities.

The report highlights AT market challenges in Sierra Leone including: the unmet demand of AT products, high out-of-pocket burden in accessing AT products, poor resource allocation to rehabilitation centers, a market driven by charity and donations, and more. To alleviate those challenges, the report makes strong recommendations for local manufacturing of AT products and allied services, allocation of sufficient funds for the AT program within the NRC, the development of a Management Information System (MIS) to capture delivery of assistive technology products (to the beneficiaries by the government or donors), building human resources capacity in rehabilitation and more. This calls for a systemic approach to developing system capacities from identifying the AT needs up to the delivery of quality AT services in the country and will certainly lead to improvement in assistive technology services and client satisfaction.



## Chapter 1: Assistive Technology Services in Sierra Leone

### Introduction

Assistive Technology (AT) according to WHO (WHO 2018) is a subset of health technologies which refers to assistive products and related systems and services developed for people to maintain or improve functioning, and thereby promote well-being. It enables people with difficulties in functioning to live healthy, productive, independent, and dignified lives, participating in education, the labor market, and social life. It can reduce the need for formal health and support services, long-term care, and the burden on carers.

Assistive Technology products include any external product whose primary purpose is to maintain or improve an individual's functioning and independence and thereby promote his or her well-being. They include (but are not limited to) wheelchairs, hearing aids, walking frames, spectacles, pill organizers, and prosthetic limbs, as well as assistive information and communication technology such as memory aids, specialized computer hardware and software, augmentative and alternative communication, and customized telephones. Assistive products are essential tools to compensate for impairment/loss of intrinsic capacity, to reduce the consequences of gradual functional decline, to reduce the need for carers, for primary and secondary prevention, and to help to rationalize health and welfare costs.

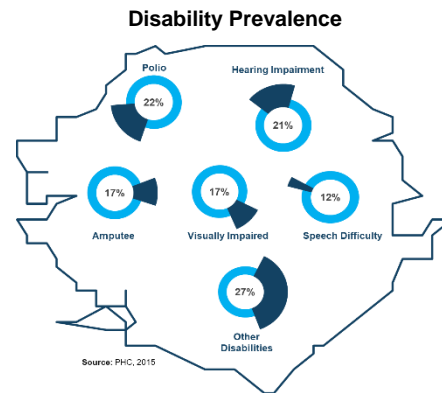
The findings from WHO suggest that the global access to assistive technology products is only one in 10 and the statistics are worse for low- and middle-income countries, which do not have national resources and programs for AT including systems to procure assistive technology products. Therefore, as part of global efforts to make Assistive Technology Products accessible, the CRPD requests that the Member States should ensure access to quality assistive products at affordable costs. The WHO during the 71<sup>st</sup> World Health Assembly in 2018 and Resolution WHA7.81 urged the Member States to develop, implement and strengthen policies and programs to improve access to assistive technology within universal health coverage. The WHO has recently published a list of 52 essential assistive technology products. The guidelines on public procurement of essential assistive technology products and standards have also recently been published to guide the member countries in the Assistive Technology space.

### Current Situation

As per the Population and Housing Census (PHC) 2015, the prevalence of disability is 1.3% (93,129) of which the Northern region has the highest number of persons with disabilities (32,849), which represents 35.3% of all persons with disabilities in the country. Disease or illness is the major cause of disability among the country's disabled population, accounting for 40.5% of cases of the 93,129 people with disabilities in the country. This is followed by congenital disability (16.2%), other non-specified causes (10.5%), accidents (8.8%), and natural aging (8.1%). Other causes of disability, including traffic accidents, occupational injuries, injuries sustained in the war, and injuries that were not specified, accounted for less than 5% of the total number of persons

with disabilities. The percentage of disabled people in Sierra Leone has been hit by the long and bloody civil war in 2002, which is one of the major contributors to the rise in disabled strata, The deadly Ebola Scourge in 2014, the devastating Freetown mudslide in 2016, and Covid19 in 2019, coupled with a weak health system, further added to the challenges of the PWDs.

Figure



### Demand exceeds supply

Rehabilitation centers under the Ministry of Health and Sanitation (MoHS) are charged with the responsibility to ensure that the assistive devices are made available to the users. Currently, there are four rehabilitation centers under MoHS: 1 National Rehabilitation Centre (Freetown), and 3 Regional Rehabilitation Centers in Kono, Bo, and Makeni, providing AT services across the country.

Following WHO definition, assistive products are not only related to mobility, but include a wide range of products to improve function in impairments due to vision, speech, language, hearing, cognition, and aging. In that context, there is an increasing demand for AT products in Sierra Leone assistive technology services. However, assistive technology services in the country are limited and scarce within the government settings. The lack of adequate and quality assistive technology services pose a great challenge for people living with disability with respect to their ability to contribute to the society and country, despite their due willingness.

### AT Market Challenges

- Demands for AT products exceeds the supply
- High out-of-pocket burden to access AT products
- Huge dependence on the donors
- Rehabilitation centers face poor resource allocation
- Limited private sector and no large-scale production
- Charity creating parallel distribution system adding to complexities

Sierra Leone is invariably dependent upon imported products as the country has extremely limited capacity to produce AT devices locally. Not-for-profit organizations play a very vital role in the provision of Assistive Technology in Sierra Leone; however, distribution of AT products and management post-distribution remains a big challenge. This is primarily due to the absence of a centralized system of procurement and distribution of AT devices in the country. The country doesn't have statistics on the number of products which have been given out thus far by various donors. There have been instances in the past where donors and other MDAs preferred to run a parallel system of distributing AT products without engaging MoHS. Such a system added to the high attrition of the donated AT products and complexities in the management of AT services, as users were left with no choice but to look to MoHS supported rehabilitation centers for repair and further management.

The shortage of trained specialists and qualified rehabilitation professionals is one of the key challenges the Assistive Technology sector in the country has been facing for a long time. The country currently has a handful of hearing-aid technicians, physiotherapists, occupational

therapists, prosthetics and orthotics, wheelchair technicians, and speech therapists. Most of them have been trained out of the country. The country has only one professional institution situated within Tonkolili District College of Health Sciences offering a BSc in Physiotherapy Programme. Currently, 14 Prosthetic and Orthotic professionals are providing Rehabilitation Services in the country. Due to this lack of adequate manpower, there is limited availability of multi-disciplinary teams to produce AT devices and train users in effective, safe use and maintenance of the products over time.

### **Unaffordability and sub-optimal quality**

Hospital is the first entry point for access to medical rehabilitation services including assistive technology products. The different departments in a hospital have functional links with national and regional rehabilitation centers assigned to provide both in-patient and out-patient rehabilitation services. The units for audiology and eyes are generally collocated within the ENT and Ophthalmology departments respectively.

Contrary to the above, the hospital doesn't have collocated physiotherapy, prosthetics, and orthotics units. These units are generally located within rehabilitation centers situated far from the hospital premises. Based on the presentation of the disability and referral from the hospitals, trained specialists from the rehabilitation centers offer physiotherapy, prosthetics, and orthotic services. The existing AT users can directly approach rehabilitation centers to address their needs. However, this adds an additional cost burden to access rehabilitation and AT services outside the hospital.

At rehabilitation centers, the referred beneficiary or existing users are measured and fitted for their prosthetic/orthotic requirements. The centers also provide training on the use and maintenance of assistive products. This leads to high out-of-pocket expenditures for the beneficiaries. Due to financial constraints in rehabilitation centers to provide raw material, the beneficiaries are either forced to procure the raw material from outside or referred to private facilities to buy ready-to-use orthotics/prosthetics. However, ready-to-use prosthetics/orthotic devices often do not meet the user's specifications and add to complexities associated with the quality of assistive technology products.

A range of components, raw materials, and consumables is required to produce assistive products. There is a severe shortage in the country of good quality raw materials required to produce specific prosthetic and orthotic devices. The centers are either unable to provide them or are forced to dismantle old prostheses and refit them for a new user using a variety of materials and techniques. As a result, the manufactured prosthetics or orthotic devices often fall short of technical requirements, durability, and overall functionality. Rehabilitation centers offer repairs free of charge, but their ability to undertake maintenance work is often hampered by the lack of available materials. This leads to beneficiaries ending up paying for raw materials from the open market.

## Limited private sector presence

The country has a limited presence of the private sector producing AT devices on a commercial basis. There are two private organizations named 'Mobility Sierra Leone' and 'Welfare Society for the Disabled' that supplement government efforts of producing AT devices at scale in the country. 'Mobility Sierra Leone' is a local private manufacturer situated in the Bo district. Their focus is on mobile devices such as wheelchairs, walking aids, and prostheses, however with very basic features. The 'Welfare Society for the Disabled' produces rubber tips, crutches, and locally made wheelchairs. Both the organizations are also involved in providing maintenance for the locally made wheelchairs. Nevertheless, the necessary parts are imported from overseas adding further strain on the scarce resources.

Other non-government entities named United Polio Brothers and Sisters Association (Freetown), Polio Persons Development Association (Makeni), and Handicap Action Movement (Freetown) are also producing locally made wheelchairs, rubber tips, posture equipment, and handgrips but not on a commercial basis.

Other devices such as hearing aids, spectacles, and cognitive aids are predominately imported to the country or procured by international donors. There are no primary suppliers for AT products in the country.

## Way forward

The prevalent inadequacies of the products and the multiple market barriers listed above demonstrate the complexities of the challenges and inability to meet the increasing demand for AT products in the country. This calls for a systemic approach to developing system capacities from identifying the AT needs up to the delivery of quality AT services in the country. To address some of these challenges, MoHS recently endeavored to develop the 'Sierra Leone Assistive Technology Policy and Strategic Plan (2021-2025)' with support from Global Disability Innovation (GDI) Hub through FCDO. This underscores the key areas that need improvement and potential activities that the country can embark on to address some of the above-mentioned gaps with a systemic approach.

## Chapter 2: Development of Priority Assistive Products List

### Objectives

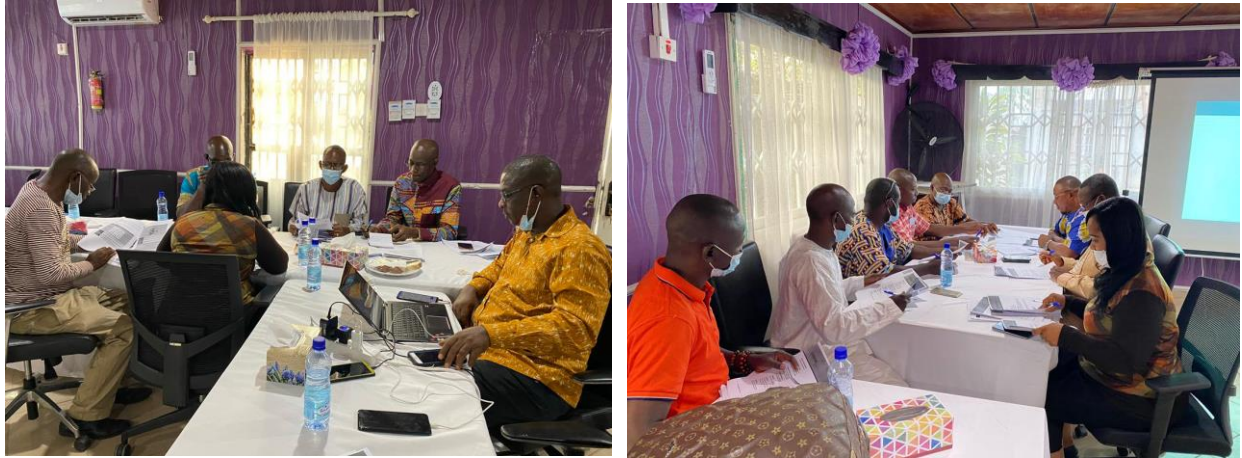
The present document acknowledges the need for a system in place that facilitates building in-country capacity for identifying AT needs, production, training, AT product procurements and management, development of standards, and setting up a regulatory mechanism to meet the essential standards and quality of AT products in the country. The purpose of this document is to publish the outcome of the efforts undertaken by the MoHS to identify and list priority AT products in the country. The list reflects the prevalent AT product needs based on the disability profile and emerging new cases. The list will guide the investment efforts of the government, non-government organizations, and other donor partners to not only procure and provide AT products but to build a sustainable AT ecosystem in the country. The document informs Sierra Leone's essential list of medicines, commodities, and equipment the government intends to develop to ensure access to quality health and rehabilitation services for the population. The following are the key objectives of the documents:

- 1) To generate scientific evidence on the critical AT products needed, that could guide future policy and investments by the government and development partners
- 2) To inform the country-specific list of essential equipment with the provision on Assistive Technology products for the general population
- 3) To lay a foundation for developing AT product standards and specifications, and other regulatory mechanisms to ensure quality control
- 4) To ensure universal access to priority AT products by the population and integration with essential rehabilitation services in the country.

## Process

### Establishment of an expert panel

As a part of government endeavors to improve access to assistive technology products and service delivery in the country, MoHS with support from GDI through FCDO embarked on the development of a 'Priority Assistive Product List'. Based on the recommendation from 'National Disability, Assistive Technology and Rehabilitation Technical Work Group' (NDATR TWG), an

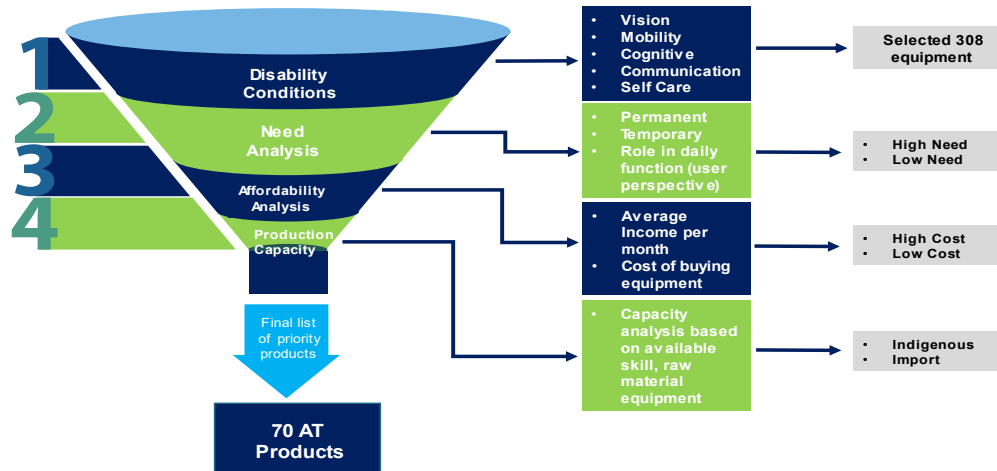


expert panel was constituted. The panel was comprised of clinicians, medical specialists (Orthopaedics, ENT, Ophthalmologist, Optometrist, Paediatrics, Neurology, Physiotherapists, Orthotics, Prosthetics, etc.), users and representatives from various organizations working in providing assistive devices to the population. The expert panel was entrusted with the responsibility of advising MoHS in identifying the needs for different types of assistive products, specifications, and provisions.

### Development of qualification framework

A series of consultative meetings were held to agree on the methodology, development of the list of assistive products, and selection criteria. An intensive literature review was undertaken to develop a list of assistive products and their classification as per WHO ICF guidelines. A qualification framework was developed using multiple evaluation criteria to evaluate the AT product eligibility for priority devices for the country. All the suggested equipment was thoroughly evaluated and reviewed severally before finalization. A validation workshop was held for endorsement of the list by expert panel and users.









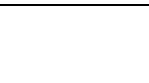
## Qualification Framework:








## Priority Assistive Products List








After a series of consultations with the expert panel, the framework helped to reduce the initial list of 308 to the final list of 53 assistive technology products. However, during the validation of the document by stakeholders in the disability sector, an additional 17 devices were added to the list using the same methodology. As a result of the additional number of devices added during the validation workshop, the final Priority Assistive Product List of Sierra Leone has 70 devices. The group also analyzed the availability of raw material, existing HR skill to produce and manage AT products, and the level of facilities where these products can be accessed. The findings of this analysis will form a basis for the development of the National Assistive Technology Program in the country.







Priority Assistive Products List of Sierra Leone

Sr. No	Name of AT Products	Illustrative Image	WHO ICF-Body Structure	WHO ICF-Body Function	Producing locally	Estimated Price for Local Production	Estimated Import Price (USD)		
<b>Mobility</b>									
1	Handrails and Grab bars		Structure of lower extremity	Gait pattern function	No	N/A	\$86.00		
2	Wheelchairs		Structure of lower extremity	Gait pattern function	Only PET	Le. 4,000,000	\$400		
	- Personal Energy Transport							N/A	\$500
	- Manual with Postural Support							N/A	\$500
	- Manual for Active Use							N/A	\$300
	- Rough Ride							N/A	\$500
	- Active Dual Terrain							N/A	\$500
	- Active Rough Terrain							N/A	\$500
	- Tricycle							N/A	\$650

















Sr. No	Name of AT Products	Illustrative Image	WHO ICF- Body Structure	WHO ICF- Body Function	Producing locally	Estimated Price for Local Production	Estimated Import Price (USD)
3	Portable ramps		Structure of upper and lower extremity	Gait pattern function	No	N/A	\$1,400
4	Ischial weight bearing/ relieving KAFO		Structure of lower extremity	Stability of single joint	No	N/A	\$200
5	CTLSO		Structure of Vertebral Column, specified	Stability of several joints	No	N/A	\$270
6	TLSO Boston		Structure of Vertebral	Stability of several joints	No	N/A	\$1,324
7	TLSO body jacket		Structure of Vertebral	Stability of several joints	Yes	Le. 2,000,000	\$200
8	Lumbo sacral corset belt		Cervical vertebral column	Stability of several joints	Yes	Le. 500,000	\$50








Sr. No	Name of AT Products	Illustrative Image	WHO ICF-Body Structure	WHO ICF-Body Function	Producing locally	Estimated Price for Local Production	Estimated Import Price (USD)
9	Polypropylene AFO solid		Structure of ankle and foot, other specified	Power of isolated muscles or muscle groups	Yes	Le. 3,000,000	\$300
10	Elbow orthosis static		Elbow joint	Stability of single joint	Yes	Le. 350,000	\$35
11	LSO - rigid brace		Structure of Vertebral Column, specified	Stability of several joints	No	N/A	\$1,324
12	Elbow crutches		Structure of lower extremity	Gait pattern function	No	N/A	\$35
13	Walking cane/stick		Structure of lower extremity	Gait pattern function	Yes	Le. 100,000	\$10
14	Quade cane		Structure of lower extremity	Gait pattern function	No	N/A	\$80
15	Axillary crutch (Armpit) – Metal		Structure of lower extremity	Gait pattern function	No	N/A	\$350








Sr. No	Name of AT Products	Illustrative Image	WHO ICF-Body Structure	WHO ICF-Body Function	Producing locally	Estimated Price for Local Production	Estimated Import Price (USD)
	Axillary Wooden Crutch				Yes	Le. 1,000,000	\$100
16	Walker/Walking frames		Structure of lower extremity	Gait pattern function	No	N/A	\$50
17	Standing Frame		Structure of brain (CP)	Tone of all muscles of the body	Yes	Le. 1,000,000	\$100
18	Ash brace		Structure of Vertebral Column, specified	Stability of several joints	No	N/A	\$50
19	Taylor's brace		Structure of Vertebral Column, specified	Stability of several joints	No	N/A	\$50
20	Williams brace		Structure of Vertebral Column, specified	Stability of several joints	No	N/A	\$50

Sr. No	Name of AT Products	Illustrative Image	WHO ICF-Body Structure	WHO ICF-Body Function	Producing locally	Estimated Price for Local Production	Estimated Import Price (USD)
21	C&E heel		Structure of ankle and foot, other specified	Mobility of tarsal bones	No	N/A	\$10
22	Molded shoes		Structure of ankle and foot, other specified	Stability of several joints	Yes	Le. 250,000	\$20
23	UCBL		Structure of ankle and foot, other specified	Stability of several joints	Yes	Le. 800,000	\$80
24	PP AFO articulated		Structure of ankle and foot, other specified	Power of isolated muscles or muscle groups	No	N/A	\$200
25	Leaf spring AFO		Structure of ankle and foot, other specified	Power of isolated muscles or muscle groups	Yes	Le. 1,000,000	\$70
26	Arch support		Structure of ankle and foot, other specified	Mobility of tarsal bones	Yes	Le. 350,000	\$35








Sr. No	Name of AT Products	Illustrative Image	WHO ICF- Body Structure	WHO ICF- Body Function	Producing locally	Estimated Price for Local Production	Estimated Import Price (USD)
27	Club foot braces		Structure of ankle and foot, other specified	Stability of several joints	Yes	Le. 2,000,000	\$200
28	In Shoe		Structure of ankle and foot, other specified	Stability of several joints	Yes	Le. 1,000,000	\$100
29	CTEV shoes		Structure of ankle and foot, other specified	Stability of several joints	Yes	Le. 500,000	\$50
30	Knee sleeve with hinge		Knee joint	Stability of single joint	No	N/A	\$79
31	Abdominal benders		Muscles of trunk	Muscle tone function, other specified	No	N/A	\$50
32	Arm sling		Structure of upper arm	Control of complex voluntary movement	Yes	Le. 350,000	\$30
33	Shoulder immobilizer		Structure of Shoulder region	Stability of single joint	Yes	Le. 350,000	\$30






Sr. No	Name of AT Products	Illustrative Image	WHO ICF- Body Structure	WHO ICF- Body Function	Producing locally	Estimated Price for Local Production	Estimated Import Price (USD)
34	Fracture arm brace without elbow hinge and forearm brace		Structure of upper arm	Mobility of bone function specified	No	N/A	\$100
35	Philadelphia collar		Cervical vertebral column	Stability of several joints	No	N/A	\$250
36	Fracture forearm brace		Bones of forearm	Mobility of bone function specified	No	N/A	\$201
37	Pediatric Limb Splints		Bones of forearm	Mobility of bone function specified	No	N/A	
	Hand Splint Static						\$50
	Dynamic Hand Splint						\$35
	Wrist Cockup Splint						\$30
	Elbow Conformer						\$25





Sr. No	Name of AT Products	Illustrative Image	WHO ICF-Body Structure	WHO ICF-Body Function	Producing locally	Estimated Price for Local Production	Estimated Import Price (USD)
38	KAFO microprocessor		Structure of lower extremity	Power of isolated muscles or muscle groups	No	N/A	\$200
39	HKAFO		Structure of lower extremity	Power of isolated muscles or muscle groups	No	N/A	\$200
40	TLSO corset		Structure of Vertebral	Stability of several joints	No	N/A	\$1,000
41	Prosthesis		Bones of forearm and wrist joint	Stability of several joints	No	N/A	
	Transtibial						\$ 1,000
	Transfemoral						\$100
	Transradial						\$300
	Trans humeral						\$500




Sr. No	Name of AT Products	Illustrative Image	WHO ICF-Body Structure	WHO ICF-Body Function	Producing locally	Estimated Price for Local Production	Estimated Import Price (USD)
42	Braille reading material		Structure of eye	Seeing function	Yes	Le. 8,000,000	\$800
43	Braille display		Structure of eye	Seeing function	No	N/A	\$2,000
44	Braille note taker		Structure of eye	Seeing function	No	N/A	\$3,000
45	Spectacles - low vision, long distance, short distance		Structure of eye	Seeing function	No	N/A	\$600
46	Sunglasses		Structure of eye	Seeing function	No	N/A	\$100
47	Braille writing equipment		Structure of eye	Seeing function	No	N/A	\$1,000
48	White Cane		Structure of eye	Seeing function	No	N/A	\$15



Sr. No	Name of AT Products	Illustrative Image	WHO ICF-Body Structure	WHO ICF-Body Function	Producing locally	Estimated Price for Local Production	Estimated Import Price (USD)
49	Handheld Magnifier		Structure of eye	Seeing function	No	N/A	\$10
<b>Hearing</b>							
50	Cochlear implants		Structure of inner ear	Hearing function	No	N/A	\$1,000
51	Inductive loop services		Structure of inner ear	Hearing function	No	N/A	\$500
52	Digital hearing aids with batteries		Structure of inner ear	Hearing function	No	N/A	\$250
53	Sound simulators		Structure of inner ear	Hearing function	No	N/A	\$250
54	Tinnitus masker		Structure of inner ear	Hearing function	No	N/A	\$1,600
<b>Self-Care</b>							
55	CP chair / corner chair/ locally made		Structure of brain (CP)	Tone of all muscles of the body	Yes	Le. 750,000	\$75

Sr. No	Name of AT Products	Illustrative Image	WHO ICF- Body Structure	WHO ICF- Body Function	Producing locally	Estimated Price for Local Production	Estimated Import Price (USD)
56	Commode chair		Structure of nervous system, other specified/ Lower extremity	Power, tone of limbs, stability of lower limbs	No	N/A	\$50
57	Indwelling catheters		Structure of nervous system, another specified/ bladder	Urinary continence	No	N/A	\$30
58	Bed pans		Structure of nervous system, other specified/ Lower extremity	Fecal continence	Yes	Le. 100,000	\$10
59	Grooming Materials		Structure of nervous system, other specified/ Lower extremity	Power of muscles of all limbs, mobility of several joints	No	N/A	\$15
60	Adapted Toothbrush		Structure of nervous system, other	Power of muscles of all limbs, mobility of several joints	No	N/A	\$10

Sr. No	Name of AT Products	Illustrative Image	WHO ICF-Body Structure	WHO ICF-Body Function	Producing locally	Estimated Price for Local Production	Estimated Import Price (USD)
			specified/Lower extremity				
61	Bathing Adapted Cushion		Structure of nervous system, other specified/Lower extremity	Sensory function of skin	No	N/A	\$10
62	Cooking Adapted Utensils		Structure of nervous system, other specified/Lower extremity	Power of muscles of all limbs, mobility of several joints	No	N/A	\$15
<b>Cognitive</b>							
63	Picture boards		Structure of voice and speech	Voice and speech function	No	N/A	\$120
67	Speech generating devices		Structure of voice and speech	Voice and speech function	No	N/A	\$1,500

Sr. No	Name of AT Products	Illustrative Image	WHO ICF- Body Structure	WHO ICF- Body Function	Producing locally	Estimated Price for Local Production	Estimated Import Price (USD)
68	Visual Timer		Structure of the nervous system	Mental function	No	N/A	\$10
69	Disability Tablet		Structure of the nervous system, voice, and speech	Mental, voice and speech function	No	N/A	\$69
70	Screen Reader		Structure of the eye and the nervous system	Reading function	No	N/A	\$230

## Chapter 3: Next Steps

Priority Assistive Products List is part of the AT project funded by FCDO from the UK government and led by the Global Disability Innovation Hub. The work has identified 70 priority products to be used to create awareness, mobilize resources, and motivate competition, as well as provide guidance for procurement and reimbursement policies for product development, production, service delivery and shaping of the market. The development of a Priority Assistive Product List of Sierra Leone is one of the steps among many to ensure access to appropriate, quality Assistive Technology products at an affordable price enhancing individual functioning and independence, while facilitating participation and integration in society and is just the beginning. The Government of Sierra Leone needs to set up sustainable structures and systems to holistically address the assistive technology product needs of the population. To reach this objective, the investment should be directed towards the following:

1. The government of Sierra Leone should build a conducive environment for the local manufacturer or international manufacturer to produce and upscale high-quality AT devices within the country which are affordable and can serve the local context.
2. MoHS needs to define the standards for priority assistive devices. A regulatory mechanism should be established to control the quality of the products manufactured locally and procured from international manufacturers.
3. The government needs to set aside funds in the annual budget for NRCs for in-country production of AT by the government rehabilitation centers, and procurement of technology-intensive devices which cannot be produced locally.
4. MoHS would precisely define the maximal price for the Priority AP, based on the “Sierra Leone Standards for Priority Assistive Product Guideline”. This price should include the AP production/importation costs and the indirect costs of providing AP to the clients which includes transportation, stay, and other personnel costs. A mechanism to revise the prices annually should be defined. The cost-sharing model can help MoHS to mobilize the resources domestically.
5. MoHS should develop a Management Information System or database to capture the delivery of assistive technology products to the beneficiaries by the government or donors. As a long-term strategy, MoHS should start partnerships with research, technical and medical institutions from public and private sectors to build in-country capacity and develop advanced AT products.

## Chapter 4: Way Forward

Access to appropriate, quality Assistive Technology products at an affordable price enhances individual functioning and independence, while facilitating participation and integration in society. Countries are facing many challenges in meeting population need for AT due to poor procurement and provision of appropriate, affordable, quality AT alongside limited information systems that provide an accurate estimate of the population need for AT and a country's capacity to meet such a need. Countries around the world are also gearing towards all-inclusive agendas including disability, set under the Sustainable Development Goals 2025. Disability is featured in various parts of the SDGs and specifically in parts related to education, growth and employment, inequality, accessibility of human settlements, as well as data collection and monitoring of the SDGs.

In 2019, MoHS and CHAI Sierra Leone with support from the Global Disability Innovation Hub (GDI) conducted a comprehensive landscape assessment of the AT sector in Sierra Leone. The assessment documented gaps and opportunities in the disability sector primarily around assistive technology services and products in the country. One among the many gaps is the fragmentation and lack of coordination among stakeholders in the AT sector.

One of the roadmaps recommended is to help improve AT Products and service delivery in the country. Consequently, MoHS along with CHAI have been working towards the development of a Priority Assistive Product List of Sierra Leone in the country. This will ensure equitable access to AT products and Rehabilitation services and improved quality of life for persons with disabilities.

MoHS and stakeholders in the disability community believe that this Priority Assistive Product List will help address the gaps related to procurement and service provision challenges. Also, the Priority Assistive Product List will be factored into the List of Essential Medical Devices being developed by UNICEF. This will help to create awareness, mobilize resources, and motivate competition, as well as provide guidance for procurement and reimbursement policies for product development, production, service delivery and shaping of the market.

## References

Priority-Assistive-Product-List Nepal, Government of Nepal, Ministry of health and population

<https://www.who.int/news-room/feature-stories/detail/first-ever-global-guide-for-assistive-technology-to-improve-the-life-of-millions> (accessed June 2021).

World Health Organization Priority Assistive Product List, 2018