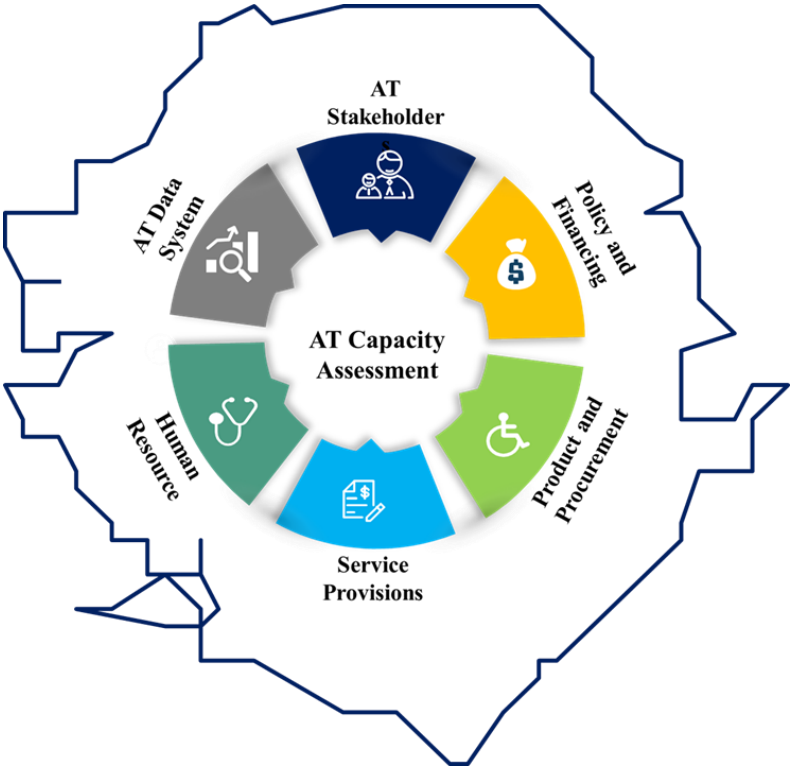
ASSISTIVE TECHNOLOGY COUNTRY CAPACITY ASSESSMENT

SIERRA LEONE



Developed by:

CLINTON HEALTH ACCESS INITIATIVE

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The Assistive Technology Country Capacity Assessment was completed as part of the AT2030 program. The AT2030 program is funded by UK aid from the UK government and led by the Global Disability Innovation Hub.

Abbreviations

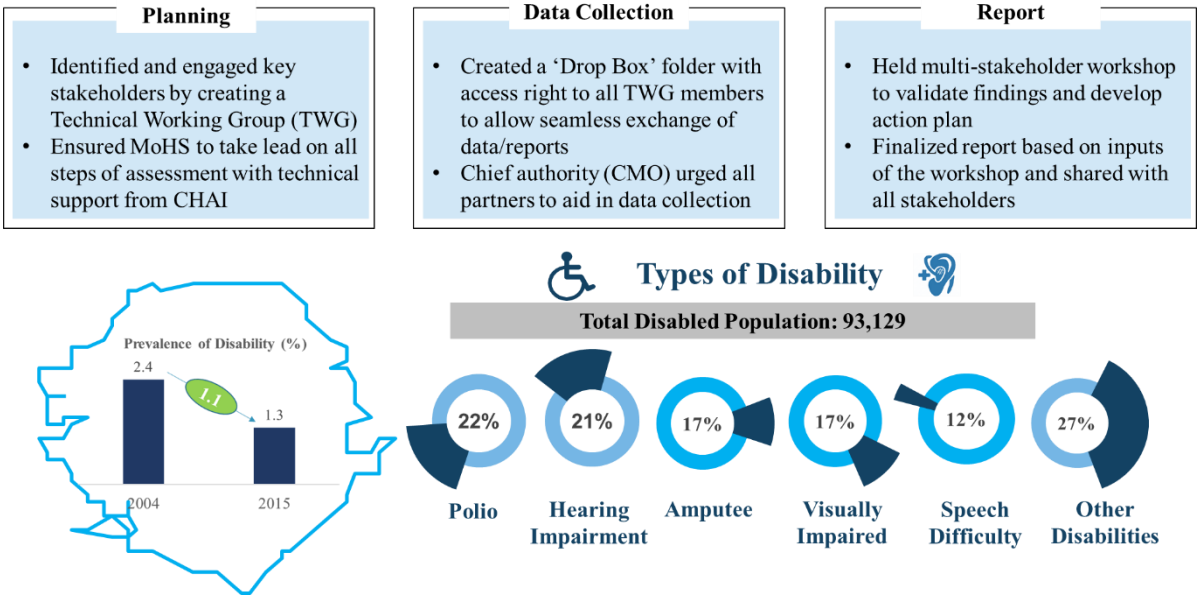
APL	Assistive Product List
AT	Assistive Technology
ATA-C	Assistive Technology Assessment Capacity
ATCCA	Assistive Technology Country Capacity Assessment
CHAI	Clinton Health Access Initiative
CHWs	Community Health Workers
CRPD	Convention on the Rights of Persons with Disabilities
DFID	Department for International Development
DPOs	Disabled People Organizations
GDIH	Global Disability Innovation Hub
GLA	German Leprosy Association
HRH	Human Resource for Health
INGOs	International Non-Governmental Organizations
LMICs	Low and Middle Income Countries
MoHS	Ministry of Health and Sanitation
NaCSA	National Commission for Social Action
NATP	National Assistive Technology Program
NCDs	Non-Communicable Disease
NGOs	Non-Governmental Organization
NRC	National Rehabilitation Center
OPD	Outpatient Department
PHC	Population and Housing Census
PWD	Person with Disability
SDGs	Sustainable Development Goals
SLeSHI	Sierra Leone Social Health Insurance Scheme
SLRP	Sierra Leone Reparation Programme
SoS	Scheme of Service
ToRs	Term of References
TWG	Technical Working Group
UK	United Kingdom
WHO	World Health Organization

Executive Summary

The purpose of Assistive Technology Scoping Assessment in Sierra Leone was to evaluate and monitor country's capacity to procure and provide Assistive Technology that appropriately meet the population's needs. Our methodology was characterized by a participatory, consultative, inclusive and transparent processes; with clear time-bound objectives and provided an opportunity to reflect on the applicability of evidence in different contexts and promoting dialogue among several types of stakeholders. WHO ATA-C instrument was customized for the purpose.

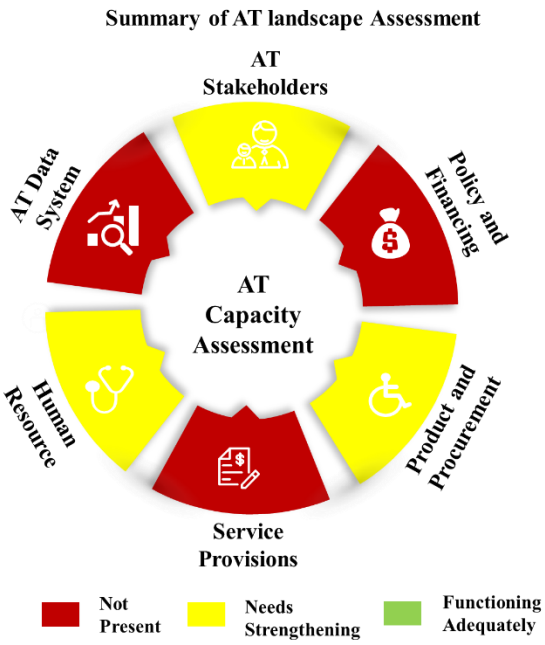
As per Population and Household Census 2015, the disease or illness is the major cause of disability among the country's disabled population, accounting for 40.5% cases of 93,129 people with disability in the country. The percentage of disabled people in Sierra Leone, has been hit by a bloody long civil war in 2002; a major contributor for significant rise in disabled strata, deadly Ebola Scourge in 2014, a devastating mudslide in 2016 and weak health system starving from the resources and technical capacities.

Lack of resources, poor health system and in-conducive environment for disabled can be attributed to poor socioeconomic conditions of disabled in the country can be attributed to significant gap exists between demand and supply of AT services in the country. Except for Population and House Census (PHC), the country doesn't have any other reliable source of information to enumerate type of disabilities, causes, level of functionality and deformity and AT users.



The expert from disability sector have raised concerns over underreporting of disabled population in PHC report. The absence of a robust data system poses one of the biggest challenges before policymakers and programme managers. The disability issues primarily fall under the ambit of

Ministry of Social Welfare. Ministry of Health has been entrusted with the mandate of providing AT and Rehabilitative services to the community. National Commission for People with Disability, established as per provision made under People with Disability Act 2011 post ratification of CPRD in 2010, has been authorized to regulate and monitor implementation of AT policies, disability act and CPRD provisions. The lack of coordination has been felt among these key stakeholders which could be attributed to constrained financial resources.



National Assistive Technology Programme is currently under the development which would help streamline undefined and fragmented AT services in the country. The increasing political commitment and first ever allocation of government funding (FY 2020) for rehabilitation services, though not significant, are being seen as a paradigm shift in AT sector. The government doesn't have any procurement process and protocols established for bulk purchase of AT devices and have equally not procured any AT devices so far. This indicates huge reliance on non-governmental and faith base organization to provide AT device services in the country. Moreover, services provided by private sector are limited to physical mobility only.

The country has handful of human resources but is all set to produce more professionals with first batch of Physiotherapist (17 in numbers) getting ready to absorb into the system. The Directorate has developed a scheme of services for AT cadres that would help popularizing AT sector and attract both professionals and sub-professionals into the AT sector. The in-service training has been a challenge due to poor availability of resources which needs further strengthening.

Action Plan

The government will undertake serious efforts to establish provisions for a dedicated disability census that will increase and give more attention to health conditions, functional limitations and arrive at accurate estimates of AT need. TWG will be expanded to include stakeholders from Ministry of Education, Ministry of Road Transport and Ministry of Finance and will meet in each quarter to gauge the development in AT sector. A detailed costed strategy plan will be developed to give a direction to the AT and rehabilitation services and mobilize resources.

A National Programme on Assistive Technology will be developed with a focus on the gaps identified in the assessment report and emphasis on AT services at the district hospital in initial phase. The National Rehabilitation Centre will be converted into 'State of Art' facility to provide AT services not online in the country but also in adjoining countries. As a part of NATP Programme, a detailed list of essential AT equipment with specifications and standards will be

devised with consultation from sub-technical groups such as Audiometry Su- technical group Ophthalmology etc. The efforts will be made to ensure inclusion of this list into medical device procurement list of the MoHS. An IT based supply chain management system will be established to ensure central distribution system with provision of biometric identity of users. In terms of human resources, the focus would be on creating skilled human resources both from formal and informal market with some innovative methods of financing the same.

Chapter 1: Background

Introduction

Assistive Technology (AT) is an umbrella term covering the systems and services related to the delivery of assistive products and services. Appropriate Assistive Technology is defined as that which meets the user's needs and environmental conditions, is properly fitted and prescribed, safe and durable and can be obtained, maintained with provided services in a country. A well-functioning, health system that has the capacity to provide assistive products and services at an affordable price and in a timely manner is instrumental to ensuring equitable access to AT.

There exists a significant gap between needs and access to AT products. Accordingly to WHO, there are over one billion people who are in need of assistive technology products worldwide (as illustrated in the Exhibit 1). And only 1 in every 10 people who need AT to learn, to work or to fully participate in their communities have access (WHO, 2018). The demand for AT devices would continue to wide to two billion by 2050 with rise of population needing AT devices.

Exhibit 1: Need of Assistive Technology across the globe

In contrast to developed countries, the situation of AT demand and supply mismatch is more pronounced in LMICs. The AT sector in LMICs faces multiple market barriers both in supply of appropriate, affordable, and quality products and in demand for these products by awareness, users, service providers, and national health systems. Further adding to these complexities, LMICs are at different level of trajectory for AT capacity development with varied level of political interests in disability services. The situation is not much different in context of Sierra Leone too. Despite its

recent strides in creating opportunities for people with disabilities to exercise their human rights, the access to Assistive Technology is extremely limited in Sierra Leone. Even though, the Convention on Rights of Persons with Disabilities (CRPD) addresses this area, persons with disability have been finding it hard to have universal access to AT services in the country.

As a result of this increasing demand in AT, the Global Disability Innovation Hub (GDI) contracted CHAI at the request of the UK Department for International Development (DFID) to scope the potential for global market-based interventions related to Assistive Technology (AT) based on the skills, experiences and lessons learned from other health areas. CHAI's work will be to inform a plan to improve availability and accessibility of selected priority AT through research, scoping, and future planning, the creation of market shaping tools, and pilot testing of market interventions. Priority products looked at in this scoping include wheelchairs, hearing aids, spectacles, prosthetics and personal digital assistants.

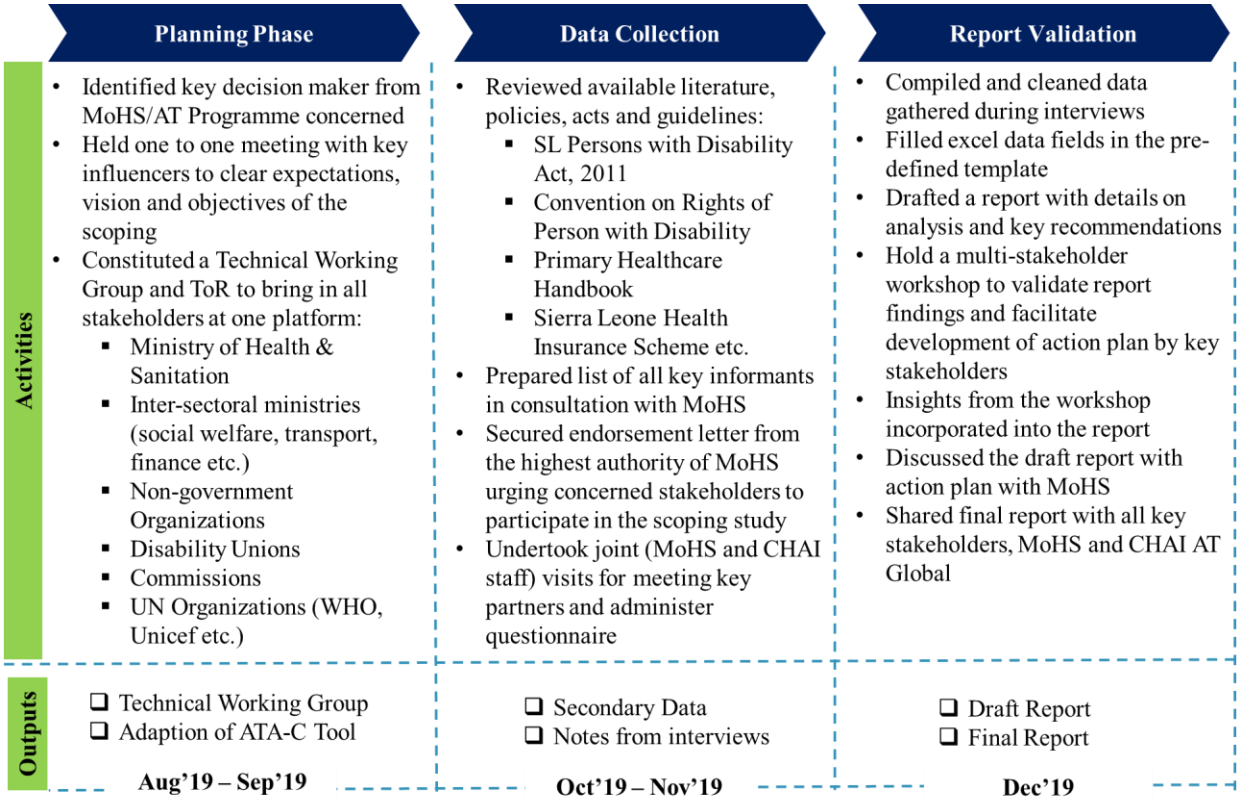
As a part of this initiative, CHAI AT Global team reached out to 8 African countries including Sierra Leone where CHAI currently operates. The financial and technical support was extended by global team to in-country teams to undertake scoping exercise.

Purpose of the Scoping

The purpose of Assistive Technology Scoping Assessment in Sierra Leone was to evaluate and monitor country's capacity to procure and provide Assistive Technology that appropriately meet the population's needs. The thrust of this study was to evaluate the Assistive Technology Landscape in Sierra Leone from a system perspective in order to clarify its limitations and opportunities for formulation of policies and implementation of strategies. It will help look at how to find means that will help tackle the lack of inadequate supply of assistive devices couple with the ill-managed distribution of assistive devices to the wrong persons by INGOs, NGOs faith-based organizations and other goodwill ambassadors.

The findings from this assessment will allow the country to better understand the current landscape for Assistive Technology and help inform the development and refinement of national action plans that will improve access to AT in Sierra Leone. It will also serve as an introductory component that will support Sierra Leone in building out an improved system for Assistive Technology financing, procurement, and provision, through Awareness raising and Policy and programme design.

Methodology



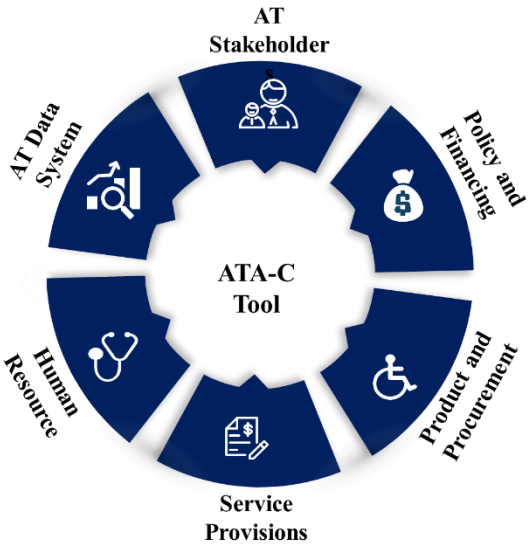
The research methodology was designed to enable interactions between stakeholders to integrate explicit knowledge and to guide policy development. It was characterized by a participatory and consultative processes; having clear objectives, being inclusive and transparent, providing an opportunity to reflect on the applicability of evidence in different contexts and promoting dialogue among several types of stakeholders. To meet our common goals of doing a structured assessment work, a well-structured ATA-C tool developed by WHO was adapted and used as a guiding instrument to develop a detailed questionnaire. Emerging ideas have been tested through stakeholder interviews, discussions and validation workshop.

ATA-C Tool

ATA-C tool has been developed as an instrument to assess country's capacity for AT services. The tool supported a high-level assessment of the current state of AT provision in Sierra Leone. The assessment findings were eventually used to identify potential interventions and inform action plan. The tool was not designed for detailed planning or to deep-dive into a specific assistive product, but rather facilitated a wider perspective of capacity across the entire sector at a systems-level. This tool captured information on following six domains:

(i) **AT Stakeholder –** This domain helped identify stakeholders in the AT sector in the country or region, both on the Government and non-governmental side; and understand their roles and programs related to AT.

(ii) **Policy and Financing –** This captured existing policies related to AT, existing schemes or programs providing access to AT, AT financing schemes and possible avenues that could potentially be used for future AT financing.



(iii) **Product and Procurement –** This domain aided in mapping out the availability of assistive products in the country or region, how quality is assured, and prevailing assistive product procurement and supply chain processes.

(iv) **Service Provision –** This section covered information on service delivery system/s in which assistive devices are provided to users, which include intersection of health services with AT services, care standards for prescribers and providers, entities and facilities where service delivery occurs, and how connected the service delivery system/s are through a referral mechanism.

(v) **Human Resource –** This domain captured information on the availability and distribution of general and AT-related health workforce, the existence of institutions providing formal training programs for the corresponding workforce, as well as the existence of AT related training in the country.

(vi) **Population Data** – This domain helped identify existing information systems that collect information related to AT needs of the population, AT users and the prevalence of functional limitations and health conditions of given population.

Decision Framework

In order to enhance objectivity of the assessment findings and guide the development of action plan, a detailed decision framework was developed (Annexure VI). The decision framework was also used to facilitate the discussions of stakeholders during data collection and elicit inputs on action plan during the validation workshop.

Chapter 2: Sierra Leone's Capacity on Assistive Technology

Assistive Technology is a life-changer. It can help individuals with disabilities increase their independence, build their self-confidence and self-esteem, improve their quality of life, and break down barriers to education and employment. The real challenge, of course, is finding the right devices and gadgets, for the right purpose, at the right price. ATA-C tool is an attempt in the same earnest that has been developed to assess countries' capacities to provide need based quality AT services. The sections below highlight information gathered across the six domains using ATA-C tool:

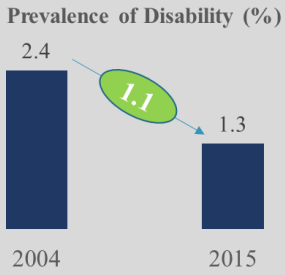
AT Data and Information System

In the absence of AT specific population/disability data system, the Population and Household Census (PHC) is apparently considered as a key data source that captures information on disability and is used extensively by key decision makers to inform policy decisions. The existing data from Disabled Persons Organizations and other research institutions have failed to portray a clear, comprehensive picture of disability in the country especially in the area of AT.

The PHC is conducted by a government agency named as 'Statistics Sierra Leone'. The last census which was carried out in 2015 captured more significant information than the previous one held in 2004 and covered information on AT related issues such as type of disability, causes and other socio-economic factors.

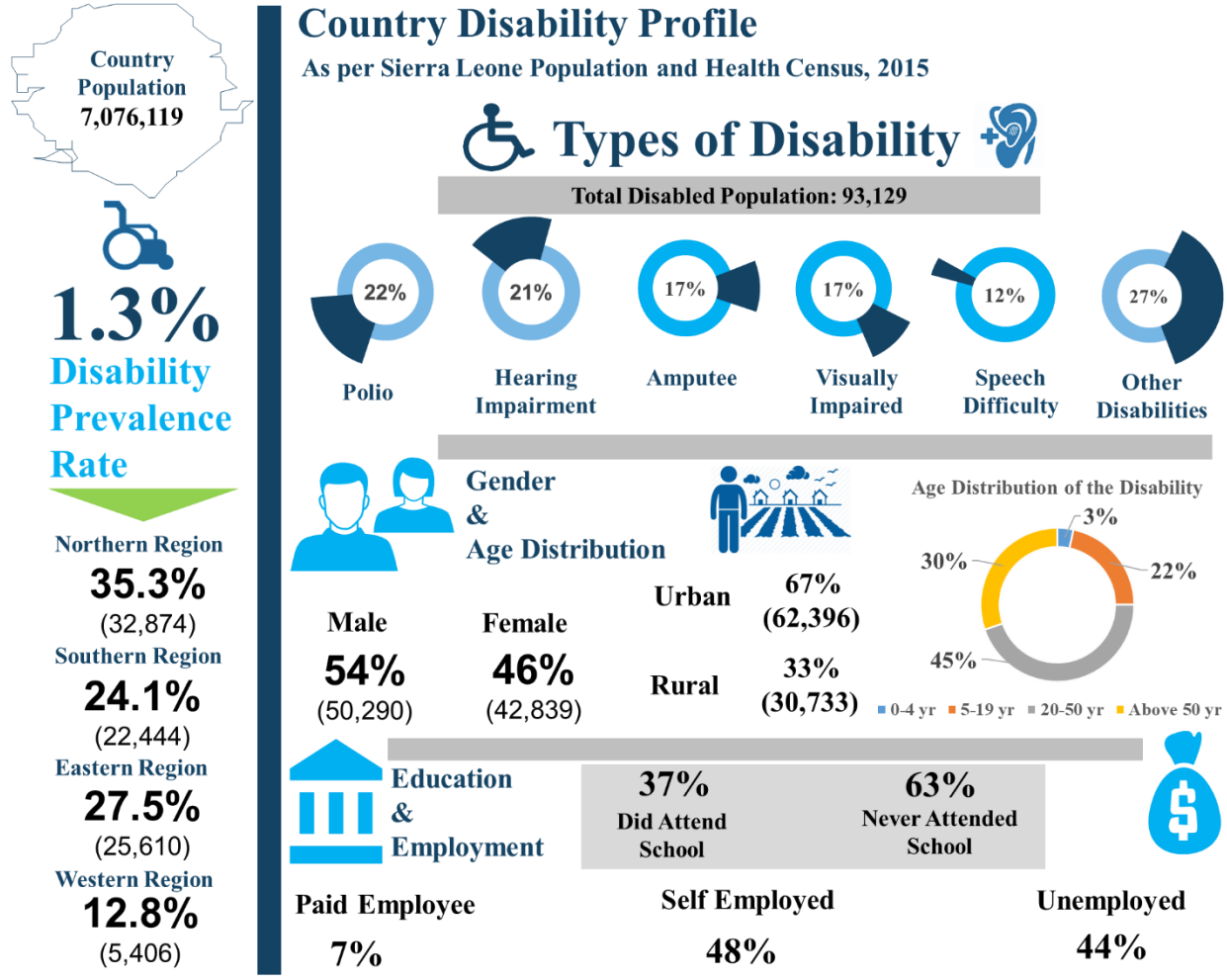
As per PHC 2015, The overall population of Sierra Leone is quite young of which 78% falls into age group of 5 to 50 yrs with elder population (above 50) constituting only 9%. The disease or illness is the major cause of disability among the country's disabled population, accounting for 40.5% cases of 93,129 people with disability in the country. This was followed by congenital disability (16.2 %), other non-specified causes (10.5%), accidents (8.8%) and natural ageing (8.1%). Other causes of disability, including traffic accidents, occupational injuries, and injuries sustained in the war, and injuries that were not specified accounted for less than 5 per cent of the total number of persons with disabilities.

Key Facts



- The factors contributed to decline in disability prevalence are:
  - ❑ High rate of amputation during the civil war in 2004
  - ❑ Increase in high number of disability campaigns post civil war
  - ❑ Intensification of road safety campaigns by authorities
  - ❑ Increased coverage of immunization
- 2/3rd of the disabled population is in reproductive age group of 18 to 50 yrs
- As per WHO 2018, Sierra Leone has the highest estimated mortality attributed to NCDs in Africa

Lack of adequate and quality AT services pose a great challenge for people living with disability in respect of their ability to contribute to the society and country as a whole despite their due willingness. The poor socio-economic conditions of disabled people are clear reflection of this phenomenon as exhibited below:



Source: Sierra Leone Population and House Census, 2015

The prevalence of disability in the country is 1.3% which means 93,129 people live with disability out of the 7,076,119 (Seven Million+) population in the country with Northern region has the highest number of persons with disabilities (32,849), which represents 35.3 per cent of all persons with disabilities in the country. The percentage of disabled people in Sierra Leone, has been hit by a bloody long civil war in 2002; a major contributor for significant rise in disabled strata, deadly Ebola Scourge in 2014, a devastating mudslide in 2016 and weak health system starving from the resources and technical capacities.

The scoping on Assistive Technology is the first comprehensive one in the country. Not much has been done in the area of AT in Sierra Leone. The demand for the use of AT devices by users is on the increase, but there has not for once been a structured or well-functioning market system on AT

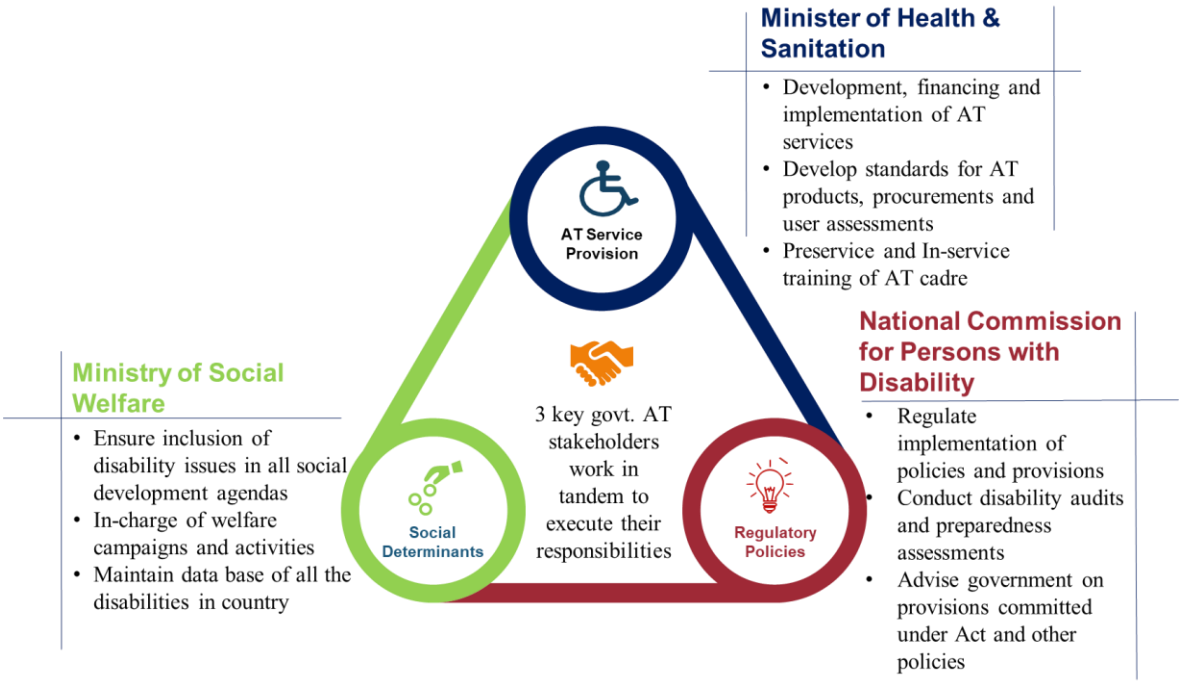
that could meet the demands and needs of these users in the country. Government is however committed to ensure that the needs and demands of these set of people are met as and shown its commitment by accession of CRPD and enacting Person with Disability Act, 2011 however, Government does not have a structured information system to collect data on disabilities, beneficiaries and other market players who are driving and leading the disability sector in the country.

Assistive Technology is at the infancy stage of development in Sierra Leone, and not much has been done to develop a comprehensive data source or system. The country has no dedicated data system that captures information on AT needs, users, and AT services provided to the people living with disability. The non-government organizations which is mainly concerned of providing charity based AT services maintain their own data base on beneficiaries which is limited to project life cycle only.

Stakeholder Landscape

The government is committed to ensure that the Agenda 2030 of "Leaving No One Behind" is achieved. And in doing that, government is working side by side with other stakeholders in the disability sector to ensure that the welfare and needs of persons with disability are adequately met.

Key Government AT Stakeholders and their Functions



In as much as the government is committed in ensuring that the disables have a better life, there is a very huge gap between demand and supply side of disability sector in the country. The Directorate of NCDs and Mental Health under MoHS works in collaboration with several other

Ministries and Development agencies such as Ministry of Social Welfare and National Commission for Persons Living with Disability etc. The primary responsibilities of these key three government agencies are exhibited above.

Disability issues as a whole fall under the ambit of the Ministry of Social Welfare, Gender and Children's Affairs (MSWGCA), and specifically under the Deputy Minister of Social Welfare, The Ministry has a Directorate of Social Welfare for Disability and is also the lead agency for the establishment of the National Commission for Persons with Disability as provided for by the Persons with Disability Act 2011. The Ministry also chairs the Disability Committee, formerly called National Rehabilitation Committee on Persons with Disability, which coordinates activities and resources and gathers NGOs working on disability and representatives of beneficiaries. However, the level of coordination between the members of the committee remains poor and the implementation of activities lacks a comprehensive framework to ensure consistency and avoid overlaps. This could be partly be attributed to insufficient funding as is the case with most governmental activities in Sierra Leone.

As result of resource constraints, the government agencies have limited capacities to execute their mandates and responsibilities. It is no secret that the provision of AT is in most cases done by the private sector with physical mobility as their focus area. In the FY 2019-20, the government of Sierra Leone has allocated meagre budget for initiating AT activities in the country primarily for meeting operational expenses of new office set up for National Assistive Technology Programme.

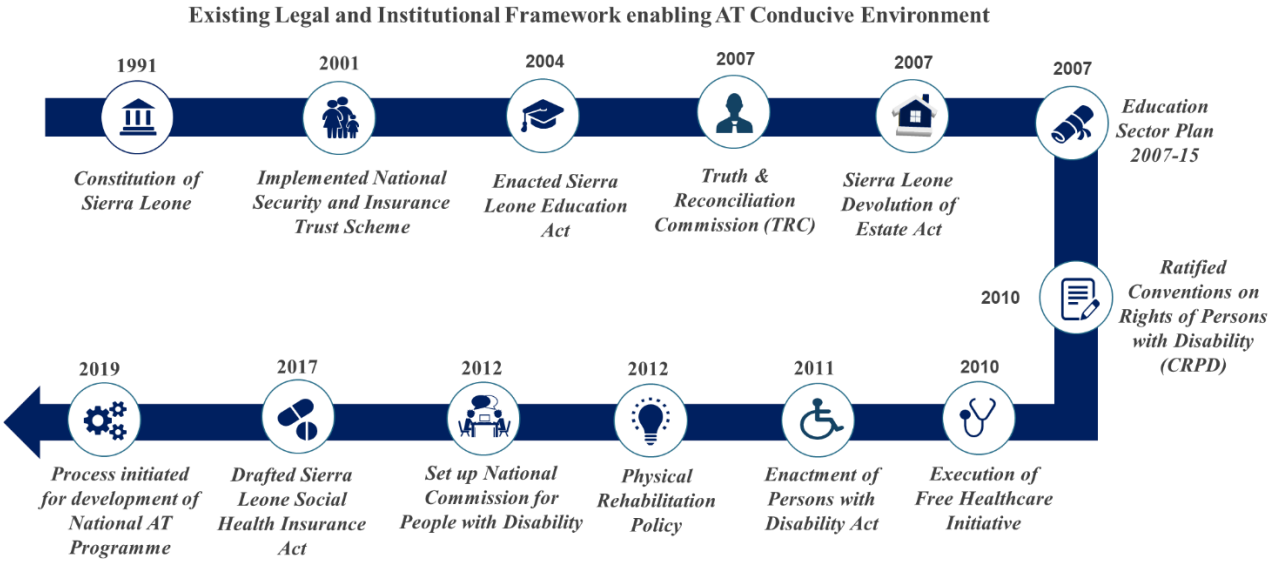
There are handful of nongovernment organizations too which provide supportive role in providing AT services in the country. The provision and purchasing of devices in the country largely lies with NGOs and faith-based organizations with an increased focus on mobility. The findings from the report shows that mobility impairment is accorded the most premium while less attention is given to others like hearing, vision, cognitive and communication impairment. The table enclosing list of key stakeholders in the AT sector in Sierra Leone is enclosed at Annexure I.

In addition to the stakeholders mentioned in the list, there are enormous Disabled People Organization (DPOs) spread across the country. The ten year of long civil war has resulted into emergence of large number of small DPOs in the community. These DPOs through their association with Disability Union advocate, help generate resources and undertake AT activities for disabled communities.

Policy and Financing

The 1991 Constitution of Sierra Leone laid a strong foundation for protecting the rights of persons with disabilities in the areas of care and welfare and educational opportunities. However, the same does not mention access to AT as a right and disability as a prohibited ground for discrimination.

National Social Security Insurance Trust (NaSSIT) provides a social security scheme for persons with disabilities employed or formerly employed in the formal sector but with no additional provisions for accessing AT services.



The Education Act 2004, provisions free primary education inclusive of children living with disability. Although the 2004 Act made no reference to affirmative actions to provide AT devices to schools in order to promote inclusive education. The report of Truth and Reconciliation Commission focused on the civil war victims who have become temporarily or permanently physically disabled led to launch of Sierra Leone Reparation Programme (SLRP) in 2008 and mandated the National Commission for Social Action (NaCSA) to implement reparations in the areas of health, education and economic empowerment programmes. Progress includes the establishment of a referral system for medical care for victims requiring emergency medical treatment and the launch of the War Victims Trust Fund. SLRP could not deliver up to the expectations due to funding limitations.

The government launched free healthcare initiative in 2010; while initially persons with disabilities were expected to be among the beneficiaries of the scheme, however, only pregnant, lactating mothers and children under five years old were eventually included. The country has 5 Rehabilitation Centers, of which three (Freetown, Bo and Kono) were equipped and supported by Handicap International since 1996, and provide treatment and AT services free of charge to persons with disabilities. The center located at Freetown functions as National Rehabilitation Centre and remaining centers are called as regional rehabilitation centers attached to hospitals. The Government has not budgeted appropriate financial allocation to this end. In the absence of new developments, this would seriously challenge the possibility to continue offering treatment.

✓ The government has now allocated around 2 billion SLL in FY 2020-21 budget to meet the operational cost of all 3 rehabilitation centers which were earlier starving for resources.

The country has made further strides and endorsed the 'Convention on the Rights of Persons with Disabilities (CRPD)' in 2010 with exclusion to optional provisions. In line with CRPD, the government promulgated and enacted Persons with Disability Act 2011 which has been instrumental in invigorating AT sector in the country.

Key Provisions of Persons with Disability Act, 2011

Regulation

- ❑ Establishment of National Commission
- ❑ Constitution of medical board to issue permanent disability certificate
- ❑ Establishment of disabilities issues units across the ministries

Finance

- ❑ Provision of development fund to training of care givers, DPOs and **AT device services**
- ❑ Provision of tax redemption for private employer for making infrastructural adjustments

Services

- ❑ Free medical services in govt. institutions
- ❑ Prohibit discrimination in employment
- ❑ Free secondary education only to girls
- ❑ Provisions for infrastructural adjustment of both public in buildings

Handicapped International supported development of Physical Rehabilitation Policy which was launched in 2012. However, the policy was not popularized due to lack of resources. Further, the policy is now seen as outdated considering the development happened in the Sierra Leone in last 7 years. Also, policy doesn't explicitly mandate National Rehabilitation Centre to provide AT device services.

The government has promulgated Sierra Leone Social Health Insurance Scheme in 2017 for their workforce. There is no explicit mention of person with disability. The scheme aims to provide free OPD treatment for identified ailments. However, the scheme is still on the paper and implementation is yet to begin. Nevertheless, the scheme has limited benefits for physically disabled people as there is no provision for AT services and devices.

With strong support from political commitment of the current government, the Ministry of Health and Sanitation in 2019, embarked on development of National Assistive Technology Programme Guidelines. The guidelines were still under the development at the time of writing this report. The Commission has recently started disability audit of public buildings with the joint funding support from German Leprosy Association (GLA). However, commission too has been facing financial

constraints since its inception. With the increasingly growing political commitment for disability, a perceptible momentum could be felt at all levels.

Assistive Products and Procurement Systems

There is an increasing demand for AT products in Sierra Leone just like any other LMICs. Nevertheless, the inadequacy of the products and the multiple market barriers both in supply of the appropriate, affordable, and quality products and in demand for these products by users, service providers, and national health systems points towards complexities of the challenges that any AT programme/interventions have to wade through in order to succeed.

Locally Made Wheel Chair

Sierra Leone is invariably dependent upon imported products as the country has extremely limited capacities to produce AT devices locally. 'Mobility Sierra Leone' is only local manufacturer available in the country which focus on mobility devices such as wheelchairs, walking aids and prostheses with very basic features. Nevertheless, the necessary parts are imported from overseas adding further strain on the scarce resources.

Mobility Sierra Leone Workshop

The other devices such as hearing aids, spectacles and cognitive aids are predominately imported in the country. It was noted that even with their lack of complexity in design and use, they were not as readily available as they could and should be. There does not appear to be coordinated systems of service provision of AT in Sierra Leone. The private sector seems to be leading the sector when it comes to making provision of AT devices for needy people. In the absence of reliable data on AT users, Latter Day Saints has recently initiated a pilot project where wheelchairs are supplied to the needy through National Rehabilitation Centres. The center has begun to their own data base of AT users to keep track of AT beneficiaries availing these services to avoid unnecessary duplication.

The country neither have a list of essential AT devices and nor a centralized system of procuring AT products. The procurements of AT products in the country is mostly done by International Donors who in turn partner with local NGOs to distribute them to end users. There are no guidelines in place for standards of AT Devices. Activities relating to the supply of these products are not in any way available.

The anecdotal evidences suggest that Prosthetics/ Orthotics, Wheelchairs, Hearing aid, Spectacles, and Personal Digital Assistance are the most demanding devices in the country. There are no

primary suppliers for AT in the country, no specific cost for these products or even stats exist on the number of products being given out in the country.

Provision of AT Services

In addition to the challenge of high abandonment rate of wheelchairs by users due to non-user-friendly nature of imported AT devices, several other barriers do exist that hamper access to AT services in the country. The provision of rehabilitation services is not defined explicitly in two key documents i.e. Primary Healthcare Handbook 2012 and Physical Rehabilitation Policy, 2012.

The constraint of resources have visible impact on the capacities of rehabilitation centers. The centers are not well equipped to do its work. Currently, AT services are highly fragmented with great reliance on handful of non-government organizations. There are only two private organizations named 'Mobility Sierra Leone' and 'Welfare Society for the Disabled' that supplement government efforts of producing AT devices. The National Rehabilitation Center (NRC) through the Ministry of Health and Sanitation is charged with the responsibility to ensure that the devices are made available and be provided to the users, but the center is not well equipped and depends mostly on international donors. National Rehabilitation Center strongly depends on assistance from donors for the devices.

Type of AT Service Providers

Name of service provider	Category	Level of facility	Estimated annual number provided
National Rehabilitation Center	Government (MoHS)	Secondary/Tertiary	500
Mobility Sierra Leone	Non-government non-profit	Provincial	N/A
Welfare Society for the Disabled. Kambia	Non-government non-profit	Provincial	N/A

Though Not-for-profit organizations play a very vital role towards the provision of Assistive Technology in Sierra Leone, but they too find it difficult when it comes to the distribution of these products as there is no central way of distribution of AT devices. The discussions are ongoing on setting up a centralized system of procurement and distribution of AT devices to the needy. However, there are no guidelines and institutional mechanism in place to guide the bulk procurement of the devices at this stage.

Human Resources

The shortage of trained specialists and qualified rehabilitation professionals is one of the main challenges the Assistive Technology sector in Sierra Leone has been facing since long. Nevertheless, the country currently has handful of hearing-aid technicians, physiotherapists, occupational therapists, prosthetics and orthotics, wheelchair technicians or speech therapist. Most of them have been trained out of the country.

Key Promising Factors

- The first batch of BSc. Physiotherapy is set to infuse 17 Physiotherapist in 2020
- The scheme of service drafted for AT cadres in the country to include them into civil services
- Government has started providing financial support to AT activities from 2019

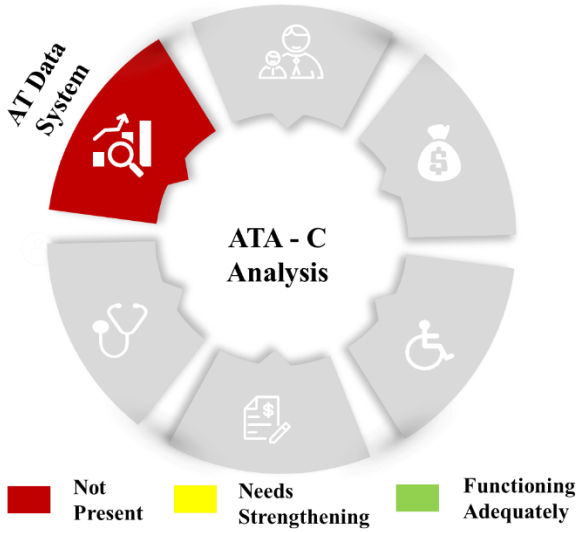
The country has only one professional institution now in Sierra Leone called "Tonkolili District College of Health Sciences" which is offering BSc in Physiotherapy Programme, 4 years duration with an average number of 17 graduates per year. Currently, there are 14 Prosthetic and Orthotic who are providing Rehabilitation Services to the entire population. The country also has Degree and Diploma course in Prosthetics and Orthotics. In the light of promising developments as mentioned in the exhibit and growing political interests, the country will be able to generate interests for AT courses and produce more professionals. However, these training institutions have been facing similar challenges of scarce financial resources to retain teaching staff.

Chapter 4: Analysis, Results and Limitations

ATA-C is a first ever study conducted in Sierra Leone and has come up at a time when National Assistive Technology Programme (NATP) is under the development. The tool has given the opportunity to government stakeholders to holistically assess the sector and thus guide the development of NATP. The data collected during study has been put together and analyzed based on the adapted decision framework to determine the status of AT activities in the country. The sections below highlight salient points and status of the AT activities:

AT Data and Information System

The country lacks a centralized data system that could comprehensively capture information on AT needs, types, level and causes of disability, AT users and service provisions. The data presented by PHC census is criticized widely by experts in disability sector in term of its reliability, quality and underrepresentation of disabled population in the country.



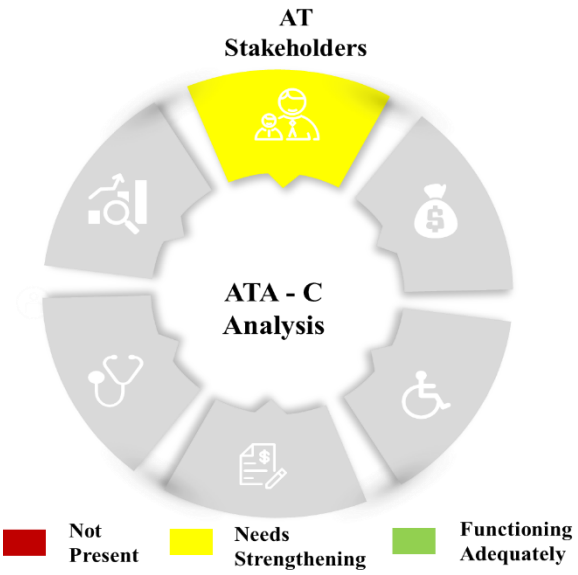
However, opportunity now exists within the system to take corrective measures in order to strengthen PHC Census from the perspective of disability with the conducive environment provided by National Commission for People with disability and development of NATP. The setting up of a robust and Centralized Monitoring and Evaluation System is one of the key objectives of the programme. The existing PHC census can supplement information captured through envisaged concurrent system of M & E under the programme. The country needs to learn from other neighboring nations who are currently at the advanced stages of providing AT services with robust information system in place and replicate them with adaption to local context.

AT Stakeholders

The AT stakeholder landscape is constituted by several government and non-government entities. Despite unwavering commitment exhibited by key government stakeholders a few coordination issues could still be felt. To some extent, this could be attributed to the lack of a clear and long-term strategy on the AT services. The stakeholders from non-government sector have been playing instrumental role in ensuring AT services; though their services are limited to mobility only. The

exchange of skills from non-government service providers to government stakeholder is paramount from sustainability perspective.

There is need of a common coordination platform to bring all government and non-government stakeholders together. The technical working group constituted by Clinton Health Access Initiative is a pivotal step in this direction and will pave a way for all the stakeholders to participate and guide the development of AT Programme and shaping disability sector as a whole. With the growing political commitment in the country for disability services, the journey of AT services seems to be quite promising at this stage.

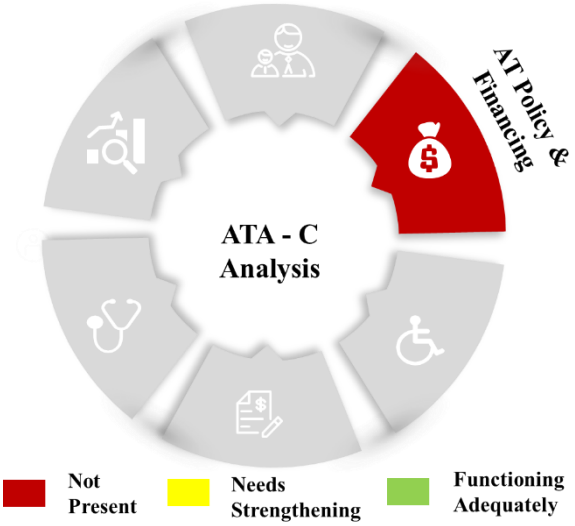


AT Policy and Financing

Country has ratified accession for CRPD/established a legal framework for CRPD implementation. However, the optional protocols have not been embraced by the government. Until 2019, no financial resources were allocated to AT sector by the government. AT sector has been predominantly dependent upon development partners (e.g., bilateral, multilateral, foundations, charities) for financial resources and AT equipment.

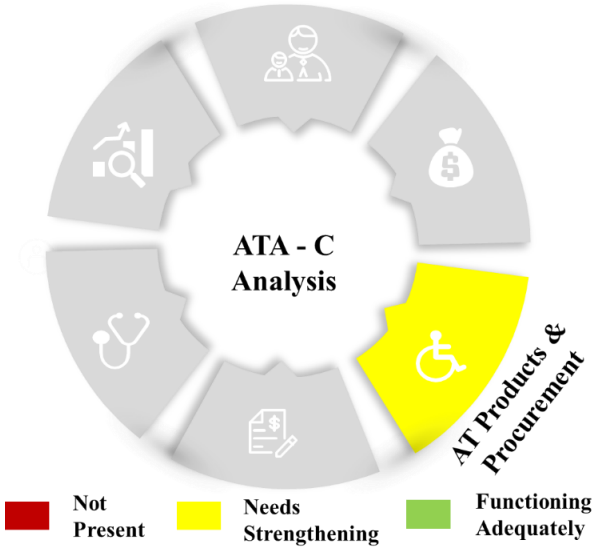
As of now, there is no national health insurance scheme in place that could provide financial protection to needy disabled people to access AT services. Moreover, the draft Sierra Leone social health insurance bill, 2017 doesn't include any services related to AT.

Considering recent developments, it is quite evident that legal framework exists but needs further strengthening and commitment to implement its provisions in the earnest. With the recent announcement of the government to allocate 2 billion SLL for rehabilitation services could be marked as a watershed development in the AT sector.



Assistive Product and Procurement

The National Commission for Persons with Disability exists and in collaboration with National Rehabilitation Centre is mandated to enforce regulatory standards for AT devices. However, there guidelines on the AT equipment standards and specifications are non-existent in the country, thus indicates that institutional mechanism exist but no mechanism is available to enforce AT device standards. This could partly be attributed to the fact that till date government has not made procurement of any AT devices.



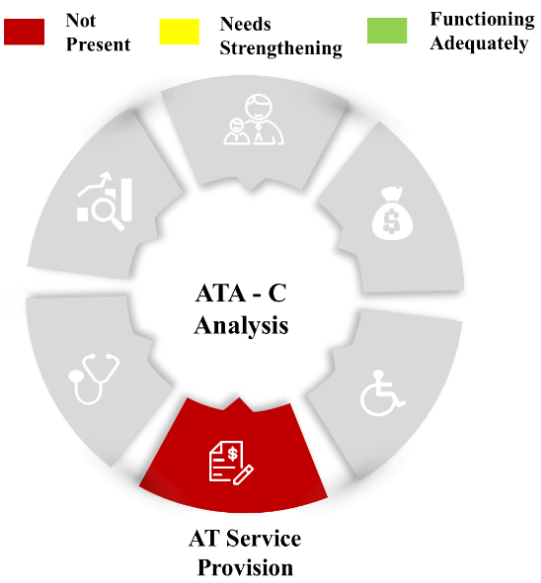
The procurement of AT devices in the country has so far been limited to non-government and faith-based organizations. With the emergence of National Assistive Technology Programme, the need of AT device standard is being felt strongly among key government stakeholders. Ministry of Health and Sanitation has a procurement unit for bulk purchase of medical devices. However, the unit lacks capacities for procurement of AT devices. The issue of non-transparency have also been reported with procurement unit for making procurement without involvement of specialists and distribution of medical devices.

Technical specifications for AT products are non-existent. The tax exemption policy on AT products exist but there is no clear mention of list of AT devices and spare parts exempted from tax leading to loopholes in the implementation. As a result, undue delays in release of procurement consignments from the port have been reported in the past. No priority assistive products on the APL are available in the country through government procurement system.

AT Service Provision

The AT services are highly fragmented and poor clarity exists on how and type of services to be provided by Rehabilitation Centres (RC). No linkages exist with services provided NRC and follow up services at the primary care by community and primary health healthcare workers. Thus, there are significant gaps in provision of assistive products in the governmental sector, which are largely filled by non-government (not-for-profit or for-profit) entities.

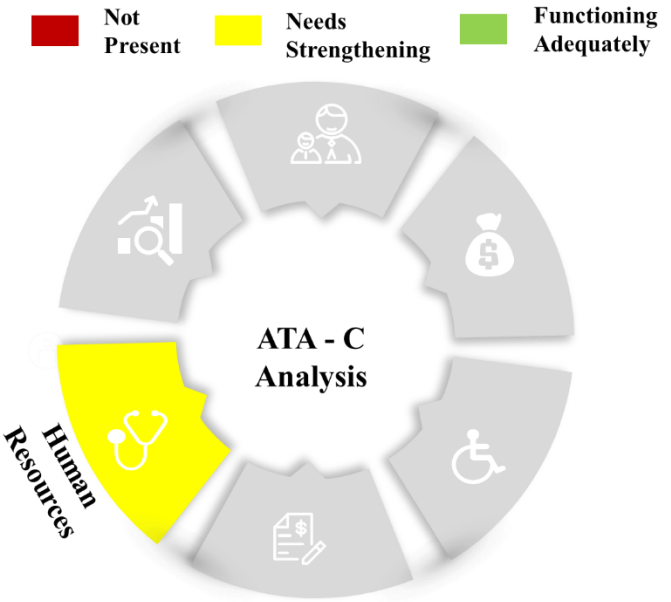
User impact and/or satisfaction is sometimes evaluated after providing assistive products but does not occur in a consistent manner and Peer-to-peer training occurs on an ad-hoc basis and is largely driven by persons using assistive technology due to need. Service provision is fragmented, poorly connected and poorly coordinated.



Very recently, the MoHS has started consolidating the functioning of three Rehabilitation Centre (NRC) after they were handover to them by Handicap International in 2012. MoHS is currently working in collaboration with 'Mobility Sierra Leone' to utilize existing resources (human and equipment) to produce locally made wheel chair and supplying it to the needy.

Human Resources

The country has a dearth of full range of AT workforce to meet the demand for service. Only a limited cadre of workforce receives training specific to AT provision. The only institution available in the country for Physiotherapy is all set to infuse its first batch of 17 professionals in 2020. Directorate has drafted a new scheme of services for AT workforce and submitted it to MoHS for its inclusion revised civil service workforce document. The diploma courses are available in Prosthetic and Orthotic.



With the popularization of draft scheme of services and emerging activities in AT sector, the groundwork is now all set and ready to attract professionals to the sector and mobilize resources in-country. However, limited financial resources is a major deterrent in scaling up both in-service and pre-service trainings.

Limitations of the study

AT assessment work was first ever in Sierra Leone and welcomed by all key and important stakeholders of the disability sector. It was indeed a challenging one at some instances to deep dive due to lack of data. None of the stakeholder/organization has reliable data or information source on AT needs and demand, user perspectives and information related to service provisions. However, all the key government stakeholders (Ministry of Social Welfare, Ministry of Health and Sanitation, Commission) have extended their support to mitigate thee challenges by providing relevant information.

Since the AT services are not defined and organized, it is difficult to assess the quality of services. The study also has limitations in terms of not having enough information on the pre-service and in-service training quality. The assessment is skewed towards supply side of the AT services with limited focus on the user perspectives. The study has a limited focus on temporary disability that require AT services.

Chapter 5: Key Recommendations and Action Plan

In order to validate the report findings and facilitate the development of action plan, a multi-stakeholder workshop was organized. The workshop has given the opportunity to all stakeholders to share their thoughts and put their acts together in terms of expansion of potential actions. The findings of the report has played a pivotal role in galvanizing the support from all key stakeholders and improve on their role in AT sector. The table below summarizes the recommendations made against the each of the domain:

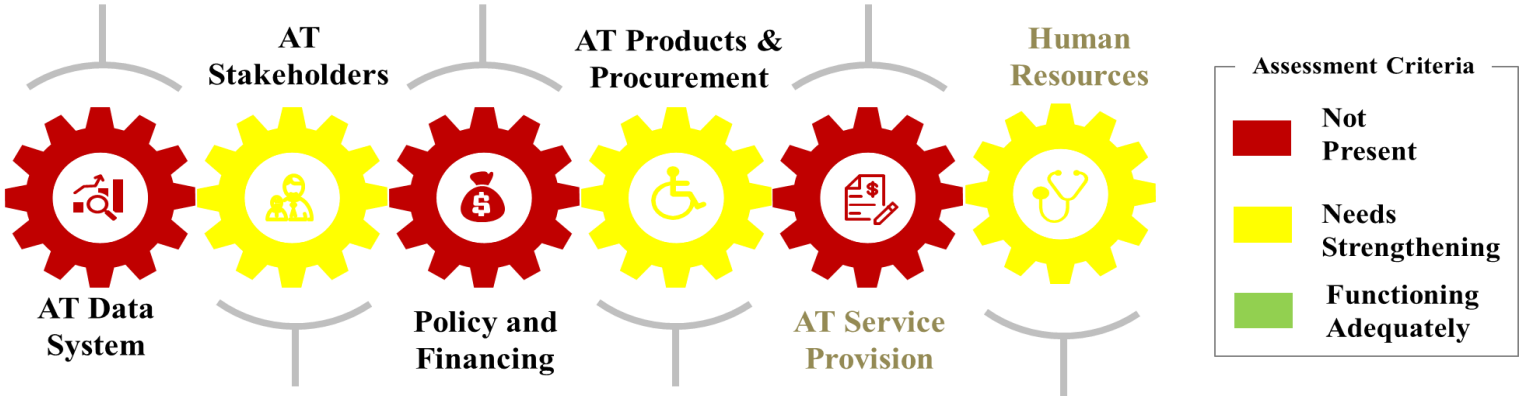
ATA-C Domain	Key Recommendations
AT Data and Information System	All the stakeholders will come together to enumerate the actual number of disabled persons and AT needs. The involvement of Paramount Chiefs, District Health Management Teams, DPOs and unions is paramount to ensure quality and mobilization of people with disability particularly for homeless during enumeration. Till then, PHC, 2015 data will be used as an acceptable data source for any decision making. Urban Research Centre established by UCL will share report on disability assessment and user perspective of AT with the government.
AT Stakeholders	The scope of Technical Working Group constituted for AT assessment will be further expanded by inclusion of key stakeholders from Ministry of Education, Labour, Finance and Road Transport. The meetings will be held regularly to ensure that all stakeholders are on the same page. The working group will also be used for advocating to inter-sectoral ministries to enable AT friendly environment.
AT Policy and Financing	The findings of the report will be presented to high Level Meeting of Ministry Officials by the Directorate to generate awareness and seek more allocation of resources.
AT Product and Procurement	The Ministry of health will develop clear guidelines to bridge the gaps identified for AT procurement. The efforts will be directed towards unified procurement of AT and having a centralized supply chain and distribution system in place.
AT Service Provisions	The findings of the report will be used to inform the guidelines for AT programme which are currently under the way. AT services will be rolled out in phase-wise manner with preference at secondary level of services at district hospitals.
Human Resources	A thorough review of the trainings required by the AT staff will be undertaken by the Ministry. The emphasis will be on identifying pre-service training courses and building capacity of existing resources through in-service training.

Action Plan

- Establish provisions for a dedicated disability census with increased focus on health conditions and functional limitations
- MoHS to support MoSW and UNFPA on census questionnaire development
- Review of Population and House Hold Census questionnaire and methodology and ensure increased involvement of disability stakeholders
- Develop an information system to issue biometric and unique ID enabled cards/certificates for AT users

- A detailed budget of the activities based on strategy plan will be developed and submitted to MoHS
- TWG to propose amendments to revise Disability Act and CRPD provisions to ensure explicit mention access to AT services
- TWG to prepare a list of AT devices and services to included into social health insurance scheme
- Physical rehabilitation policy will be reviewed and provision of AT would be included

- Guidelines for National AT Programme will be developed, criteria for patient needs of AT, and process standardization
- The thrust would be on strengthening continuity of care at secondary level of care at district hospitals in initial phases
- Establish a 'State of Art' National Rehabilitation and AT Centre
- A robust M & E plan will be developed to monitor the progress of AT services in the country



- Expansion of TWG by inclusion of Ministry of Education, Ministry of Transport, Ministry of Labour and Ministry of Finance
- TWG meetings will be held quarterly to review the progress in all inter-sectoral ministries
- MoHS will endeavour to develop AT Strategy Plan with cost estimates and clear mention of roles and responsibilities among key stakeholders

- Sub-technical working group will be constituted to develop an essential list of Assistive Technology devices with specifications and standards
- The essential list will be shared with MoHS to be included into list of medical devices with sensitization of port authorities for tax exemption of spare parts
- MoHS to set up a centralised system of procurement and distribution of AT devices in the country with NGOs on board

- Popularization of scheme of service for AT cadre to generate interest for Prosthetic and Orthotic courses
- Create a pool of resources both from formal and informal market to quick fix the technical issues with AT devices and develop a cost sharing model
- Provide basic training to CHWs to facilitate and adaptation to AT devices in the community by new users

AT Data and Information System

Provision of a dedicated census on disability in the country and review of Population and Household Census questionnaire

The Ministry of Social Welfare has started engaging UNFPA on possibilities of supporting for conducting a dedicated disability census. The 'Statistics Sierra Leone' will be approached to provide technical support for implementing this large scale survey. The Ministry of Health & Sanitation will be involved to develop technical component of census questionnaire. The thrust would be on identifying type of disability, causes, level of functional disability and AT usages etc.

Ministry of Social Welfare in consultation with Ministry of Health will also review Population and Household Census Questionnaire and suggest changes to Statistics Sierra Leone through appropriate channel.

Establishment of biometric enabled data system to issue permanent disability certificate to capture AT needs and registration of AT users

The ministry of health will set up a robust information data system that would enable institution of unique id to all permanent disabled persons and AT devices used by them. The system would capture full profile of the AT users with AT assessment criteria performed. The system will also have facility to issue permanent disability certificate with unique ID so that concurrent data of AT users could also be maintained for improving services on real time basis.

AT Stakeholders

Expansion of TWG by inclusion of key stakeholders to ensure inclusive development in AT sector

Ministry of Health and Sanitation will expand the scope of Technical working group established for AT assessment by inclusion of several other inter-sectoral ministries such as Ministry of Road Transport, Science and Technology, Education and Finance. This would ensure commitment from all these stakeholders to enable AT conducive environment in the country.

Development of long-term costed strategic plan for AT services and sensitization for mobilization of resources

MoHS will put together its efforts to develop a long term strategy plan with cost estimates. The plan will help delineate roles and responsibilities of key stakeholders and mobilize the resources from the government and other international donors. The strategy will be founded on AT 2030, and SDG.

Policy and Financing

Revision of Physical Rehabilitation Policy, Disability Act and other related Acts to ensure explicit mention of AT services and its implementation

A detail budget of all activities based on the strategic plan will be developed and submitted to MoHS. And the TWG will propose amendment to revise Disability Act and CRPD provisions to

ensure explicit mention access to AT services. The working group will again prepare a compressive list of all AT devices and services to be included into the social health scheme. The physical rehabilitation policy will be looked into and review and provision of AT would be included.

AT Product and Information System

Develop a list of essential AT devices with specifications and standards by creation of sub-technical committee and inclusion of the same into medical device list of MoHS

A sub technical working group will be constituted to develop an essential list of all AT devices with specifications and standards. The group will also help to develop guidelines in line with the government procurement process of AT. TWG will ensure that AT devices that be included in the list of medical devices for procurement. This will help guide the supply chain process of AT in line with the MoHS's supply chain. This list will be shared with MoHS and be included on the list of all medical devices with adequate sensitization. The Ministry of Health will in return, set up a centralized system of procurement and distribution of AT devices in the country with stakeholders in the NGO world onboard.

AT Service Provision

Establishment of National AT Programme with robust M & E plan and continuity of care approach and phase wise roll out with priority to district hospitals

There will be guidelines for a National AT Programme with criteria for patient's needs of AT and process of standardization. The provision of the devices is one of the main components in the disability sector. Having devices that fits and meets the needs of the users will help create an enable atmosphere that will help users to move and use the devices without any constrains. The proramme will be implemented in phase-wise manner. The drive would be on strengthening continuity of care at secondary level at district hospitals in initial phase. The TWG will work in line with one of our local producers (Mobility Sierra Leone) to ensure that the right devices are produced. The establishment of a 'state of the art' National Rehabilitation Centers in the country with a robust M & E plan to monitor the progress of all AT devices in the country will also be the priority under the programme.

AT Human Resources

Ensure Scheme of Service for AT cadre, career opportunities with focus on creating pool of resources both in formal and informal market

The popularization of the scheme of services for AT cadre to generate interest for prosthetic and orthotic courses in learning institutions in the country. This will help with having more professionals in the field that will help in the provision of devices that will fit and meet the needs of the users. It will help towards guiding the ministry in ensuring there be institutions in the country that will involve in the training of these set of individuals. Again, it will help create a pool of

resources both from formal and informal market to quick fix the technical issues with AT devices and as well develop a cost sharing model and finally provide basic training to CHWs (Community Health Workers) to facilitate and adaptation to AT devices in the community by new users.

Annexure I

Key Government and Non-Government Stakeholders in AT Sector

Entity Name	Category	Role	Focus area/s of AT	Key AT program	Budget
Directorate of NCDs and Mental Health, MoHS	Government	Lead	All	National Assistive Technology Program	N/A
Ministry of Social Welfare Gender and Children's Affairs	Government	Lead	All	None	N/A
National Commission for Persons with Disability	Government	Lead	All	National Tech Committee on Accessibility	N/A
Sierra Leone Union on Disability Union	Non-government non-profit	Lead	All	None	N/A
Handicap International	Non-government non-profit	Support	All	AIT Projects and Inclusive Education Project	GATE GEC Project
Sierra Leone Physiotherapy Association (SLPA)	Non-government non-profit	Support	Mobility	None	N/A
Sierra Leone Orthotic and Prosthetic Association (SLOPA)	Non-government non-profit	Support	Mobility	None	N/A
Mobility Sierra Leone BO	Non-government non-profit	Lead	Mobility	Mobility Outreach Training	N/A
Welfare Society for the Disabled. Kambia	Non-government non-profit	Support	Mobility	Komot na Gron Program	N/A

N/A- no provision of budget

Annexure II

Procurement Process of Assistive Products in Sierra Leone

Product category	The largest procuring entity	Level/scope of procurement	Frequency of procurement	Average volume procured	Procurement model	Mechanism to choose suppliers	Existence of technical specification	Information used to determine the quantity procured
Prosthetics/ Orthotics	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Wheelchair	Latter Day Saints	Nationally	Based on Need	500	Based on Need	N/A	N/A	NRC Report
Hearing Aid	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Spectacles	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Personal Digital Assistance	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Annexure III

Supply Landscape for assistive products in Sierra Leone

Product category	Primary supplier/s	Approximate cost per unit (local currency)	Assessed taxes and duties	Exist through donation	Primary donor/s	Annual volume donated
Prosthetics/ Orthotics	N/A	N/A	N/A	Yes	Varies	Varies
Wheelchair	N/A	N/A	N/A	Yes	Latter Day Saints	500
Hearing Aid	N/A	N/A	N/A	N/A	N/A	N/A
Spectacles	N/A	N/A	N/A	N/A	N/A	N/A
Personal Digital Assistance	N/A	N/A	N/A	N/A	N/A	N/A

Annexure IV

Total Number of AT related workforce available in the country

Workforce Category	Existence in the government sector		Total number in the non government sector
	Total Numbers	Facility Level	
Physiotherapists	6	Secondary level; tertiary level	2
Technicians	6	Secondary level; Primary level	1
Prosthetic &Orthotic Technicians	14	Secondary level; Primary level	1
Support Staff to Technicians	5	Provincial	2
Personal Digital Assistance	N/A	N/A	N/A

Annexure V

Summary of Findings as per Decision Framework

1. Stakeholder landscape

Component	Status	Rationale
➔ Implementation of programs related to AT by Government entities (e.g., provision, training, standards/regulation, procurement, etc.) with defined monitoring and evaluation plan	Not present	Government entities have programmes for AT. However, there is no monitoring and evaluation plan and indicators.
➔ Unified national strategy for increased access to AT exist with clear roles and responsibilities and strong coordination among government entities for its successful implementation	Not present	There is no national strategy for AT, and government plays very limited role in ensuring availability and access to AT. Contribution from government entities is ad-hoc.

2. Policy and Financing

Component	Status	Rationale
➔ Legal framework on AT.	Needs strengthening	Country has ratified accession for CRPD/established a legal framework for CRPD implementation. However, AT is mentioned but it has not been implemented.
➔ Enough government financing exists to support programmes for AT (e.g. provision, training, standards/regulation, procurement, etc.)	Not present	Government financial resources are not available to support programmes for AT. Donors (e.g., bilateral, multilateral, foundations, charities) play a more significant financing role in AT.
➔ National health financing scheme provides appropriate coverage for assistive technology	Not present	National health financing scheme doesn't exist. The draft bill doesn't include any services related to AT.

3. Assistive Products and Procurement System

Component	Status	Rationale
➔ Regulation of AT products.	Not present	Regulatory structures and mechanisms for assistive products are non-existent across both public and private sectors.
➔ Country has a national assistive product list (APL) or similar, with enough technical specifications	Needs strengthening	AT is registered on the national list of approved medical device. Technical specifications exist, but only for a limited range of assistive products.
➔ There is an established government procurement system for assistive technology	Not present	Government is not undertaking procurement of assistive products. They mostly rely on international donations/non-government actors.
➔ Assistive products are exempted from tax and duties	Present/ Functioning	A wide range of assistive products are exempted from tax and duties
➔ Enough categories of assistive products on the APL are available through government procurement	Not present	No priority assistive products on the APL are available in the country through government procurement system.

4. Human Resource

Component	Status	Rationale
➔ Workforce related to assistive technology.	Needs strengthening	The full range of workforce are too few in numbers to meet the demand for service.
➔ Structures/resources to build or strengthen the capacity of workforce in assistive technology is available.	Needs strengthening	Only a limited cadre of workforce receives training specific to AT provision. And the groundwork is now set and ready all that matters the most here is to get the necessary support needed.

5. Provision of assistive products

Component	Status	Rationale
➔ Guidelines for the provision of AT services	Not present	The quality of provisions of AT varies widely from one provider to another
➔ Assistive product service provision largely occurs in	Not present	There are significant gaps in provision of assistive products in the

Component	Status	Rationale
facilities within the governmental sector		governmental sector, which are largely filled by non-government (not-for-profit or for-profit) entities.
➔ Assistive product service provision is person-centered	Needs strengthening	User impact and/or satisfaction is sometimes evaluated after providing assistive products but does not occur in a consistent manner and Peer-to-peer training occurs on an ad-hoc basis and is largely driven by persons using assistive technology due to need.
➔ Assistive product service provision is well-connected and coordinated	Not present	Service provision is fragmented, poorly connected and poorly coordinated

Assistive Technology Assessment Decision Framework

POLICY, PROGRAM, AND FINANCING FOR AT

ANALYSIS OF CAPACITY			POTENTIAL ACTIONS TO SUPPORT ACCELERATING ACCESS TO AT	
Component	**Status**	**Criteria**	**Objective for Improvement**	**Possible actions**
1. Assistive technology has a legal framework (ATA-C item 2.1 - 2.3)	Present/ Functioning	Country has ratified or accepted accession of the CRPD/established a legal framework for CRPD implementation, AT is explicitly mentioned in the legal framework/legislation, and it has been implemented.	Establish/strengthen and implement legislation supporting access to AT	• Develop legislation and adopt policies supporting access to AT in accordance with national processes (including ratifying or accepting accession for CRPD); establish legal framework for its implementation • Update or revise existing relevant legislation and/or policies to include AT (e.g., disability, employment, and/or education laws). • Develop accountability mechanism(s) to track progress against the implementation of legislation.
	Needs strengthening	Country has ratified or accepted accession for CRPD/established a legal framework for CRPD implementation. However, AT is not explicitly mentioned in the legal framework/legislation, or it is mentioned but it has not been implemented.		
	Not present	Country has not ratified or accepted accession of CRPD. Assistive technology is not explicitly mentioned in any legislation.		
2. Unified national strategy for increased access to AT exist with clear roles and responsibilities and strong coordination among government entities for its successful implementation (ATA-C item 1.1. - 1.4)	Present/ Functioning	Government is aware on the need for and importance of AT. There is a unified national strategy for AT with clear/defined roles and responsibilities among government entities engaged in AT. Coordination is strong and there are mechanisms or platforms for inter-sectoral and/or inter-agency coordination.	Establish/strengthen/maintain a coordinated national effort for increased access to AT.	• Increase awareness among stakeholders on the need for and importance of AT, and build political commitment for improved access to AT. • Develop and implement a unified national strategy, including clear and coordinated roles and responsibilities among different government entities and between national and sub-national levels. • Develop a national priority assistive product list (APL) and determine priorities based on national needs and drawing on WHO priority list. • Establish or designate a national entity (this might be a specific Ministry, new agency, inter-agency coordinating mechanism or Technical Working Group) responsible for coordinating the implementation, monitoring, and evaluation of AT activities at various government entities and national and sub-national level. Ensure AT user representation in the entity.
	Needs strengthening	Government is aware on the need for and importance of AT. There is a national strategy for AT, but there is a lack of clarity regarding the roles and responsibilities among government entities, which result in gaps in implementation of strategy or overlap of work being done. There is poor or inadequate coordination among sectors and agencies and there are no established mechanisms or platforms for addressing this. There are also gaps in roles and/or focus on particular assistive technology areas.		
	Not present	Government has limited awareness on the need for and importance of AT. There is no national strategy for AT, and government plays no or very limited role in ensuring availability and access to AT. Contribution from government entities is ad-hoc.		
3. Government entities implement programmes for AT (e.g., provision, training, standards/regulation, procurement, etc.) with defined monitoring and evaluation plan (ATA-C item 1.5 - 1.7)	Present/ Functioning	Government entities have programmes for AT with defined monitoring and evaluation plan and indicators	Develop/strengthen/maintain programmes for AT within relevant government entities and associated monitoring and evaluation plans and indicators	• Integrate AT into existing, relevant developmental plans (e.g., SDGs) and large-scale programmes. • Establish programmes for AT within relevant sectors (e.g., health, education, social welfare, etc.) and within national and sub-national levels of government. • Develop and implement a monitoring and evaluation plan and tools with indicators that also capture the users' perspectives. • Apply the results of evaluation and lessons learned to improve program implementation.
	Needs strengthening	Government entities have programmes for AT. However, there is no monitoring and evaluation plan and indicators.		
	Not present	Government entities do not have programmes for AT or monitoring and evaluation plan and indicators		
4. Sufficient government financing exists to support programmes for AT (e.g. provision, training, standards/regulation, procurement, etc.) (ATA-C item 1.8)	Present/ Functioning	Financial resources to support programmes for AT exist among government entities. There is a budget line for appropriate AT activities at national, provincial and district level with attached allocated funds.	Ensure sufficient/increasing/ consistent amount of resources are put towards AT programming from government and/or partners (e.g. donors)	• Implement process to identify and calculate costs for implementing programmes within the national strategy for AT. • Implement fiscal analysis and forecasting. • Identify possible funding mechanisms for AT programmes (e.g., public private partnerships, donor support, etc.).
	Needs strengthening	Financial resources to support programmes for AT exist among government entities and there is a budget line with attached allocated funds. However, the allocation is insufficient resulting in gaps in programming.		

	Not present	Government financial resources are not available to support programmes for AT. Donors (e.g., bilateral, multilateral, foundations, charities) play a more significant financing role in AT.		
5. National health financing scheme provides appropriate coverage for assistive technology (ATA-C item 2.4 - 2.5)	Present/ Functioning	National health financing scheme includes AT and is accessible to the majority of the population. It provides a wide range of priority assistive products and services.	Ensure national health financing scheme is inclusive of AT	• Develop investment case for inclusion of priority AT into health financing scheme, universal health coverage or other social safety policy. • Follow process to ensure that coverage for priority AT is included in national health financing scheme, universal health coverage or other social safety policy. • Determine range of assistive products to be covered or financed based on need and economic capacity. • Establish reimbursement rate or amount at which each priority AT is to be covered by the financial mechanism.
	Needs strengthening	National health financing scheme exist, but it does not include AT or it includes some AT but gaps exist because the overall expenditure is inadequate, there is restrictive eligibility criteria, there is a small range of products covered, etc.		
	Not present	National health financing scheme does not exist, or if the scheme does exist it covers a fraction of the population. AT is not covered.		

PRODUCTS AND PROCUREMENT SYSTEM

ANALYSIS OF CAPACITY			POTENTIAL ACTIONS TO SUPPORT ACCELERATING ACCESS TO AT	
Component	**Status**	**Criteria**	**Objective for Improvement**	**Possible actions**
6. Assistive products are regulated (ATA-C item 3.2 - 3.3.)	Present/ Functioning	There are comprehensive, clear and effective regulatory structures and mechanisms to regulate assistive products in the country. There are regulations or standards that products must comply to before being placed on the market	Establish/strengthen/maintain regulation and regulatory mechanism for assistive products	• Establish a regulatory structure or assign agency at national or sub-national level to implement quality control of assistive products. • Include assistive products into existing health products certification regulation (e.g., essential medical device list). • Develop and publish clearly defined, step-by-step procedure for a product to go through the regulation process (e.g. standard operating procedures, registration requirements, minimum quality). • Facilitate testing and certification of assistive products using existing national or sub-regional testing facilities, and establish and maintain a register of certified or approved products. • Establish and maintain a register of manufacturers, suppliers and importers of assistive products and a post-market surveillance system. • Establish mechanism for routine update
	Needs strengthening	There are regulatory structures and mechanism for some assistive products. These regulations are inadequate, lack clarity, and do not work effectively most of the time (e.g., due to lack of compliance, lack of applicability to key stakeholders, etc.)		
	Not present	Regulatory structures and mechanisms for assistive products are non-existent across both public and private sectors		
7. Country has a national assistive product list (APL) or similar, with sufficient technical specifications (ATA-C item 3.3 and 3.7)	Present/ Functioning	Country has a national assistive product list, or AT is registered on the national list of approved medical devices, and uses it to guide product development, production, service delivery, procurement, or reimbursement/benefit package policies. Quality products are procured through use of appropriate, sufficient technical specifications.	Develop/strengthen/maintain national assistive product list and technical specifications	• Develop a national priority assistive product list (APL) and determine priorities based on national needs and drawing on WHO priority list. • Introduce comprehensive technical specifications and minimum standards for all assistive products on the APL. to guide the procurement of quality products. • Enforce the use of technical specifications as the main tool to evaluate products and suppliers during the procurement process; implement a clear verification process.
	Needs strengthening	Country has a national assistive product list, or AT is registered on the national list of approved medical device, however it covers limited types of AT and/or poorly used. Technical specifications exist, but only for a limited range of assistive products and/or only provides basic, insufficient product specifications.		
	Not present	National assistive product list does not exist, and AT is not registered on the national list of approved medical device. No technical specifications for assistive products are available.		
8. There is an establishedgovernment procurement system for assistive technology (ATA-C item 3.4 - 3.11)	Present/ Functioning	Government is the largest procuring entity for assistive products. Procurement is well-managed, done in bulk and regularly. Procurement among different entities are well-coordinated and/or pooled nationally or sub-nationally. Quantity is determined by sufficient and accurate data/information.	Establish/strengthen/maintain government procurement system for assistive technology	• Integrate assistive products into the existing procurement system in the country (e.g., MoH's procurement system). • Develop plan and guidelines for the procurement of assistive products (e.g. technical specification, tender process to select supplier, etc.) • Develop aggregate procurement lists based on needs from various sectors/ministries to enable centralized procurement. • Develop and maintain database of available assistive products and suppliers that meet quality requirements for planning and decision-making. • Participate in regional procurement network, if available.
	Needs strengthening	Government plays a significant role in the procurement of assistive products. However, the procurement system is weak. For example, the systems is inadequate; inconsistency in procurement frequency or procurement happens in an ad-hoc manner; there is no information to reliably determine the quantity to procure.		
	Not present	Government is not undertaking procurement of assistive products. They may procure a limited amount, however they mostly rely on international donations/non-government actors		

9. Assistive products are exempt from tax and duties (ATA-C item 3.16)	Present/ Functioning	A wide range of assistive products are exempt from tax and duties	Increase/maintain range of assistive product categories that are tax exempt	• Gather data and evidence to advocate for and support policy development for inclusion of priority assistive products in tax-exempt categories of medical and health devices
	Needs strengthening	Many assistive products are not exempt from tax and duties, except for some priority products		
	Not present	All or most assistive products are not exempt from tax and duties		
10. Sufficient categories of assistive products on the APL are available through government procurement (ATA-C item 3.1 and 3.5)	Present/ Functioning	More than 50% of priority assistive products on the APL are available in the country through government procurement system	Ensure sufficient categories of assistive products in the national APL are available through government procurement	• Develop a national priority assistive product list (APL) and determine priorities based on national needs and drawing on WHO APL. • Analyze and quantify need for each assistive products category based on user needs to inform priorities • Develop plans, guidelines and tenders to integrate procurement of products on APL into government procurement • Something on adequate supply chain to ensure availability at appropriate facility level
	Needs strengthening	Less than 50% of priority assistive products on the APL are available in the country through government procurement system.		
	Not present	No priority assistive products on the APL are available in the country through government procurement system.		

HUMAN RESOURCES

ANALYSIS OF CAPACITY			POTENTIAL ACTIONS TO SUPPORT ACCELERATING ACCESS TO AT	
Component	**Status**	**Criteria**	**Objective for Improvement**	**Possible actions**
11. Workforce related to assistive technology is sufficiently available (ATA-C item 4.2 - 4.5)	Present/ Functioning	There is a sufficient number of general health workforce, as well as full range of specialists and allied health professionals related to AT in the government sector	Ensure/strengthen/maintain sufficient workforce related to AT	• Identify needs for personnel at different levels of the AT service provision system. • Estimate the required number of personnel required to meet the unmet and future needs for AT at all levels. Note: Based on priority AT, the cadre of health worker or personnel may vary by type of AT to be delivered. • Develop and implement strategies for training of required personnel at different levels of the system. • Develop a fit-for-purpose AT workforce at all levels. • Develop and adopt standards for AT service providers. • Develop and implement initiatives/incentives to support retention and career pathways/continuing professional development.
	Needs strengthening	The full range of workforce is not available and/or in insufficient quantities in the government sector. For example, rehabilitation specialists or audiologists may not exist, or are too few in numbers to meet the demand for service.		
	Not present	There is lack of or major deficits in the workforce; there is not enough to meet basic needs for AT provision. Multiple gaps exist across AT service delivery.		
12. Structures/resources to build or strengthen the capacity of workforce in assistive technology is available (ATA-C item 4.6 - 4.7)	Present/ Functioning	There are educational institutions in the country offering degrees, diplomas or other courses for the full range of workforce categories (refer to workforce list in ATA-C). Most of the workforce receives specific training on AT provision, either as part of their core training or through continuing education.	Establish/strengthen/maintain capacity to develop workforce related to AT	• Integrate degrees, diplomas, and/or courses within existing educational institutions to achieve sufficient range of workforce categories. • Develop curricula and materials for training programmes on the provision of AT at different levels of the system. • Develop the capacity of educational institutions to develop workforce for the provision of AT at different levels and offer academic credentials with a focus on AT provision; provide continued learning and educational opportunities, and increasing accreditation and certification. • Develop policy for establishing professional associations related to AT. • Recognize AT provision as part of workforces' scope of practice • Implement training programs for non-traditional AT providers. • Establish center of excellence to provide training in collaboration with existing facilities at tertiary care hospitals.
	Needs strengthening	There are educational institutions in the country offering degrees, diplomas or other courses for most of the workforce categories (refer to workforce list in ATA-C). Only a limited cadre of workforce receives training specific to AT provision.		
	Not present	Educational institutions in the country offer degrees, diplomas or other courses for limited range of workforce categories (refer to workforce list in ATA-C). Workforce in the country does not receive specific training on AT provision.		

PROVISION OF ASSISTIVE TECHNOLOGY

ANALYSIS OF CAPACITY			POTENTIAL ACTIONS TO SUPPORT ACCELERATING ACCESS TO AT	
Component	**Status**	**Criteria**	**Objective for Improvement**	**Possible actions**
13. The provision of assistive products is guided by clear guidelines/standard (ATA-C item 5.1 - 5.6)	Present/Functioning	There are clear guidelines/standards that support effectiveness and quality of assistive technology provision, including policy on which workforce is eligible to prescribe and/or provide the assistive product, and the standard of service provision. The practice of AT service provision is consistent with the guideline/standard.	Develop/strengthen/maintain standards guiding the provision of assistive technology	• Form expert or technical committee(s) to develop standards and guidelines for AT service provisions • Develop mechanism to provide training and raise awareness on provision standards to workforce and facilities where assistive products are provided • Implement oversight of standards and guidelines at national and sub-national levels • Monitor and evaluate the efficiency of service delivery through outcomes measurements such as performance indicators • Develop and enforce expectations and good practices among AT providers • Develop and implement a plan for ensuring that service facilities are physically, cognitively, socially and culturally accessible
	Needs strengthening	There are few guidelines/standards that support effectiveness and quality of assistive technology provision. Those that exist are unclear, insufficient or impractical. There are substantial gaps in its implementation.		
	Not present	Guidelines/standards of assistive technology provision are non-existent. The quality of provisions of AT varies widely from one provider to another		
14. Assistive product service provision largely occurs in facilities within the governmental sector (ATA-C item 5.7)	Present/ Functioning	Majority of assistive product service provision occurs in the governmental sector, at the primary healthcare level or community level, while more complex assistive products are sufficiently provided at the secondary/tertiary healthcare levels.	Include/increase/maintain the provision of assistive products in facilities within the governmental sector	• Identify government facilities where the provision of assistive products could be added into the existing services offered • Establish services at primary, secondary and tertiary care levels as appropriate, and at other relevant ministries; increase the number of service outlets over time. • Identify and allocate necessary resources over time • Ensure sufficient availability of assistive products from the approved national list
	Needs strengthening	Some assistive products are provided in the governmental sector. Gaps in service provision are filled by non-governmental (not-for-profit and for-profit) entities. Some limitations exist in capacity to provide assistive technology at either the primary, secondary, and tertiary healthcare levels or community, district, and national levels, which result in inefficient allocation of tasks (e.g.' specialists providing simple assistive products, general health workforce providing complex assistive products without adequate training).		
	Not present	There are significant gaps in provision of assistive products in the governmental sector, which are largely filled by non-government (not-for-profit or for-profit) entities. There are significant limitations in capacity to provide assistive products at all levels, resulting in inefficient allocation of tasks.		
15. Assistive product service provision is person-centered (ATA-C item 5.5 and 5.9)	Present/ Functioning	User impact and/or satisfaction is consistently evaluated after providing assistive products. Evaluation results are systematically reviewed and used to improve quality of services provided. Peer-to-peer training is available for some assistive products and led by service providing entities.	Ensure/strengthen/maintain person-centeredness within the assistive product service provision	• Ensure user impact and/or satisfaction and peer-to-peer training are included in the guidelines/standards of assistive technology service provision • Engage technical experts and user-groups (e.g., disabled persons' organization) to develop necessary tools (e.g., user impact and satisfaction assessment tool) and training of trainers program for delivering person-centered assistive technology services • Carry out user impact and/or satisfaction assessment routinely and use results to improve product procured and service provision • Develop follow-up and online user tracking system or mechanism, including compliance and grievance mechanisms
	Needs strengthening	User impact and/or satisfaction is sometimes evaluated after providing assistive products, but does not occur in a consistent manner. Evaluation of results are not systematically considered to improve the quality of services provided. Peer-to-peer training occurs on an ad-hoc basis and is largely driven by persons using assistive technology due to need.		
	Not present	User impact and/or satisfaction is not considered at all after providing assistive products. Peer-to-peer training does not exist for any assistive products.		
16. Assistive product service provision is well-connected and coordinated (ATA-C item 5.8)	Present/ Functioning	There is a formal referral mechanism between the different services providers (e.g., providers within health and other sectors, providers at different level, etc.). Service providers in different sectors and levels are well-connected to provide appropriate service to users	Develop/strengthen/maintain well-connected and coordinated assistive product service provision system	• Map service providers and develop directory • Include AT in existing referral mechanism within the healthcare system • Develop and implement a larger referral mechanism between facilities under different sectors (health education, social welfare, etc.) • Improve knowledge of service providers on AT services and referral process
	Needs strengthening	There is a formal referral mechanism between the different services providers, but it has not been successfully implemented due to various limitations on-the-ground		
	Not present	There is no mechanism to refer or connect users from one provider to another. Service provision is fragmented, poorly connected and poorly coordinated		

DATA AND INFORMATION SYSTEM

ANALYSIS OF CAPACITY			POTENTIAL ACTIONS TO SUPPORT ACCELERATING ACCESS TO AT	
Component	**Status**	**Key Finding C**	**Objective for Improvement**	**Possible actions**
17. Reliable information is collected to accurately estimate the need for assistive technology (ATA-C 6.2)	Present/ Functioning	Government collects data on health conditions and/or functional limitations that may require AT, and the results are up-to-date, comprehensive, reliable, and covers entire population. There is a clear method to estimate AT need from prevalence of health conditions and functional limitation.	Establish/strengthen/maintain data collection on health conditions and functional limitations to estimate the need for assistive technology.	• Assess gaps in the existing data availability and determine priority question(s) to add into the regular census or survey (e.g., population survey on health, facility survey). • Develop a national data collection roadmap with defined intervals on when data will be collected and how data will be used to inform procurement, service delivery, and AT policy. • Engage and encourage universities and research institutions to participate and fill the gaps in data availability on AT through research activities.
	Needs strengthening	Government collects data on health conditions and/or functional limitations that may require AT. However, the results are not up-to-date, not comprehensive, the reliability is questioned, and/or subsets of total population are not accounted for. There is no clear method to estimate AT need from prevalence of health conditions and functional limitation.		
	Not present	Government only collects data on limited number of health conditions that may require AT. There is no data collection on functional limitation. There is no/unsubstantial information to support estimation of AT needs.		
18. Information is collected on the provision and utilization of assistive technology (ATA-C item 6.1)	Present/ Functioning	Government has centralized information system that can comprehensively and reliably generate up-to-date information regarding utilization of AT (e.g., number of products provided, current AT users, etc.).	Establish/strengthen/maintain information system and database on the provision and utilization of AT	• Design and implement an AT information system or registry that meets the needs of the county and that can be extended/adapted as the needs shift (e.g., numbers of individuals in need of AT, number of people using AT, registration of products, projected needs); promote the use of the data to drive evidence-based practices. • If some data collection exists, determine mechanism to integrate data collection across agencies/ministries/facilities into a streamlined AT information system under one relevant ministry. • Develop capacity among stakeholders on how to analyze and use the data captured in the information system; encourage utilization of data for research to improved policy and programming.
	Needs strengthening	Government has centralized information system that can generate information regarding utilization of AT. However, the results are not up-to-date, comprehensive, and the reliability is in question.		
	Not present	Information system that can generate data regarding utilization of AT is non-existent.		

List of organizations consulted during ATA-C Assessment

1.	Directorate of NCDs and Mental Health, MOHS
2.	National Assistive Technology Programme, MOHS
3.	Ministry of Social Welfare Gender and Children's Affairs (MSWGCA)
4.	National Commission for Persons with Disability
5.	Sierra Leone Union on Disability Issues
6.	POPDA Makeni
7.	WESOFORD Kambia
8.	Mobility Sierra Leone Bo
9.	Handicap International
10.	SLEDT
11.	34 Military Hospital
12.	MoHS/Sierra Leone Physiotherapy Association (SLPA)
13.	MoHS/Sierra Leone Orthotic & Prosthetic Association (SLOPA)
14.	MoHS/NRC
15.	MoHS Connaught
16.	MoHS BO Government Hospital
17.	Koidu Regional Rehabilitation Center Koidu Govt Hospital
18.	Emergency Hospital
19.	MoHS BO Government Hospital
20.	World Health Organization
21.	Abdul Miracle Disabled Children's Foundation
22.	Sierra Leone Association of the Deaf
23.	Human Rights Commission Sierra Leone
24.	Ministry of Education
25.	Freetown Chercher Home
26.	Disability Awareness Action Group
27.	Amputee/War Wounded
28.	One Family People Org. Freetown
29.	Kings SL Partnership
30.	Enable the Children
31.	Latter Day Saint
32.	NEHP/MoHS
33.	Life Matters Disabled Foundation
34.	Sierra Leone Urban Research Center