

# Strategic action framework to improve access to assistive technology in the Eastern Mediterranean Region

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World Health  
Organization

REGIONAL OFFICE FOR THE Eastern Mediterranean

# **STRATEGIC ACTION FRAMEWORK TO IMPROVE ACCESS TO ASSISTIVE TECHNOLOGY IN THE EASTERN MEDITERRANEAN REGION**

Draft 2020

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## **PREFACE**

The *Strategic action framework to improve access to assistive technology in the Eastern Mediterranean Region* was developed with the vision that all people living in the Region will have access to the assistive products they need to fully enjoy all human rights and fundamental freedoms.

The framework is intended to support Member States in their efforts to implement resolution EM/RC63/R.3 on Improving access to assistive technology, which was adopted by the 63rd session of the WHO Regional Committee for the Eastern Mediterranean in 2016. The regional resolution was followed by resolution WHA71.8 on Improving access to assistive technology, adopted by the World Health Assembly in 2018. The full implementation of these commitments will help to achieve progressive realization of the measures required by the Convention on the Rights of Persons with Disabilities and the targets of the Sustainable Development Goals.

The strategic action framework was developed in full consultation with Member States of the Region through a process that included the Consultative meeting on improving access to assistive technology in the Eastern Mediterranean Region in Islamabad, Pakistan, in May 2018.

## **1. INTRODUCTION**

### **1.1 Assistive technology**

From before birth until the end of life, people are exposed to the risk of functional limitations that cause significant impacts in terms of quality of life and social and economic costs. To help to address functional limitations, about one in seven people needs assistive technology – a figure that will rise to one in five by 2050 (1).

Assistive technology comprises assistive products, as well as services and systems for their provision. Assistive products are products external to the human body whose primary purpose is to maintain or improve the functioning and independence of people living with impairments irrespective of the cause being a disease, a disorder, an injury or ageing. Assistive products are also used to prevent impairments and secondary health conditions. They encompass a broad range of devices, equipment, instruments and software including, for example, wheelchairs, hearing aids, white canes, pill organizers, text-to-speech software and incontinence pads (2).

Although the provision of assistive technology improves functioning and thereby is an integral part of health services, its benefits stretch into all areas of life. Assistive technology enables people to live healthy, productive, independent and dignified lives, as well as to participate in education and the labour market, and in family and civic life. Without assistive technology, people may be excluded or isolated, or risk poverty or become a burden to their families. Provision of assistive technology can be cost-effective, reduce the demand and costs for health, care and support services, and enable family members to study or work (3). It is equally vital to invest in and promote inclusive barrier-free environments to support the optimum use of assistive technology by all people who need it (4).

Assistive technology is required by a broad spectrum of the population including people with chronic health conditions, persons with disabilities and older persons, as well as any person who experiences temporary or life-long impairment or functional decline across the life cycle. Besides providing promotive, preventive, curative, rehabilitative and palliative services, assistive care (including assistive technology) also needs to be available (5). The increasing need for assistive technology and rehabilitation services is driven by the increasing global health and demographic trends, including the rise in noncommunicable diseases (NCDs), ageing populations and the number of people living with the consequences of disease and injury (6).

The strategic action framework to improve access to assistive technology is an important contribution towards improving access to assistive technology in the Eastern Mediterranean Region, which is linked to the development of better rehabilitation services. The framework has been developed following extensive consultation with Member States, international organizations and nongovernmental organizations, as well as a range of national, regional and international assistive technology experts.

## 1.2 Global situation

Globally, an estimated one billion people need assistive technology; a figure that will double by 2050 as populations age and the prevalence of NCDs increases. Nine out of 10 people who need assistive technology do not have access to it, which has an adverse impact on the education, livelihood, health and well-being of individuals, families, communities and societies (1). People often need more than one assistive product (7).

The global market for assistive products was valued at more than US\$ 14 billion in 2015 and is expected to be nearly twice as large (US\$ 27 billion) by 2024 (8). There is an immense workforce shortage in assistive technology, and countries with the lowest supply of workers skilled in provision of assistive technology tend to have the highest prevalence of disability-related health conditions (9).

By ratifying the Convention on the Rights of Persons with Disabilities, 182 countries (as of 17 August 2020) have committed to undertaking measures to improve access to assistive technology through national efforts and international cooperation (10).

In May 2018, Member States of the World Health Organization (WHO) approved resolution WHA71.8 on improving access to assistive technology at the Seventy-first World Health Assembly (4). Through its Global Cooperation on Assistive Technology (GATE) initiative,<sup>1</sup> WHO has committed to improving access to assistive products. GATE assists countries to develop assistive technology policies and programmes as an integral component of universal health coverage (UHC) (2). To improve access to high-quality, affordable assistive products in all countries, the WHO Priority Assistive Products List was introduced in 2016.<sup>2</sup> The list includes 50 priority assistive products, selected on the basis of widespread need and impact on a person's life. The Priority Assistive Products List can be used to guide product development, production, service delivery, market shaping, procurement, and reimbursement policies (including insurance coverage). Fig. 1 shows the 50 WHO priority assistive products, grouped into six categories (2). Some of the priority assistive products are relevant to more than one category, but only deafblind communicators are placed in two of the categories (hearing and vision).

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<sup>1</sup> GATE initiative ([https://www.who.int/phi/implementation/assistive\\_technology/phi\\_gate/en/](https://www.who.int/phi/implementation/assistive_technology/phi_gate/en/)).

<sup>2</sup> Priority Assistive Products List (APL) ([https://www.who.int/phi/implementation/assistive\\_technology/global\\_survey-apl/en/](https://www.who.int/phi/implementation/assistive_technology/global_survey-apl/en/)).

<p style="text-align: center;"><b>Cognition</b></p> <ul style="list-style-type: none"> <li>• Fall detectors</li> <li>• Global positioning system locators</li> <li>• Personal digital assistants</li> <li>• Personal emergency alarm systems</li> <li>• Pill organizers</li> <li>• Recorders</li> <li>• Simplified mobile phones</li> <li>• Time management products</li> <li>• Travel aids, portable</li> </ul>	<p style="text-align: center;"><b>Hearing</b></p> <ul style="list-style-type: none"> <li>• Alarm signallers with light/sound/vibration</li> <li>• Closed captioning displays</li> <li>• Deafblind communicators</li> <li>• Gesture to voice technology</li> <li>• Hearing aids and batteries</li> <li>• Hearing loops/FM systems</li> <li>• Video communication devices</li> </ul>	<p style="text-align: center;"><b>Mobility</b></p> <ul style="list-style-type: none"> <li>• Canes/sticks</li> <li>• Club foot braces</li> <li>• Crutches, axillary/elbow</li> <li>• Hand rails/grab bars</li> <li>• Orthoses, lower limb</li> <li>• Orthoses, spinal</li> <li>• Orthoses, upper limb</li> <li>• Pressure relief cushions</li> <li>• Pressure relief mattresses</li> <li>• Prostheses, lower limb</li> <li>• Ramps, portable</li> <li>• Rollators</li> <li>• Standing frames, adjustable</li> <li>• Therapeutic footwear, diabetic/neuropathic/orthopaedic</li> <li>• Tricycles</li> <li>• Walking frames/walkers</li> <li>• Wheelchairs, electrically powered</li> <li>• Wheelchairs, manual assistant-controlled</li> <li>• Wheelchairs, manual active use</li> <li>• Wheelchairs, manual with postural support</li> </ul>
<p style="text-align: center;"><b>Self care</b></p> <ul style="list-style-type: none"> <li>• Continence products, absorbent</li> <li>• Chairs for shower/bath/toilet</li> </ul>	<p style="text-align: center;"><b>Vision</b></p> <ul style="list-style-type: none"> <li>• Audio players with DAISY capability</li> <li>• Braille displays (note takers)</li> <li>• Braille writing equipment/braille</li> <li>• Deafblind communicators</li> <li>• Magnifiers, digital hand-held</li> <li>• Magnifiers, optical</li> <li>• Screen readers</li> <li>• Spectacles, low vision/short distance/long distance/filters/protection</li> <li>• Watches, talking/touching</li> <li>• White canes</li> </ul>	
<p style="text-align: center;"><b>Communication</b></p> <ul style="list-style-type: none"> <li>• Communication boards/books/cards</li> <li>• Communication software</li> <li>• Keyboard and mouse emulation systems</li> </ul>		

**Figure 1. The 50 WHO priority assistive products, grouped in six categories**

### 1.3 Regional situation

In the Region, following global calculations, an estimated 10% of the people needing assistive products currently have access to and use the assistive products they need (11). The estimated number of people with moderate and severe functioning limitations in the Region will be nearly 200 million by 2050. Many of them – if not all – would require one or more assistive product (11). This magnitude is supported by a global estimate by the GATE initiative of the need for a limited range of assistive products, indicating that the number of people in the Region who need glasses and low vision aids, wheelchairs, prostheses or orthoses, other mobility products, hearing aids and cognitive aids ranges between 3.1 and 86.1 million (see Table 1) (5).

Table 1. Estimated number of people in need of a selected range of assistive products in the Eastern Mediterranean Region (5).

Type of assistive product	Number of people in need (millions)
Glasses and low vision products	86.1
Wheelchairs	6.7
Prostheses or orthoses	3.1
Other mobility products	13.3
Hearing aids	8.3
Cognitive products	13.3



Some countries in the Region may be able to achieve universal assistive technology coverage by 2050, meaning that everyone in that country is able to receive the assistive technology they need without financial hardship, while other countries may require more time. To achieve an average coverage rate of 50% in the Region by 2050, systems for the provisioning of assistive products that can cater to the needs of about 100 million people would be required.<sup>1</sup>

To address the limited access to assistive technology in the Region, the 63rd session of the Regional Committee in 2016 adopted resolution EM/RC63/R.3 on Improving access to assistive technology. To operationalize the resolution, a rapid assessment on the situation of assistive technology needs and provision was done in 17<sup>2</sup> of the 22 Member States of the Region in 2017 (5). The regional assessment tool addressed the 25 most essential assistive products,<sup>3</sup> listed in Fig. 2, which constitute a subset of the 50 priority assistive products listed in Fig. 1. This strategic action framework was informed by the analysis of the assessment. The analysis is presented in a report titled *Assistive technology in the Eastern Mediterranean Region: results of a rapid assessment* (5).

The Region faces an unprecedented scale of emergencies. Eight Member States are classified as being in a state of emergency, with more than 62 million people affected (12). Conflicts, violence and natural disasters do not only cause new impairments, but also increase the vulnerability of those living with pre-existing functional limitations and hamper access to needed services including provision of assistive technology. The income levels of countries vary within the Region, with four low-income countries, 12 middle-income countries and six high-income countries (13).

<p style="text-align: center;"><b>Cognition</b></p> <ul style="list-style-type: none"> <li>• Pill organizers</li> <li>• Time management products (such as white board, memory calendar, etc.)</li> </ul>	<p style="text-align: center;"><b>Communication</b></p> <ul style="list-style-type: none"> <li>• Communication boards/books/cards</li> </ul>	<p style="text-align: center;"><b>Mobility</b></p> <ul style="list-style-type: none"> <li>• Canes/sticks</li> <li>• Tripod/quadripod sticks</li> <li>• Crutches, axillary/elbow</li> <li>• Rollators</li> <li>• Walking frames/walkers</li> <li>• Club foot braces</li> <li>• Orthoses</li> <li>• Pressure relief cushions</li> <li>• Prostheses, lower limb</li> <li>• Ramps, portable</li> <li>• Therapeutic footwear, diabetic/neuropathic/orthopaedic</li> <li>• Wheelchairs, manual active use</li> </ul>
<p style="text-align: center;"><b>Self care</b></p> <ul style="list-style-type: none"> <li>• Continence products, absorbent</li> </ul>	<p style="text-align: center;"><b>Vision</b></p> <ul style="list-style-type: none"> <li>• Audio players with DAISY capability</li> <li>• Braille writing equipment/brailers</li> <li>• Magnifiers, optical</li> <li>• Spectacles, low vision/short distance/long distance/filters/protection</li> <li>• Watches, talking/touching</li> <li>• White canes</li> </ul>	
<p style="text-align: center;"><b>Hearing</b></p> <ul style="list-style-type: none"> <li>• Alarm signallers with light/sound/vibration</li> <li>• Hearing aids digital and batteries</li> </ul>		

**Figure. 2. Twenty-five most essential assistive products, grouped in six categories, for which availability has been explored in the Region**

<sup>1</sup> Coverage of 50% of people with moderate and severe functional limitations.

<sup>2</sup> Afghanistan, Bahrain, Iran (Islamic Republic of), Iraq, Jordan, Lebanon, Libya, Morocco, Oman, Pakistan, Palestine, Qatar, Saudi Arabia, Somalia, Sudan, Syrian Arab Republic and Tunisia.

<sup>3</sup> WHO identified 25 essential assistive products that could be delivered at community level with minimum training of health care or community-based rehabilitation personnel, taking into consideration the context in the Region (5).

The rapid assessment found that in most countries, current policies, systems and service delivery were inadequate to ensure access to assistive technology for those who need it. Findings of the report also reveal a number of specific common challenges facing several countries, although to varying degrees, in their task to improve access to assistive technology. Major challenges include: lack of adequate information on population in need of assistive products; lack of a national assistive technology strategy or plan; lack of government funding for assistive products; lack of relevant information system and research; weak systems for the registration, market pre-approval and pricing regulation of assistive products; lack of reliable information on the availability and affordability of individual assistive products; inadequate involvement of the public sector in providing for the running costs of assistive products; lack of a system to identify the potential of producing assistive products locally at a lower cost; shortage of certain types of relevant personnel and in local training opportunities; weak coordination and/or referral between the different sectors in relation to assistive technology service delivery; and lack of regulations of assistive technology service delivery and systems for monitoring such delivery (5).

The findings of the survey indicate that ministries involved in the provision of assistive technology vary in the Region, with both ministry of health (or similar) and ministry of social welfare (or similar) taking the leading role. Both ministries are involved in the provision of assistive technology in 15 out of the 17 countries. The ministry of defence (or similar) is involved in nine countries, and the ministry of education (or similar) is involved in six countries. Other public institutions provide assistive technology in two countries, while local or international nongovernmental organizations are involved in providing assistive technology in 16 countries. In countries with higher incomes and stability, assistive technology is more often provided at different health care levels (5).

In the Region, the availability of the 25 most essential assistive products (listed in Fig. 2) was reported to be highest for those related to mobility (51%), followed by communication, environment and personal care, vision and hearing; the lowest availability was for cognition-related products (15%). Local manufacturing ranged from 6% of countries for hearing-related products to 35% for mobility-related products. Most assistive products cost between US\$ 10 and US\$ 1000, to which costs for transportation to the service centre, training in using the assistive product, and maintenance of the assistive product are to be added (5).

#### 1.4 Policy and technical documents

In 2016, the Regional Committee for the Eastern Mediterranean adopted resolution EM/RC63/R.3 on Improving access to assistive technology to address the limited access to assistive technology in the Region (14). The resolution urges countries to:

- develop an evidence-based integrated policy to improve access to assistive technology for all as an essential component of health service delivery systems, supported by adequate financing;
- conduct a needs assessment using appropriate WHO tools to inform the adequate planning of services;

- develop a national priority assistive products list with minimum quality and safety standards, drawing on the WHO Priority Assistive Products List and based on national needs, context and resources;
- ensure that provision of priority assistive products is included in all stages of emergency preparedness and response planning;
- ensure adequate and trained human resources for the provision of assistive products at all levels of health service delivery.

In addition, there are several policy documents at the regional and international levels that are relevant to the provision of assistive technology.

- World Health Assembly resolution WHA71.8 on Improving access to assistive technology was approved by Member States in 2018 (4). The resolution urges, inter alia, Member States to develop, implement and strengthen policies and programmes to improve access to assistive technology within UHC and/or social services coverage; to ensure that the availability of adequate and trained human resources for the provision and maintenance of assistive products; to ensure that users and their carers have access to the most appropriate assistive products and develop a national list of priority assistive products that are affordable and cost-effective and meet minimum quality and safety standards; and to promote the inclusion of priority assistive products and inclusive barrier-free environments within emergency preparedness and response programmes.
- The Framework for action on advancing universal health coverage (UHC) in the Eastern Mediterranean Region calls on countries to take actions to strengthen the health system to achieve UHC, which includes improving access to assistive technology (15).
- By ratifying the Convention on the Rights of Persons with Disabilities, with its purpose to ensure the full and equal enjoyment of all human rights and fundamental freedoms by people with functional limitations, Member States have committed to and are bound to take effective measures to facilitate access to assistive products, including making them available at affordable cost. The Convention requires international cooperation between and among States and, as appropriate, partnership with relevant international, regional and civil society organizations in support of national efforts to facilitate access to assistive technology (10, 16).
- United Nations General Assembly resolution A/RES/70/1 on Transforming our world: the 2030 Agenda for Sustainable Development seeks to realize peace, prosperity and human rights for all, leaving no one behind. Improving access to assistive technology will facilitate the achievement of all 17 SDGs, and is integral to achieving target 3.8 on UHC, including financial risk protection and accessing quality essential health-care services (17, 18). Without the inclusion of assistive technology as an essential component of UHC and integrated people-centred health services, it will not be possible to achieve the target (5).
- In response to United Nations General Assembly resolution A/RES/64/265 in 2010 on the prevention and control of NCDs, a report by the Secretary-General outlines the way forward to address the impacts of NCDs on social and human development, household income, economic development and the Millennium Development Goals. Among other measures, Member States are recommended to implement cost-effective population-wide interventions for the NCD-related risk factor of lack of physical activity, and to promote

multisectoral action and “health in all policies” approaches to address social determinants of NCDs, such as poverty and lack of education (19). To people with functional limitations, assistive technology can be instrumental in addressing these risk factors and determinants. Moreover, NCDs such as stroke and diabetes are major contributors to disability. For instance, lower limb amputation rates are 10–20 times higher among people with diabetes than among the general population (20). Assistive technology plays a crucial role in addressing the resultant functional limitations.

- United Nations General Assembly resolution A/HRC/36/L.25 on Mental health and human rights in 2017 urges States to develop community-based people-centred services and supports that do not lead to over medicalization and inappropriate treatments, and that fail to respect the autonomy, will and preferences of all persons (21). Studies have shown that assistive technology can improve the quality of life and independence of people with mental health conditions (22, 23).
- In 2016, the World Health Assembly adopted a global strategy and plan for action on ageing and health. Assistive technology is an integral part of actions to achieve the strategic objectives, including developing age-friendly environments, aligning health systems to the needs of older populations, developing sustainable and equitable systems for long-term care, and improving measurement, monitoring and research on healthy ageing (24). The accompanying resolution urges Member States to implement the proposed actions (25).
- According to United Nations General Assembly resolution A/RES/48/96 on Standard rules on the equalization of opportunities for persons with disabilities, States should ensure the development, production, distribution, provision and servicing of assistive technologies, and the dissemination of knowledge about them. When possible, the development and production of simple and inexpensive devices, using local materials and production facilities, should be stimulated. Everyone who needs assistive technologies should have access to them as appropriate, including financial accessibility. This may mean that assistive technology should be provided free of charge or at a low price. Assistive products should be age-appropriate with regards to their design and durability (26).
- One of the objectives of the WHO global disability action plan 2014-2021: better health for all people with disability is to strengthen and extend the provision of assistive technology (27).

In cooperation with other organizations, WHO has published recommendations on how access to assistive technology can be improved. They can be found in:

- a joint position paper on the provision of mobility devices (28);
- a discussion paper on assistive technology for children (29).

To support countries in their efforts to improve access to assistive technology, WHO has published guidelines and resource materials. These include:

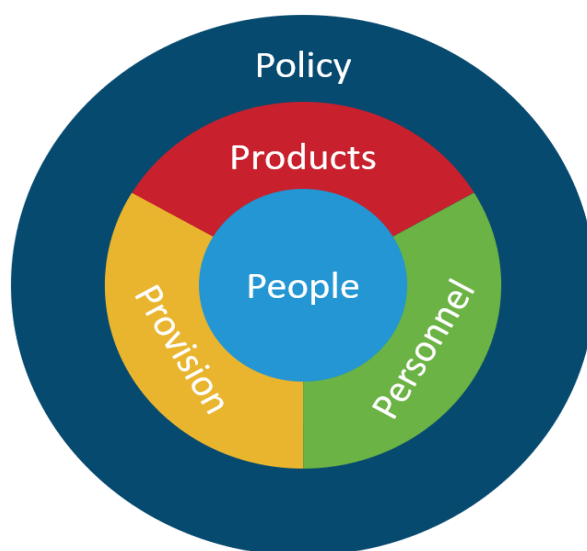
- list of 50 priority assistive products, i.e. products that are highly needed, an absolute necessity to maintain or improve an individual’s functioning and which need to be available at a price the community or state can afford (see Fig. 1) (2);
- global priority research agenda for improving access to assistive technology (30);
- standards and a manual for improving access to prosthetics and orthotics (31, 32);

- world report on disability, which addresses the use and affordability of assistive technology (33);
- guideline on and training materials for improving access to manual wheelchairs (34–40);
- manuals on how to improve, among others, the use of hearing aids (41, 42);
- preferred profile for hearing aid technology (43);
- policy brief on access to assistive technology (44);
- report on a rapid assessment of the assistive technology situation in the Eastern Mediterranean Region (5).

## **2. STRATEGIC ACTION FRAMEWORK**

### **2.1 Conceptual model**

Improving access to assistive technology aims at sustained provisioning of sufficient quantities of safe, effective<sup>1</sup> and affordable assistive products and services (29). It is central to progressing towards universal assistive technology coverage, which means that everyone everywhere receive the assistive technology they need without financial hardship. To achieve this, efforts are required in four areas: leadership, governance, financing, information and research (policy); assistive products (products); service delivery (provision); and workforce involved in these areas (personnel) (3). The regional framework is based on these “four Ps”. Fig. 3 illustrates this approach, where “people” needing assistive technology are at the centre of the four Ps, and “policy” defines the space in which the other three Ps operate.

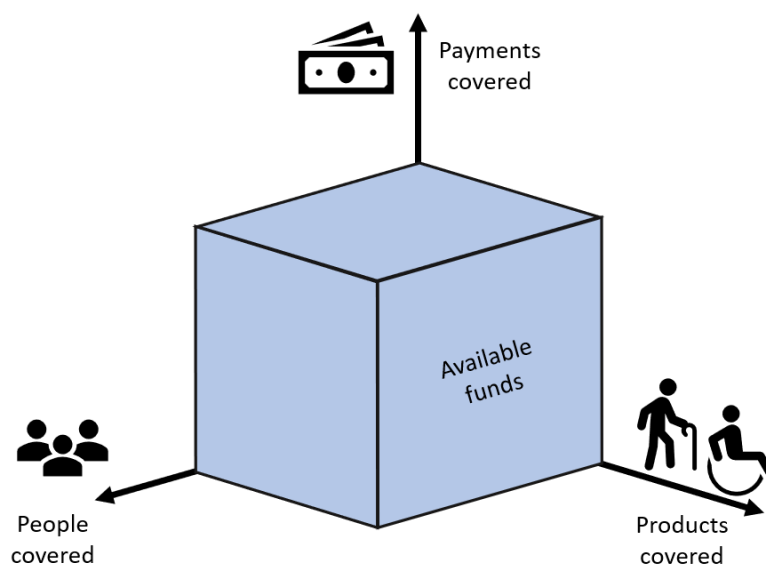


**Figure. 3. People-centred products, provision and personnel guided by people-centred policy**

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<sup>1</sup> For an assistive product to be effective, the assistive product needs to match the user, and the environments of use need to match the assistive product.

Policies are key to specifying assistive technology coverage, which can be operationalized and measured in three dimensions related to the coverage of people, assistive products and payments. Available personnel and provision of services partly determine which assistive products can be provided to whom and at what cost, and are therefore implicit in the three dimensions. As illustrated in Fig. 4, additional funds can be used to include people or assistive products that were not covered previously, or to reduce the direct payments needed to acquire, use, maintain or repair assistive products.



**Fig. 4. Three dimensions to consider when progressing towards universal assistive technology coverage<sup>1</sup>**

## 2.2 Development process

The regional framework was developed following extensive consultation with Member States, international organizations and nongovernmental organizations, as well as a range of national, regional and international assistive technology experts.

### Phase 1: finalizing the first draft of the framework

A consultative meeting on improving access to assistive technology in the Eastern Mediterranean Region was conducted in Islamabad, Pakistan, from 7 to 9 May 2018. A proposed draft of the regional framework prepared by an independent expert, and the results of a rapid assessment of the assistive technology situation in the Region (5) informed the discussions. Through a collaborative process, the draft regional framework on improving access to assistive technology was developed in consultation with Member States. The meeting brought together representatives of 13 countries in the Region as well as experts, members of civil society and representatives from national and State-level governments of Pakistan. The first draft framework was then further reviewed by WHO experts and introduced for implementation at country level.

<sup>1</sup> Adapted from: Universal coverage – three dimensions [website]. Geneva: World Health Organization ([http://www.who.int/health\\_financing/strategy/dimensions/en/](http://www.who.int/health_financing/strategy/dimensions/en/), accessed 16 August 2020).

## Phase 2: implementing the framework

In 2019, Bahrain (at the national level) and Iraq (at the subnational level, in Ninawa Governorate) were the first two countries that used the framework to develop action plans to improve access to assistive technology. This implementation informed the revision and fine-tuning of the regional framework to further augment its feasibility in development and in emergency situations and humanitarian contexts.

This effort was conducted jointly by the health ministries (national counterparts) and a WHO team supported by an international consultant in both countries. The national focal person/team was officially nominated by the country. Technical support was provided by WHO throughout the piloting exercise and included tracking the progress made by countries over the agreed time frame. A report enclosing an in-depth assessment of the assistive technology situation in the country informed the development of an action plan for improving access to assistive technology in Bahrain and Ninawa Governorate in Iraq. The exercise included:

### (a) conducting capacity assessment of assistive technology at country level

This step aimed at conducting an analysis of the current situation of assistive technology covering need, demand and supply in the country, drawing on an earlier rapid assessment. The assessment was done using the WHO Assistive Technology Capacity Assessment (ATA-C) tool.

### (b) developing a national action plan for improving access to assistive technology

The findings of the capacity assessment informed the development of a national action plan to improve access to assistive technology, drawing on the regional framework and taking into account the country's specific context and resources.

## Phase 3: revising and updating the framework

The utilization of the framework to develop the action plans informed its revision and updating. The process helped to augment its usability, feasibility and relevance for application at country level, with technical assistance from WHO or independently. The updated regional framework also draws on the GATE initiative *Policy brief: access to assistive technology* (44).

## 2.3 Objective

The objective of the framework is to provide guidance to countries of the Region in designing and implementing action plans for improving access to assistive technology, considering the existing context, situation and stage of development in each country.

## 2.4 Rationale

Available evidence demonstrates that assistive technology is an effective means to ensure that people with functional limitations can exercise their human rights and fundamental freedoms. Without assistive technology, people in need are often excluded, isolated and locked into poverty, and the burden of morbidity and disability increases. Besides its positive impact on individual health and well-being, assistive technology is a cost-effective strategy which leads

to reduced health and social welfare costs and enables people with functional limitations to work and contribute to national economies and development.

Access to assistive technology should be an inherent component of UHC and needs to be integrated into efforts to attain SDG target 3.8 on UHC.

Available data show that the unaddressed need for assistive technology is high in the Region. With the rise in injuries and NCDs as well as ageing populations and emergency situations, the need for assistive technology is increasing. The access to safe, effective and affordable assistive products is limited. Lack of national policies, programmes and financial resources; inadequate needs assessment; data limitations including lack of uniform definition and standardized methodology; and unavailability of appropriate services and trained human resources are key regional challenges. Crises and conflicts can result in dismantling and fragmenting health systems curbing their capacity to deliver required care, including assistive technology.

Member States bear the responsibility of meeting their global and regional commitments. Implementation of international treaties and UHC cannot be achieved without improving access to assistive technology in the Region. The Member States have recognized the urgency of improving access to assistive technology by adopting resolution EM/RC63/R.3.

To progressively achieve universal assistive technology coverage, assistive technology policies and financing schemes need to be continuously developed and implemented, and an increasing range of assistive products needs to be provided through expanding services with personnel that increase in numbers and improve in competency.

## 2.5 Target group

The framework targets all people with functional limitations who need assistive technology, without distinction of any kind such as age, sex, place of residence, ethnic origin, colour, religion, language, or economic, social or another status, and regardless of the stability in the country.

## 2.6 Guiding principles

The regional framework is guided by the following principles.

- Everyone is entitled to the full and equal enjoyment of all human rights and fundamental freedoms.
- No one should have additional costs because of functional limitations.
- Everyone should have equal opportunities to access assistive technology.
- Everyone should have seamless access to assistive technology across all ages and areas of life.
- All assistive products should be safe and effective.
- The SDGs should be considered in the manufacturing, supply, use, maintenance and repair of assistive products, and in training on and services for their provision.



## 2.7 Vision

All people living in the Eastern Mediterranean Region have access to all the assistive products they need to fully enjoy all human rights and fundamental freedoms.

## 2.8 Goal

The goal of the framework is to improve access to safe, effective and affordable priority assistive products in the countries of the Region.

## 2.9 Strategic objectives

To achieve the goal of the regional framework, there is a strategic objective for each of the four areas of policy, products, personnel and provision.

1. Advance **policy** for the progressive realization of universal assistive technology coverage.
2. Increase the supply of high-quality, safe, effective and affordable assistive **products**.
3. Improve the availability of qualified **personnel** at all levels.
4. Expand the coverage of services for the **provision** of assistive products.

In addition, assistive technology policy, products, personnel and provision in emergency situations and humanitarian contexts need to be addressed to achieve the goal.

A list of actions that will contribute to the achievement of the strategic objectives has been developed. For each action, several implementation steps and activities are provided for Member States, WHO and partners to consider in their support towards implementation of actions across all levels of government and nongovernment sectors. Concerned national stakeholders can select from these actions when developing national action plans, based on their local contexts and considerations.

## 2.10 Monitoring

A set of indicators have been developed to support monitoring and reporting on the progress of the regional framework, especially when implemented at country level (Annex 2). The indicators aim to measure progress in terms of the commitment and capacities that a country contributes to the strategic objectives. The selection of indicators was guided by availability of reliable data at country level.

## 2.11 Brief manual

A brief manual has been developed to provide stepwise guidance for countries to design national action plans for improving access to assistive technology using the framework and considering the existing context, situation and stage of development in countries. Policy-makers and planners can use the manual document when developing action plans based on the regional framework.

### **3. PRIORITY ACTIONS**

Actions to reach the four strategic objectives and specific actions to improve the access to assistive technology in emergency situations and humanitarian contexts are described below. The action sheets in Annex 1 detail the actions and proposed roles for Member States, WHO and partners, including international organizations and nongovernmental organizations. As mentioned above, these should be seen as proposed actions and roles which concerned national stakeholders can select from when developing national action plans, based on their local contexts and considerations. National action plans may also include additional actions, roles and activities.

#### **Strategic objective 1: Policy**

##### *Advance policy for the progressive realization of universal assistive technology coverage*

To improve access to safe, effective and affordable assistive products, actions related to policy (i.e. leadership, governance, financing, information and research) are instrumental. Political commitment, appropriate and enforced legislation, and financial investments, as well as support of stakeholders, are important prerequisites to develop and implement a comprehensive and multisectoral national policy for universal assistive technology coverage.

The health sector is in the best position to ensure the availability of assistive products. Many such products are provided and fitted by health professionals. While non-health ministries may be involved in the provision of assistive technology, it is the health ministries that are responsible for ensuring the health and well-being of people. Ministries of health often have an infrastructure for integrated service provision in place, including at the primary health care level, which can be utilised for wide-scale provision of assistive products. Even where other sectors, such as social welfare, have the main responsibility for providing assistive technology, health ministries should also play a key role, at least by establishing a dedicated programme on assistive technology and coordinating with other ministries and stakeholders. This involves consulting and actively including people with functional limitations in a committee for the development and implementation of national assistive technology strategy and policy.

A national assistive technology agency can be instrumental in providing technical support to the actors implementing assistive technology activities, and to monitoring and evaluating those activities in a country, and thereby should inform the development the national strategy and policy. It is also key to consult with and actively involve assistive technology users in formulating and implementing policies, laws and services, as they often have unique insights about their needs and their situation (33).

Another important element towards informing the development of national policies and strategies is to establish or strengthen databases and information systems on assistive technology. Before advancing the policy framework, it is necessary to take stock of the current situation in terms of needs for assistive products and available resources related to the provisioning of assistive technology in the country. In places where the needs cannot be easily determined, data from similar settings and populations may be drawn on.

The beneficiaries, and the provisions that they are entitled to, should be integrated into appropriate new or existing policies or legislations. The policies or legislation may regularly be reviewed to explore the scope of changes that contribute to the progressive realization of universal assistive technology coverage. Following the development of policies, legislation and assistive technology regulations, they need to be enforced and implemented.

To ensure adequate funding for the provision of assistive technology, additional funding may be required and the financing mechanisms may need to be reviewed and strengthened in order to facilitate the progressive realization of universal assistive technology coverage. Financial barriers to assistive technology can be reduced through tax exemption and appropriate procurement procedures. The procurement procedures can also ensure that assistive products are safe and effective for their users.

The implementation of policies, legislation and regulations needs to be supported by procurement rules, assistive product standards, service standards or guidelines, and strategies for training of personnel. These should be developed and implemented in line with the strategic objectives on products, personnel and service provision.

A communication strategy needs to be established and implemented to improve access to assistive technology. Policy-makers should be educated on needs for and benefits of assistive technology at the individual and societal level. Beneficiaries and their families should also be made aware of the existing assistive technology policy, rights and services.

To support and guide the development of the provisioning of assistive technology in a country, a monitoring and evaluating mechanism for assistive technology policy, products, personnel and provision needs to be developed and implemented, with indicators that also capture the users' perspective. This can be complemented by the development of a national assistive technology research agenda in coordination with academia, private sector, research and scientific institutions, and user groups. Similarly, an agency responsible for regulation and surveillance of the development, manufacturing and marketing of assistive products needs to be established or assigned.

### **Strategic objective 2: Products**

*Increase the supply of high-quality, safe, effective and affordable assistive products*

To improve access to assistive products, high-quality, safe, effective and affordable assistive products need to be supplied in sufficient quantities. They can be manufactured in-country or can be imported. The range of supplied assistive products may vary, but a first target may be to develop a national list of priority assistive products based on a selection of or all the types listed in the WHO Priority Assistive Products List, according to national need and available resources. It is important that the assistive products initially meet the needs and requirements of people covered by policy, and eventually people of all age groups, men and women, and urban and rural dwellers.

Guided by the national assistive technology research strategy, and differences between identified needs and available resources, necessary research, innovations, production and importation can be stimulated and facilitated. The access to assistive products can be further improved by facilitating the often complex and costly process of testing and certifying assistive products to ensure that they are safe and effective. National specifications and standards for assistive products need to be developed or agreed on.

Progressive development and maintenance of registers of manufacturers and importers, as well as of certified or otherwise approved assistive products, will facilitate regulatory control and procurement. To facilitate access to information about assistive products and how to obtain them, there is a need for a database or information system with information on the products, intended users, distribution, price, and so on.

Implementation of post-market surveillance systems will help manufacturers and importers to identify issues with their assistive products and withdraw them if they are unsafe. It will also help these actors to further develop and refine their assistive products.

Follow-up on maintenance and technical support for assistive products is required, including repair and refurbishment to maintain and enhance the quality of products.

Procurement may be undertaken or coordinated nationally, locally or at the service level. Regional collaboration on procurement among two or more countries may help reduce costs for imported assistive products, components or materials. The financial or economic feasibility of production in the country or in the Region versus importation from outside needs to be assessed.

Not only the running costs for assistive products and for providing services need to be considered, but also the costs for establishing services, including costs for training personnel, equipping facilities and infrastructure. To overcome financial barriers, measures need to be taken to ensure that assistive products are affordable to users.

Based on the needs, and current and additional resources, there is an iterative process to define what assistive products are to be provided to whom and at what level of the system. For example, initially, the range of products and beneficiaries may be limited to community level provision of a selection of products in the WHO Priority Assistive Products List to their intended users.

### **Strategic objective 3: Personnel**

#### *Improve the availability of qualified personnel at all levels*

To improve access to assistive products, qualified personnel need to be available to provide services at various levels. This requires identifying the needs for personnel and developing strategies for staff training and enhancing their capacity at different levels of the service provision system.

When and where possible, curricula, training materials and training capacity can be developed at regional or international levels. Training of assistive product designers, service-providing

personnel and managers at various levels can be carried out in-country, or at regional or international levels. Relevant training on disability, which incorporates human rights principles, should also be integrated into current curricula and accreditation programmes (33). Measures to improve staff retention may be relevant in some settings and sectors. Supporting the establishment of professional associations can contribute to development of personnel, strengthen assistive technology services, and contribute to staff retention.

Efficient human resource capacity development could be done through providing assistive technology users and other personnel, such as schoolteachers, family members and caregivers, with specific training programmes to engage them in service provision. To further enhance capacities in low-income settings, it is important to note that community-based rehabilitation programmes can assist people with disabilities and their families to overcome access barriers, train primary health care workers in disability awareness, and initiate referrals to health services (33).

Creating peer support programmes for users of assistive products and service providers to share their knowledge and to support each other within their local communities would maximize the health benefits.

#### **Strategic objective 4: Provision**

##### *Expand the coverage of services for the provision of assistive products*

To improve access to assistive products, the coverage of services for their provision needs to be expanded in terms of geographic coverage, the range of assistive products they can handle, and the quantity of assistive products they can provide. This can be achieved by including provision of assistive products at primary, secondary and tertiary care levels, and through other concerned ministries.

To progressively ensure that everyone everywhere receives the assistive technology they need without financial hardship, the affordability and location of services need to be considered. Affordability relates not only to the costs of the assistive product and the service, but also relates to costs for travelling, accommodation and food, and loss of income. These costs can easily be doubled if an accompanying person is required.

To enhance the quality of services, steps to improve assessment of users, referral, prescription, fitting and adaptation of assistive products, as well as training of users, are required. Referral paths across services for the provision of assistive products, and between them and other services indirectly related to such provision, need to be developed or strengthened. This often involves a need for raising awareness about assistive technology among personnel of related services, for example, medical doctors, psychologists and special teachers. Awareness about available assistive technology services also needs to be raised among people in need of assistive technology and their families (as indicated in Strategic objective 1). Improvement of services for follow-up of users, maintenance and repair of assistive products may be required as well.

The services and their facilities need to be barrier-free, which means physically and cognitively accessible as well as socially and culturally accessible.

To support the development of and improve the quality of services for the provision of assistive products, related research guided by the national assistive technology research agenda and innovation may be stimulated, and service standards or guidelines may be developed and implemented.

### **Specific actions for emergency situations<sup>1</sup> and humanitarian contexts**

This strategic framework emphasizes the need to include priority assistive products and inclusive barrier-free environments within emergency preparedness and response planning and all-hazards disaster risk management programmes (11). The provision of assistive technology during emergencies needs to be included in national assistive technology policies and legislation, to ensure that pre-existing needs and those emerging as a consequence of these situations are adequately addressed. In addition, as underlined in resolution EM/RC63/R.3, the provision of priority assistive products and related services need to be included in all stages of emergency preparedness and response planning and services. Most of the specific actions for emergency situations and humanitarian contexts are relevant to all countries irrespective of their current situation, as they need to be carried out before an emergency situation or humanitarian crisis arises. Mass gathering events, whether for educational, work, leisure, sports, culture or religious purposes, may lead to situations where large-scale emergency responses are required.

To prepare for these situations, estimates of potential needs for priority assistive products can guide sufficient supply through service provision by trained personnel and community workers. This is facilitated by earlier awareness in the community and prepared communication strategies.

Emergency situations and humanitarian contexts may require alternative shorter paths and mechanisms for the provision of assistive products. Addressing the need for a workforce for the provision of assistive products in emergency settings may require the development of alternative curricula and training opportunities to address the challenges encountered in these settings. These situations and contexts may also place specific requirements on assistive products in order to enable space-saving storage and transportation, and simplified assessment, fitting and training. This is likely to call for product-related research and innovation.

By monitoring and evaluating provision of assistive technology in one situation, lessons can be learned and incorporated into emergency preparedness and response planning and all-hazards disaster risk management programmes.

To ensure general accessibility and the possibility to use assistive products, it is necessary that all facilities that will be used in emergency situations and humanitarian contexts comply with codes on accessibility in the built environment, as the situation allows.

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<sup>1</sup> For the purpose of this regional framework, emergency situations may be caused by natural hazards, technological hazards, conflicts, outbreaks, mass-gatherings, and so on.

#### **4. INDICATORS FOR MONITORING ACTION PLANS**

Monitoring is a critical component to systematically track the implementation and outputs of an action plan and to measure its effectiveness. To support Member States to monitor their progress in implementing their national action plans for improving access to assistive technology, a set of 18 indicators that are mapped to the strategic objectives are provided in Annex 2.

The indicators were developed to offer a simple (but not simplistic), realistic and feasible means of collecting key data at country level. If necessary, additional indicators could be developed following the same criteria.

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## ANNEX 1. STRATEGIC ACTION FRAMEWORK TO IMPROVE ACCESS TO ASSISTIVE TECHNOLOGY IN THE EASTERN MEDITERRANEAN REGION

No.	Actions	Role of Member States	Role of WHO	Role of partners
<b>Strategic objective 1: Advance policy for the progressive realization of universal assistive technology coverage</b>				
1.1.	<i>Develop a unified national strategy* and policy that ensures involvement of concerned stakeholders, including assistive technology users</i>	<ul style="list-style-type: none"> <li>Ministry of health works with other ministries and concerned stakeholders to develop and implement a unified national strategy and policy, including coordination of national and subnational activities</li> <li>Establish an assistive technology committee involving key stakeholders and the user groups</li> <li>Draft terms of reference for assistive technology committee, defining roles and responsibilities</li> <li>Create practical structure, budgetary support and process for engagement of committee</li> </ul>	<ul style="list-style-type: none"> <li>Support through training and best practices</li> <li>Provide access to technical expertise</li> <li>Help develop criteria for identifying representation of different stakeholders</li> </ul>	<ul style="list-style-type: none"> <li>Raise awareness and advocate</li> <li>Encourage active community participation</li> <li>Provide funding</li> <li>Help identify potential representatives</li> <li>Inform process through sharing of perspective</li> </ul>
1.2.	<i>Establish or strengthen a national assistive technology agency</i>	<ul style="list-style-type: none"> <li>Establish and/or strengthen a national agency responsible for implementation, monitoring and evaluation of assistive technology activities at national and subnational levels</li> <li>Ensure adequate user and gender representation on the board of the agency</li> </ul>	<ul style="list-style-type: none"> <li>Provide technical support, through best practices and lessons learned</li> </ul>	<ul style="list-style-type: none"> <li>Provide technical support and funding for infrastructure and implementation of national strategy</li> </ul>
1.3.	<i>Establish and maintain a database or information system on assistive technology</i>	<ul style="list-style-type: none"> <li>Develop an assistive technology information system (to be integrated with health and social information systems)</li> <li>Develop database of available and needed assistive products that meets quality requirements for planning and decision-making</li> </ul>	<ul style="list-style-type: none"> <li>Provide technical and financial support to establish, maintain and update the information system</li> <li>Provide technical support in system development and sharing best practices and guidelines</li> </ul>	<ul style="list-style-type: none"> <li>Participate in information system, contributing data to existing national system</li> <li>Provide technical support and share feedback with government</li> </ul>
1.4.	<i>Determine current needs and estimate supply needs for assistive products</i>	<ul style="list-style-type: none"> <li>Decide the tool to be used for the needs assessment, in consultation with key stakeholders including user groups</li> <li>Conduct surveys on needs and unmet needs for assistive products, barriers to access assistive products, and barrier-free environments</li> <li>Map existing gaps between needs, demand and supply to inform donor agencies and concerned ministries</li> <li>Maintain database through ongoing data collection, including spare parts and maintenance data</li> <li>Analyse data and quantify the supply need of assistive products</li> <li>Ensure disability questions are included in other national census processes</li> </ul>	<ul style="list-style-type: none"> <li>Assist with developing assessment tools, guidelines and other technical materials, if needed</li> <li>Support research on needs and gaps analysis</li> <li>Support capacity-building on local and regional supply</li> <li>Provide technical and financial support to develop and conduct a mapping exercise</li> </ul>	<ul style="list-style-type: none"> <li>Support estimation of supply needs</li> <li>Support mapping exercise through engaging local media and community, and providing perspective and research</li> <li>Develop questions in monitoring of other projects</li> <li>Contribute to estimation of needs</li> <li>Develop questions on functional limitations in monitoring of other projects</li> <li>Support through public advocacy and education</li> <li>Review assessment tool and provide perspectives</li> </ul>
1.5.	<i>Develop and implement supportive legislation, regulations and a regulatory system</i>	<ul style="list-style-type: none"> <li>Develop and implement accountability mechanisms</li> <li>Develop legislation and adopt policies in accordance with national process</li> <li>Establish a regulatory body at national and subnational levels</li> <li>Develop legislation and adopt policies on inclusive barrier-free environments</li> </ul>	<ul style="list-style-type: none"> <li>Provide technical support through sharing of best practices and lessons learned</li> </ul>	<ul style="list-style-type: none"> <li>Provide support through advocacy</li> </ul>
1.6.	<i>Assess the current available resources and identify possible funding mechanisms for meeting the unmet need</i>	<ul style="list-style-type: none"> <li>Allocate adequate budget for assistive technology provision</li> <li>Engage private sector and formulate policy on public-private partnership</li> <li>Encourage corporate social responsibility to support assistive technology provision</li> </ul>	<ul style="list-style-type: none"> <li>Share lessons learned and best practices</li> <li>Identify international donor organizations and connect governments with them</li> </ul>	<ul style="list-style-type: none"> <li>Support through fundraising and sharing best practices</li> <li>Support engagement of private sector and encourage corporate social responsibility</li> </ul>
1.7.	<i>Establish and implement a communication strategy to promote the assistive technology policy</i>	<ul style="list-style-type: none"> <li>Develop a communication strategy</li> <li>Generate and respond to media coverage</li> <li>Develop and undertake campaigns to raise public awareness about beneficiaries of the assistive technology policy</li> <li>Educate policy-makers on the needs and unmet needs, and the link between assistive technology access and national social interests</li> </ul>	<ul style="list-style-type: none"> <li>Support the development of a communication strategy</li> </ul>	<ul style="list-style-type: none"> <li>Assist with the mobilization, advocacy and community awareness components</li> </ul>
1.8.	<i>Develop or strengthen procurement rules and guidelines for assistive products, including tax exemption policy</i>	<ul style="list-style-type: none"> <li>Review existing procurement rules, guidelines or practices. If not available, then develop national procurement strategy including standard operating procedures for procurement</li> <li>Consider using ISO, establish national or international standards while developing or upgrading procurement manual</li> <li>Develop or amend policy or legislation including waiving of local taxes for priority assistive products</li> <li>Review and develop import tax and duty exemption strategy for assistive products, if not manufactured in the country</li> </ul>	<ul style="list-style-type: none"> <li>Provide lessons learned and best practices including a template for procurement</li> <li>Facilitate pool procurement or bulk purchase</li> <li>Provide specifications of standards</li> <li>Support through technical expertise about tax exemption best practices</li> </ul>	<ul style="list-style-type: none"> <li>Undertake public advocacy. Nongovernmental organizations can also support through advocacy and technical advice</li> <li>Producers and retailers should comply with applicable standards during production and procurement</li> </ul>
1.9.	<i>Develop and implement monitoring and evaluation mechanisms for assistive technology policy, products, personnel and provision</i>	<ul style="list-style-type: none"> <li>Develop and implement a monitoring and evaluation process and tools that cover policy, products, provision and personnel, with indicators that also capture the users' perspective</li> <li>Engage and involve all stakeholders, including disabled-people's organizations, in all stages of monitoring and evaluation</li> <li>Evaluate promptness and quality of service provision at regular intervals</li> <li>Adopt lessons learned to improve policies, products, personnel and provision</li> </ul>	<ul style="list-style-type: none"> <li>Provide technical support, including sharing best practices</li> <li>Assist with developing indicators</li> </ul>	<ul style="list-style-type: none"> <li>Provide technical support and the collection and provision of data to feed into the monitoring and evaluation process and tools</li> <li>Provide oversight, feedback, and customer and user opinions</li> <li>Provide financial support</li> </ul>
1.10.	<i>Develop a national assistive technology research agenda and resource its implementation</i>	<ul style="list-style-type: none"> <li>Develop a research plan with provision of adequate funding</li> <li>Build partnerships with academia, private sector, research and scientific institutions, and user groups</li> <li>Support research by providing access to data and information</li> <li>Encourage innovation and ensure that research is used to inform operational action</li> <li>Simplify procedures to enhance easy access to assistive technology</li> </ul>	<ul style="list-style-type: none"> <li>Provide technical support including institutional support and sharing of best practices, lessons learned and research undertaken</li> <li>Help governments fulfil research needs</li> <li>Facilitate networking and sharing of best practices</li> </ul>	<ul style="list-style-type: none"> <li>Conduct and participate in research</li> <li>Share research findings</li> <li>Help with collaborative research</li> <li>Provide technical and financial support to the research process</li> </ul>
1.11.	<i>Establish or assign an agency responsible for regulation and surveillance of the development, manufacturing and marketing of assistive products</i>	<ul style="list-style-type: none"> <li>Establish new agency, or assign task to existing agency</li> </ul>	<ul style="list-style-type: none"> <li>Provide technical support and institution building</li> </ul>	<ul style="list-style-type: none"> <li>Provide technical support and funding for infrastructure</li> <li>Engage with government on public-private partnership</li> </ul>

\* A national strategy that involves all related actors.

No.	Actions	Role of Member States	Role of WHO	Role of partners
<b>2.</b>	<b>Strategic objective 2: Increase the supply of high-quality, safe, effective and affordable assistive products</b>			
2.1.	<i>Define the range of assistive products to be covered or financed by assistive technology policy</i>	<ul style="list-style-type: none"> <li>Develop criteria, and common language and vocabulary</li> <li>Secure stakeholder support for criteria</li> <li>Develop a national list of assistive products and determine priority, based on national needs and by drawing on WHO priority list</li> <li>Set up schedule for review of the list</li> <li>Ensure inclusion of assistive products for activities of daily living</li> </ul>	<ul style="list-style-type: none"> <li>Provide technical support in developing criteria and national priority/essential assistive products lists</li> <li>Assist in prioritization based on need and availability of products/resources</li> <li>Identify and share innovative solutions used in other countries</li> </ul>	<ul style="list-style-type: none"> <li>Raise public awareness</li> <li>Provide input to the assistive products list</li> <li>Conduct research on needed products</li> </ul>
2.2.	<i>Develop national (or agree to) specifications and standards for assistive products</i>	<ul style="list-style-type: none"> <li>Develop or agree product specifications and minimum standards with a clear verification process</li> <li>Consider using international/national product specifications and standards</li> <li>Engage relevant national agencies and develop quality control mechanism</li> <li>Ensure appropriateness of product to environment and needs</li> </ul>	<ul style="list-style-type: none"> <li>Provide technical advice in developing product specifications, standards and guidelines</li> <li>Provide assistive product specifications and standards</li> </ul>	<ul style="list-style-type: none"> <li>Provide input and feedback about the product specifications and standards</li> <li>Advocate for developing national specifications and standards</li> </ul>
2.3.	<i>Stimulate assistive product research and innovations with user involvement</i>	<ul style="list-style-type: none"> <li>Encourage research and innovation based on needs and availability of resources</li> <li>Provide financial inducements for innovations</li> <li>Put in place tax incentives</li> <li>Facilitate innovation and provide financial rewards and prizes for distinguished innovations</li> <li>Engage universities, technical and vocational institutes and the private sector</li> <li>Make optimum use of intellectual property rights</li> </ul>	<ul style="list-style-type: none"> <li>Provide technical and financial support</li> <li>Facilitate networking, knowledge exchange and sharing of best practices</li> <li>Assist countries on intellectual property rights matters</li> <li>Facilitate technology transfer</li> <li>Encourage and support local production where possible and feasible</li> </ul>	<ul style="list-style-type: none"> <li>Provide financial and technical support</li> <li>Promote involvement of user groups in assistive products innovations</li> <li>Support with feasibility studies and finding manufactures and suppliers</li> <li>Provide skills and entrepreneurial training of local manufacturers</li> </ul>
2.4.	<i>Facilitate testing and certification of assistive products and establish and maintain a register of certified or approved assistive products</i>	<ul style="list-style-type: none"> <li>Make use of existing national or subregional testing facilities. If not available, then establish needed facilities</li> <li>Include assistive products into existing health products certification regulations</li> </ul>	<ul style="list-style-type: none"> <li>Share criteria, guidelines, standards, protocols and best practices</li> <li>Connect countries for sharing of testing and certification facilities</li> </ul>	<ul style="list-style-type: none"> <li>Provide technical support</li> <li>Support through advocacy and through sharing information and best practices on assistive products</li> <li>Ensure that products comply with approved standards</li> </ul>
2.5.	<i>Establish and maintain a register of manufacturers, suppliers and importers of assistive products and a post-market surveillance system</i>	<ul style="list-style-type: none"> <li>Develop a registry, with registration requirements, minimum quality standards and standard operating procedures</li> <li>Develop integrated management information system</li> <li>Construct mechanism or method to conduct routine update</li> <li>Conduct market surveys among product users</li> </ul>	<ul style="list-style-type: none"> <li>Provide technical support in developing system or database and IT models for the registry</li> <li>Provide technical support for developing follow-up mechanism or method and customer survey</li> <li>Share best practices</li> </ul>	<ul style="list-style-type: none"> <li>Provide technical support</li> <li>Ensure that manufacturers and importers comply with requirements</li> <li>Share customer experiences with government and report adverse events</li> </ul>
2.6.	<i>Follow-up, maintenance and technical support for assistive products including repair and refurbishment</i>	<ul style="list-style-type: none"> <li>Set criteria and budget for preventative and corrective maintenance</li> <li>Link to user database</li> <li>Monitor and evaluate maintenance services through periodic inspection</li> </ul>	<ul style="list-style-type: none"> <li>Share guidelines and best practices on preventative and corrective maintenance</li> </ul>	<ul style="list-style-type: none"> <li>Comply with preventative and corrective maintenance criteria</li> </ul>
2.7.	<i>Establish regional collaboration for procurement of assistive products and coordinate national assistive products procurement</i>	<ul style="list-style-type: none"> <li>Develop and participate in regional network</li> <li>Develop regional level guidelines</li> <li>Support using a memorandum of understanding</li> <li>Develop aggregate procurement lists based on needs</li> <li>Develop centralized procurement for assistive products</li> <li>Utilize existing or develop new inventory systems</li> </ul>	<ul style="list-style-type: none"> <li>Provide technical support and facilitate engagement of Member States</li> <li>Provide technical support on building a digital platform to aggregate data</li> <li>Facilitate engagement among Member States</li> </ul>	<ul style="list-style-type: none"> <li>Provide technical and financial support in identifying needs, oversight and guidance</li> </ul>
2.8.	<i>Stimulate production of assistive products in-country and at regional levels, and facilitate import of assistive products in absence of local alternatives</i>	<ul style="list-style-type: none"> <li>Evaluate the financial or economic feasibility of local or regional assistive technology production versus importing from abroad.</li> <li>Reduce or waive import taxes, duties and custom fees if products are not available within the country</li> <li>Simplify importation regulations and procedures</li> <li>Provide financial incentives, tax exemption and protection for local manufacturers</li> <li>Develop and invest in assistive product manufacturing facilities</li> <li>Ensure environment and policies are supportive and aligned</li> </ul>	<ul style="list-style-type: none"> <li>Provide technical support on product procurement at the national and regional levels</li> <li>Share best practices and successful models</li> <li>Support capacity-building</li> <li>Provide technical expertise on bulk procurement, and information on importers and imported assistive products</li> <li>Advocate for global uniform tax policy</li> </ul>	<ul style="list-style-type: none"> <li>Support local production</li> <li>Provide financial support to local producers</li> <li>If local production is not feasible, then provide a list of reliable manufactures and suppliers</li> <li>Provide perspective and feedback on related policy formulation</li> <li>Provide information on needs and costing, assist with prioritizing products to be imported and costing of globally available assistive products</li> </ul>
2.9.	<i>Identify costs for providing assistive products and for establishing services</i>	<ul style="list-style-type: none"> <li>Develop and implement process to identify and calculate costs</li> <li>Conduct market survey to assess range of prices</li> </ul>	<ul style="list-style-type: none"> <li>Provide technical support in the development of calculation tools</li> <li>Share best practices and lessons learned</li> </ul>	<ul style="list-style-type: none"> <li>Provide technical support</li> <li>Share lessons learned on costing and planning</li> <li>Identify quality and cost-effectiveness issues</li> <li>Identify costs of locally produced and procured assistive products</li> </ul>
2.10.	<i>Ensure affordability for users of assistive products and establish and enforce a fair pricing policy for assistive products</i>	<ul style="list-style-type: none"> <li>Take all the necessary measures including tax exemptions to make priority products affordable for users</li> <li>Determine products to be subsidized or fully reimbursed based on need and economic capacity</li> <li>Ensure assistive technology is included in health insurance and other social safety policies</li> <li>Subsidize assistive technology and establish mechanisms to provide affordable products</li> <li>Establish mechanisms to ensure fair pricing of priority assistive products and prevent overpricing or overcharging</li> </ul>	<ul style="list-style-type: none"> <li>Provide technical support, especially around funding models</li> <li>Share best practices and guidelines</li> <li>Advocate for assistive technology to be included in health insurance and other social safety policies</li> </ul>	<ul style="list-style-type: none"> <li>Raise awareness</li> <li>Provide technical support, and share best practices and social protection models</li> <li>Assist with raising funds and provide financial support</li> </ul>

No.	Actions	Role of Member States	Role of WHO	Role of partners
<b>3.</b>	<b>Strategic objective 3: Improve the availability of qualified personnel at all levels</b>			
3.1.	<i>Identify needs for personnel at different levels of the assistive technology service provision system</i>	<ul style="list-style-type: none"> <li>Map currently available service providers and estimate the required number needed to meet the unmet and future needs</li> <li>Develop and adopt standards for service providers</li> <li>Ensure appropriate engagement of users and women as assistive technology service providers</li> <li>Ensure safe and motivating working environment</li> </ul>	<ul style="list-style-type: none"> <li>Provide technical support</li> <li>Share best practices</li> <li>Support in developing assessment and mapping tool</li> <li>Assist in developing standards and training materials</li> <li>Explore possibilities of providing scholarships within low-income countries to assist with learning opportunities</li> </ul>	<ul style="list-style-type: none"> <li>Participate in mapping by identifying gaps and education needs</li> <li>Support learning opportunities</li> </ul>
3.2.	<i>Develop and implement strategies for training of assistive technology-related personnel at different levels of the system</i>	<ul style="list-style-type: none"> <li>Develop national and subnational training plans and institutional development, including placement of graduates</li> <li>Identify needed personnel to work in primary/district health care facilities and at higher levels</li> <li>Develop a fit-for-purpose assistive technology workforce at all levels, with particular focus on primary health care level</li> <li>Provide continued learning and educational opportunities, and increase accreditation and certification</li> <li>Develop and implement initiatives to support retention and career pathways/continuing professional development</li> </ul>	<ul style="list-style-type: none"> <li>Provide financial support</li> <li>Help to develop training materials, including training of trainers</li> </ul>	<ul style="list-style-type: none"> <li>Provide financial support</li> <li>Assist with training delivery</li> <li>Support with awareness raising and promotion</li> <li>Help in the identification of user training needs</li> <li>Enhance capacities of trainers</li> </ul>
3.3.	<i>Develop curricula and materials for training programs on the provision of assistive technology at different levels of the system</i>	<ul style="list-style-type: none"> <li>Form expert or technical committees to develop curricula and training programmes</li> </ul>	<ul style="list-style-type: none"> <li>Provide technical support in developing curricula</li> <li>Assist with funding of training, or facilitating sending trainees abroad for training</li> </ul>	<ul style="list-style-type: none"> <li>Provide technical and financial support</li> </ul>
3.4.	<i>Develop capacity to train personnel and develop workforce for the provision of assistive technology at different levels</i>	<ul style="list-style-type: none"> <li>Develop training-of-trainers capacity and programmes</li> <li>Recruit technical experts</li> <li>Cooperate with universities and training institutions</li> <li>Establish centre of excellence to provide training in collaboration with existing facilities at tertiary care hospitals</li> <li>Provide local training of special education teachers and community-based rehabilitation workers</li> <li>Ensure availability of continuous professional development training programmes</li> <li>Ensure continuous training and education opportunities, and supportive supervision for all cadres in both urban and rural areas</li> <li>Offer scholarships</li> </ul>	<ul style="list-style-type: none"> <li>Provide technical and financial support</li> <li>Develop training materials</li> <li>Identify experts and assist with training of trainers</li> <li>Fund scholarships and/or fellowships</li> <li>Encourage regional and multilateral cooperation</li> </ul>	<ul style="list-style-type: none"> <li>Provide technical and financial support</li> <li>Fund scholarships and fellowships</li> <li>Ensure employees are properly trained</li> </ul>
3.5.	<i>Develop human resources for developing, designing and managing national and subnational level assistive technology programmes</i>	<ul style="list-style-type: none"> <li>Develop education and training opportunities</li> <li>Include assistive technology curricula in schools (health, engineering, etc.)</li> <li>Encourage undergraduate and postgraduate assistive technology programmes</li> <li>Encourage innovation, through incubators and start-ups</li> <li>Develop strategy and initiatives to support retention and career pathways/continuing professional development</li> <li>Encourage institutional development</li> </ul>	<ul style="list-style-type: none"> <li>Provide technical and financial support</li> <li>Share knowledge of existing WHO medical education programmes</li> <li>Contribute to curricula development</li> <li>Encourage sharing of best practices among Member States</li> </ul>	<ul style="list-style-type: none"> <li>Provide technical and financial support</li> <li>Fund scholarships and fellowships</li> <li>Ensure employees undertake appropriate training</li> <li>Encourage ongoing capacity-building</li> </ul>
3.6.	<i>Support the establishment of professional associations for those involved in assistive technology</i>	<ul style="list-style-type: none"> <li>Encourage and facilitate the establishment of professional associations</li> <li>Recognize professions related to assistive technology</li> </ul>	<ul style="list-style-type: none"> <li>Provide technical support</li> </ul>	<ul style="list-style-type: none"> <li>Provide technical support</li> <li>Collaborate with professional associations</li> </ul>
3.7.	<i>Develop a specific training programme to engage users and other personnel, especially community-based rehabilitation workers, schoolteachers, family members, caregivers and others, to further provision of assistive technology</i>	<ul style="list-style-type: none"> <li>Facilitate, encourage and allocate resources</li> <li>Implement training programmes</li> </ul>	<ul style="list-style-type: none"> <li>Facilitate actions as needed</li> </ul>	<ul style="list-style-type: none"> <li>Collaborate and implement trainings where needed</li> </ul>
3.8.	<i>Invest in peer* support programmes and engage peers in strengthening assistive products provision</i>	<ul style="list-style-type: none"> <li>Facilitate, invest and develop training manual on peer support</li> <li>Provide training to peer supporters</li> <li>Create mechanism for enforcement of peer support process, including formation of peer support group</li> </ul>	<ul style="list-style-type: none"> <li>Provide guidance and technical support upon request</li> </ul>	<ul style="list-style-type: none"> <li>Collaborate with stakeholders</li> </ul>

No.	Actions	Role of Member States	Role of WHO	Role of partners
<b>4.</b>	<b>Strategic objective 4: Expand the coverage of services for the provision of assistive products</b>			
4.1.	<i>Increase the geographic coverage of the provision of assistive products</i>	<ul style="list-style-type: none"> <li>Map existing government, nongovernment and private facilities providing assistive products</li> <li>Carry out a gap analysis and develop a road map for national coverage</li> <li>Task an agency to coordinate to avoid duplication</li> <li>Identify possible locations (district hospitals) for setting up assistive technology provision facilities</li> <li>Ensure adequate financial resources</li> <li>Invest and set up assistive technology centres of different scales strategically</li> </ul>	<ul style="list-style-type: none"> <li>Provide technical support and share best practices</li> <li>Develop indicators for coverage and assessment tools to measure coverage</li> </ul>	<ul style="list-style-type: none"> <li>Support through advocacy for equitable coverage</li> <li>Support mapping exercise through sharing information and identifying gaps</li> <li>Provide technical and financial support to bridge identified gaps</li> </ul>
4.2.	<i>Expand the range and quantity of provided assistive products</i>	<ul style="list-style-type: none"> <li>Develop a list of services provided at various levels</li> <li>Identify resources required and increase budget where necessary</li> <li>Ensure sufficient availability of assistive products from the approved national list</li> </ul>	<ul style="list-style-type: none"> <li>Develop indicators and assessment tools to measure coverage</li> <li>Provide a list of essential technology services</li> <li>Provide technical and financial support and help to build capacity</li> </ul>	<ul style="list-style-type: none"> <li>Provide technical support</li> <li>Contribute to building a national list of essential products, at different levels</li> <li>Identify gaps and provide technical support to help bridge these gaps</li> <li>Support through advocating for equitable coverage</li> </ul>
4.3.	<i>Include provision of assistive products at different levels of the system, as appropriate, and at other relevant ministries</i>	<ul style="list-style-type: none"> <li>Ensure a functioning referral system is in place within the health care system and other sectors (education, social welfare, etc.)</li> <li>Establish services at primary, secondary and tertiary care levels as appropriate, and at other relevant ministries</li> <li>Increase the number of service points*</li> <li>Ensure adequate financial resources</li> </ul>	<ul style="list-style-type: none"> <li>Provide technical support and share best practices</li> <li>Advise on roles, protocols and terms of references at each level</li> </ul>	<ul style="list-style-type: none"> <li>Provide technical support and collaborate with ministries to expand service points</li> <li>Contribute to ensuring sufficient availability of assistive products at different levels of the system</li> <li>Support building staff capacity and provide funding</li> </ul>
4.4.	<i>Develop or strengthen assistive technology assessment and referral system</i>	<ul style="list-style-type: none"> <li>Enhance staff capacity and develop clinical practice guidelines</li> <li>Promote skills development</li> <li>Ensure existence of all positions related to assistive technology in service provision system</li> <li>Map service providers and develop directory</li> <li>Include assistive technology in existing referral system</li> <li>Improve knowledge of service providers on assistive technology services and referral process</li> <li>Train health care workers and develop multidisciplinary team, where possible</li> <li>Develop and enforce guidelines for prescription</li> </ul>	<ul style="list-style-type: none"> <li>Provide technical support and help build capacity</li> <li>Develop protocols and standards for assessment and referral</li> <li>Provide technical support in developing referral models and instructions and share best practices</li> </ul>	<ul style="list-style-type: none"> <li>Provide technical support and capacity building through training and implementing services</li> <li>Provide technical support in developing a referral system, and collaborate with the system once in place</li> </ul>
4.5.	<i>Improve services for fitting and adapting assistive products, and training of individual users</i>	<ul style="list-style-type: none"> <li>Develop training packages and service provision standards</li> <li>Provide staff training on fitting and adapting assistive products, and training of individual users</li> <li>Enforce standards and good practices</li> <li>Develop training materials for users and establish training teams</li> </ul>	<ul style="list-style-type: none"> <li>Provide technical support in developing training and standards</li> </ul>	<ul style="list-style-type: none"> <li>Provide technical support and capacity-building, including needed finances</li> <li>Provide oversight over service provision, where needed</li> </ul>
4.6.	<i>Improve services for follow-up of assistive product users, and maintenance and repair</i>	<ul style="list-style-type: none"> <li>Develop follow-up and online user tracking system or mechanism, including compliance and grievance mechanism</li> <li>Establish service ranking and expectations</li> <li>Develop and enforce expectations and good practices</li> <li>Ensure maintenance and repair facilities are an integral part of the service provision system</li> <li>Develop training for users and providers</li> </ul>	<ul style="list-style-type: none"> <li>Provide technical support in developing tracking systems or mechanisms and enabling capacity-building programmes</li> </ul>	<ul style="list-style-type: none"> <li>Provide technical support and capacity-building, including needed finances</li> <li>Help in reaching beneficiaries</li> <li>Create or make optimum use of local repair and maintenance facilities</li> </ul>
4.7.	<i>Develop and implement a plan for ensuring that service facilities are physically, cognitively, socially and culturally accessible</i>	<ul style="list-style-type: none"> <li>Ensure assistive technology provision facilities are fully accessible and gender-friendly</li> <li>Develop standards, framework and requirements on accessibility</li> <li>Provide logistical support</li> <li>Promote "one window" or "one stop" concept for access to assistive technology services</li> <li>Implement changes in staffing and improve staff attitudes</li> <li>Ensure gender balance among the workforce</li> <li>Provide training and raise awareness</li> </ul>	<ul style="list-style-type: none"> <li>Provide technical support by sharing guidance and guidelines on inclusivity and assisting with tools development</li> <li>Publicize service points publicly</li> <li>Provide financial support</li> </ul>	<ul style="list-style-type: none"> <li>Provide technical and financial support</li> <li>Assist with implementation, monitoring and training</li> <li>Assist in providing transportation</li> <li>Help communicate information regarding services</li> </ul>
4.8.	<i>Stimulate research on and innovation in the provision of assistive products</i>	<ul style="list-style-type: none"> <li>Encourage research on abandonment of, satisfaction with, barriers to use and socioeconomic impact of assistive products</li> <li>Encourage innovation in service delivery based on need and availability of resources</li> <li>Provide financial inducements and incentives for innovations in service delivery</li> <li>Facilitate innovation and provide financial rewards and prizes for distinguished innovations in service delivery</li> <li>Engage universities, vocational institutes and the private sector</li> </ul>	<ul style="list-style-type: none"> <li>Provide technical and financial support</li> <li>Facilitate networking, knowledge exchange and sharing of best practices</li> <li>Assist countries on intellectual property rights matters</li> <li>Facilitate technology transfer</li> </ul>	<ul style="list-style-type: none"> <li>Provide financial and technical support</li> <li>Promote involvement of user groups in innovations</li> <li>Support with feasibility studies</li> <li>Provide training</li> </ul>
4.9.	<i>Develop and implement service standards or guidelines for assistive technology service provision</i>	<ul style="list-style-type: none"> <li>Establish standards and guidelines for assistive technology service provision</li> <li>Improve timeliness of service provision to ensure minimum waiting periods</li> <li>Promote a person-centred approach including active users' involvement and choice throughout the provision processes</li> <li>Establish verification process to ensure standards are being met</li> <li>Monitor and evaluate the efficiency of service delivery through outcomes measurements, such as performance indicators</li> <li>Ensure that monitoring is inclusive of user feedback and establish a mechanism to support change if deemed necessary following outcome evaluation</li> </ul>	<ul style="list-style-type: none"> <li>Provide technical advice in developing service provision standards and guidelines</li> </ul>	<ul style="list-style-type: none"> <li>Provide input and feedback about the standards</li> <li>Support through advocacy</li> </ul>

No.	Actions	Role of Member States	Role of WHO	Role of partners
<b>5.</b>	<b>Specific actions for emergency situations* and humanitarian contexts<sup>1</sup></b>			
5.1.	<i>Include assistive technology in national policies and contingency plans for disaster management and emergency preparedness and response</i>	<ul style="list-style-type: none"> <li>Review the national emergency plans and policies and integrate assistive technology into health sector emergency preparedness and response planning</li> <li>Make disaster management and emergency preparedness and response plans inclusive of people with disability, older people and other vulnerable groups</li> <li>Make all government emergency and disaster management plans inclusive of assistive technology</li> <li>Develop and increase capacity of assistive technology service providers in emergency situations and humanitarian contexts and ensure other needed resources</li> <li>Ensure linkage between assistive technology facilities in emergency areas and national or subnational assistive technology centres</li> </ul>	<ul style="list-style-type: none"> <li>Provide technical support, including best practice examples, to make emergency plans inclusive of assistive technology</li> <li>Strengthen the leadership and coordination role of the health sector during emergency contexts</li> <li>Make entire United Nations response system aware of the need for and benefit of assistive technology including in emergency contexts</li> </ul>	<ul style="list-style-type: none"> <li>Provide technical support</li> <li>Collaborate with other stakeholders</li> <li>Include assistive technology in relief packages</li> <li>Make emergency programmes inclusive of assistive technology provision</li> </ul>
5.2.	<i>Estimate needs for assistive products in locations with potential disaster risks and emergencies</i>	<ul style="list-style-type: none"> <li>Conduct a rapid assessment to estimate the assistive product needs for populations living in these locations</li> <li>Include assistive technology in all-risk profiling and risk assessment processes to identify and quantify the needs and gaps in provision</li> <li>Predict gravity of potential disasters and associated needs for assistive products</li> <li>Review and update disaster management and emergency response plans to ensure they address the identified needs and gaps in assistive technology, based on risk profiling and risk assessments</li> </ul>	<ul style="list-style-type: none"> <li>Provide technical support, including in development of assessment tools</li> </ul>	<ul style="list-style-type: none"> <li>Collaborate, support, invest and implement when needed</li> </ul>
5.3.	<i>Develop a priority assistive products list for use during emergency situations and humanitarian contexts and ensure sufficient supply</i>	<ul style="list-style-type: none"> <li>Develop a mechanism to assess needs for assistive products during an emergency and ensure a rapid procurement process</li> <li>Ministry of health to engage ministries involved with emergency response and conduct planning based on risk assessment</li> <li>Deploy assistive technology prior to disasters</li> </ul>	<ul style="list-style-type: none"> <li>Provide technical support to ministry of health in developing emergency priority assistive products list</li> <li>Share best practices</li> <li>Support sufficient availability of assistive products at country level</li> </ul>	<ul style="list-style-type: none"> <li>Support through advocacy, raising awareness, sensitization and mobilization</li> <li>Include priority assistive products in all emergency plans</li> <li>Assist with government and WHO supply chain for assistive technology</li> </ul>
5.4.	<i>Improve integrated service provision of assistive products in emergency situations and humanitarian contexts</i>	<ul style="list-style-type: none"> <li>Identify the bodies and authorities responsible for service provision and intervention in emergency situations and humanitarian contexts</li> <li>Ensure inclusion of assistive technology in emergency services</li> <li>Create a subcommittee to oversee provision of services in emergencies</li> </ul>	<ul style="list-style-type: none"> <li>Provide technical and financial support</li> <li>Give guidance and develop protocols on making assistive technology available in emergencies</li> </ul>	<ul style="list-style-type: none"> <li>Fill gaps in service provision</li> <li>Collaborate with government and WHO</li> </ul>
5.5.	<i>Sensitize and train the workforce for the provision of assistive products in emergency situations</i>	<ul style="list-style-type: none"> <li>Integrate emergency preparedness and response in training programmes of assistive technology providers</li> <li>Develop curricula and materials for training programmes on the provision of assistive technology in emergency situations and humanitarian contexts</li> <li>Sensitize and train emergency staff on the need for and benefit of including assistive technology among emergency preparedness and response</li> <li>Ensure deployment of assistive technology professionals and focal persons in emergencies</li> <li>Offer continuing education about assistive technology in emergencies</li> </ul>	<ul style="list-style-type: none"> <li>Provide technical support and capacity-building in developing training materials, curricula and standards</li> <li>Share best practices</li> <li>Provide financial support</li> </ul>	<ul style="list-style-type: none"> <li>Provide technical and financial support</li> <li>Assist in raising the awareness of personnel on assistive technology special requirements in emergencies</li> <li>Help to engage civil society</li> </ul>
5.6.	<i>Engage the community, nongovernmental organizations and civil society, especially disabled-people's organizations, in assistive technology service planning and provision</i>	<ul style="list-style-type: none"> <li>Develop rapid training modules to be able to provide assistive technology services in emergency affected areas</li> <li>Identify and train community champions and leaders in different geographic locations</li> <li>Conduct community awareness campaigns</li> <li>Engage the non-specialized health care workers in provision of assistive technology in emergency preparedness and response such as community-based rehabilitation workers and nurses</li> <li>Develop and display information materials related to assistive technology in local languages</li> </ul>	<ul style="list-style-type: none"> <li>Assist with community engagement and provide training, if necessary</li> </ul>	<ul style="list-style-type: none"> <li>Partner with the related ministry to identify community champions</li> <li>Nominate personnel for trainings</li> <li>Disseminate community awareness campaigns</li> </ul>
5.7.	<i>Ensure appropriate means of communication with persons with disabilities and older people during emergency situations and humanitarian contexts</i>	<ul style="list-style-type: none"> <li>Train personnel on the different means of communication</li> <li>Develop and disseminate communication guidelines for relevant personnel, as well as for persons with disabilities and older people</li> <li>Use different modes of communication using simple text and graphics including audios and videos to ensure everybody is informed</li> </ul>	<ul style="list-style-type: none"> <li>Provide technical assistance for developing the needed training curricula and guidelines</li> </ul>	<ul style="list-style-type: none"> <li>Provide technical and financial assistance for developing the training curricula and guidelines</li> </ul>
5.8.	<i>Monitor and evaluate access to assistive technology in emergency situations and humanitarian contexts</i>	<ul style="list-style-type: none"> <li>Lead and ensure proper monitoring</li> <li>Incorporate lesson learned into response plans</li> </ul>	<ul style="list-style-type: none"> <li>Provide technical support in development of monitoring framework and tools</li> </ul>	<ul style="list-style-type: none"> <li>Provide technical and financial support</li> <li>Share lessons learned</li> </ul>
5.9.	<i>Ensure that the design of facilities is equipped with a code on accessibility, including for emergency situations and humanitarian contexts</i>	<ul style="list-style-type: none"> <li>Ensure enforcement of the accessibility code during facility design, including for emergency situations and humanitarian contexts</li> <li>Educate facility designers in concerned ministries on code on accessibility requirements, including for emergency situations and humanitarian contexts</li> <li>Develop communication materials for building requirements during application of accessibility codes</li> </ul>	<ul style="list-style-type: none"> <li>Provide technical assistance in developing accessibility codes</li> </ul>	<ul style="list-style-type: none"> <li>Comply with the developed codes of accessibility (including for emergency situations)</li> </ul>

<sup>1</sup> Assistive technology should be integrated into all emergency/disaster management programmes and considered in countries adopting the all-hazards approach and/or emergency preparedness and response plans.



## ANNEX 2. INDICATORS FOR MONITORING THE STRATEGIC ACTION FRAMEWORK

Indicator name	Description	Numerator	Denominator	Response/Unit
<b>Policy</b>				
1. National strategy	Existence of an operational, multisectoral national assistive technology strategy			Yes/No
2. Per capita spending	Per capita spending on assistive technology by government and others, including insurance agencies	Spending on assistive technology by government and others, including insurance agencies	Total population	Currency/capita (e.g. JOD/capita, PKR/capita)
3. National agency	Existence of a national assistive technology agency			Yes/No
4. Regulatory entity	Existence of a regulatory body for assistive technology products and services (including standards, surveillance, manufacturing and marketing of assistive products)			Yes/No
<b>Products</b>				
5. List of funded assistive products	Existence of a list of assistive products covered by financing mechanisms of government or others, including insurance agencies			Yes/No
6. Coverage of WHO priority assistive products	Proportion of assistive products in the WHO Priority Assistive Products List covered by the government or others, including insurance agencies	Number of types of assistive products in the WHO Priority Assistive Products List covered by the government or others, including insurance agencies	Total number of types of assistive products in the WHO Priority Assistive Products List (= 50)	%
7. Standards for national assistive products	Proportion of products in the national assistive products list for which nationally adopted standards or specifications exist	Number of types of assistive products in the national assistive products list for which nationally adopted standards or specifications exist	Total number of types of assistive products in the national assistive products list	%
8. Supplier database	Existence of a database with information on suppliers of assistive products and the assistive products they supply			Yes/No
9. Coverage of costs	Proportion of total cost for the provisioning of assistive products covered by government (includes government at national, regional and local levels; where relevant and possible, costs related to nongovernment and private provision may be considered)	Total costs for the government to provide assistive products <i>minus</i> Total user fees paid to government for assistive products	Total costs for the government to provide assistive products	%
<b>Personnel</b>				
10. Personnel density	Per capita assistive technology personnel involved in providing assistive technology services to users	Number of personnel employed at all levels of the assistive technology service provision system providing assistive technology services to users	Total population <i>divided by</i> 10 000	Personnel per 10 000 population
11. Service density	Proportion of service points for assistive technology services relative to service points for health services	Total number of government and where possible, nongovernment and private assistive technology service points	Total number of government and, where possible, nongovernment and private health service points (including assistive technology service points) at primary, secondary and tertiary levels	%
<b>Provision</b>				
12. Coverage of needs	Proportion of the population in need of assistive products that report having the products they need, towards reaching 50% coverage of such products for all people in need	Total number of people stating a need for assistive products reporting that they have all assistive products they need	Total number of people stating a need for assistive products	%
13. Availability of assistive products	Proportion of districts where assistive products are provided	Number of districts where assistive products are provided through government and, where possible, non-government and private services	Total number of districts	%
14. Accessibility of service facilities	Proportion of assistive technology service facilities that are physically accessible	Number of government and, where possible, nongovernment and private assistive technology service points with ramps or elevators to all floors (including ground floor) where assistive technology services are provided, and at least one wheelchair accessible toilet	Total number of government and, where possible, nongovernment and private assistive technology service points	%
15. Personnel gender ratio	Proportion of female personnel in assistive technology service facilities	Total number of female personnel in government and, where possible, nongovernment and private assistive technology service facilities	Total number of personnel in government and, where possible, nongovernment and private assistive technology service facilities	%
<b>Emergencies</b>				
16. Emergency assistive technology plan	Existence of assistive technology plan within national emergency plan			Yes/No
17. Emergency assistive products list	Existence of a list of assistive products required during emergencies based on estimated needs			Yes/No
18. Emergency assistive technology subcommittee	Existence of an operational multisectoral subcommittee overseeing provision of assistive technology in emergencies			Yes/No

## **GLOSSARY OF TERMS**

All-hazards approach	An approach to the management of the entire spectrum of emergency risks and events based on the recognition that there are common elements [and common capacities required] in the management of these risks, including in the responses to virtually all emergencies (1).
Assistive product	Any external product (including devices, equipment, instruments or software), produced or generally available, the primary purpose of which is to maintain or improve an individual's functioning and independence, and thereby promote their well-being. Assistive products are also used to prevent impairments and secondary health conditions (2).
Assistive technology	The application of organized knowledge and skills related to assistive products, including systems and services. Assistive technology is a subset of health technology (2).
Barriers	Factors in a person's environment that, through their absence or presence, limit functioning and create disability; for example, inaccessible physical environments, a lack of appropriate assistive technology and negative attitudes towards disability (3).
Caregiver	Caregivers are people who provide care and support to someone else. Caregivers may include family members, friends, neighbours, volunteers, care workers, trained personal assistants and health care professionals. The support they provide may include: helping with self-care, household tasks, mobility, social participation and meaningful activities; offering information, advice and emotional support as well as engaging in advocacy, facilitation of decision-making and peer support, and helping with advance-care planning; offering respite services; and engaging in activities to foster intrinsic capacity (4).
Code on accessibility	Mandatory and recommended design requirements and guidelines to ensure that the built environment is made accessible and usable to people with disabilities and other intended users (5).
Cognition products	Assistive products designed to improve or maintain the knowledge and comprehension of people with cognitive impairment. They help to focus on

	<p>categorization, matching, association, reasoning, decision-making, problem-solving, memory skills, perceptual skills, word processing, word prediction, cognitive retraining or rehabilitation, among other things. They include, among others, products for time management/orientation, location tracking, personal digital assistants, personal emergency alarm systems, pill organizers and recorders (6).</p>
Communication products	<p>A category of assistive products designed to maintain or improve the communication abilities of individuals with impairments in receiving or expressing communication. Communication products may include electronic and non-electronic devices; for example, communication boards/books/cards, alternative keyboards and communication software (7).</p>
Community-based rehabilitation workers	<p>Community-based rehabilitation workers facilitate rehabilitation services at the community level. They carry out a range of activities within community-based rehabilitation programmes including identifying people with disabilities, addressing their needs, supporting family members, reducing stigma and prejudice, facilitating equal opportunities and participation, and referring to a higher health care level for relevant services (3).</p>
Contingency planning	<p>A management process that analyses disaster risks and establishes arrangements in advance to enable timely, effective and appropriate responses (1).</p>
Corporate social responsibility	<p>A management concept whereby companies integrate social and environmental concerns in their business operations and interactions with their stakeholders (8).</p>
Disability	<p>According to the International Classification of Functioning, Disability and Health, disability is an umbrella term for impairments, activity limitations, and participation restrictions, denoting the negative aspects of the interaction between an individual (with a health condition) and that individual's contextual factors (environmental and personal factors) (3).</p>
Disabled people's organizations	<p>Organizations or assemblies established to promote the human rights of disabled people where most of the members and the governing body are people with disabilities (3).</p>

Disaster risk management	The application of disaster risk reduction policies and strategies to prevent new disaster risk, reduce existing disaster risk and manage residual risk, contributing to the strengthening of resilience and reduction of disaster losses (1).
Emergency preparedness	The knowledge and capacities developed by governments, response and recovery organizations, communities and individuals to effectively anticipate, respond to and recover from the impacts of likely, imminent or current disasters (1).
Emergency response	Actions taken directly before, during or immediately after a disaster in order to save lives, reduce health impacts, ensure public safety and meet the basic subsistence needs of the people affected (1).
Functioning	According to the International Classification of Functioning, Disability and Health, functioning is an umbrella term for body functions, body structures, activities, and participation. It denotes the positive aspects of the interaction between an individual (with a health condition) and that individual's contextual factors (environmental and personal factors) (3).
Geological hazards	[Hazards that] originate from internal earth processes. Examples are earthquakes, volcanic activity and emissions, and related geophysical processes such as mass movements, landslides, rockslides, surface collapses and debris or mud flows (1).
Hearing products	Any product that maintains or improves the functioning of people who are deaf or have hearing impairment to better perceive sounds in their surroundings and/or interact with their environment and other people. Hearing products include devices for listening and alerting and devices for augmentative and alternative communication. Listening devices are mainly for concentrating, amplifying and modulating sound for a person with hearing problems, for example, hearing aids and loops. Alerting or alarm devices use sound, light, vibrations, or a combination of these techniques, to let someone know when a particular event is occurring. Hearing products can also include devices for alternative communication to improve understanding, to help people with communication

disorders resulting from hearing impairment express themselves, for example, video communication devices (9, 10).

Health conditions

According to the International Classification of Functioning, Disability and Health, health conditions are an umbrella term for disease (acute or chronic), disorder, injury or trauma. A health condition may also include other circumstances such as ageing, stress, congenital anomaly, or genetic predisposition (3).

Impairment

Loss of or abnormality in a body structure or physiological function (including mental function), where “abnormality” is used to mean significant variation from established statistical norms (3).

Mobility products

Products to support a person who has difficulties moving any body part freely and easily, from sitting upright or carrying objects to walking and climbing stairs. Examples include walking aids, wheelchairs, prosthetics, orthotics, keyguards, therapeutic footwear, portable ramps and grab bars (7).

Partners

For the purpose of the regional framework, partners include communities, nongovernmental and civil society organizations including disabled people’s organizations and other organizations that represent people who use assistive products, United Nations agencies, academia, grass-roots advocates, professionals, the media and the private sector.

Peer support programmes

Peer support is where individuals who have lived experience of life experiences provide support to others who are facing with similar situations. By listening empathetically, sharing their experiences and offering suggestions based on that experience, people with lived experience of these issues are uniquely able to support others (11).

People-centred services/care

An approach to care in which the perspectives of individuals, caregivers, families and communities are consciously adopted so that people are participants in and beneficiaries of trusted health systems that respond to their needs and preferences in humane, holistic ways. People-centred care also requires that people have the education and support they require to make decisions and participate in their own care. It is organized around the health needs and expectations of people rather than diseases (12).

Primary care	<p>Often used interchangeably with first level of care.</p> <p>(i) The part of a health services system that assures person-focused care over time to a defined population, accessibility to facilitate receipt of care when it is first needed, comprehensiveness of care in the sense that only rare or unusual manifestations of ill health are referred elsewhere, and coordination of care such that all facets of care (wherever received) are integrated. Quality features of primary care include effectiveness, safety, people-centredness, comprehensiveness, continuity and integration. (ii) The provision of integrated, accessible health care services by clinicians who are accountable for addressing a large majority of personal health care needs, developing a sustained partnership with patients, and practicing in the context of family and community (13).</p>
Priority assistive products	<p>Those products that are highly needed, are an absolute necessity to maintain or improve an individual's functioning and which need to be available at a price the community/state can afford (2).</p>
Public-private partnership	<p>Any informal or formal arrangement between one or more public sector entities and one or more private sector entities created in order to achieve a public health objective or to produce a health-related product or service for the public good. In a public-private partnership, the partners share certain risks and may exchange intellectual property, financial, in-kind, and/or human resources in any mutually agreed upon proportion (14).</p>
Referral	<p>The direction of people to an appropriate facility, institution or specialist in a health system, such as a health centre or a hospital, when health workers at a given level cannot diagnose or treat certain individuals by themselves, or face health or social problems they cannot solve by themselves (15).</p>
Rehabilitation	<p>A set of interventions designed to optimise functioning and reduce disability in individuals with health conditions in interaction with their environment (16). Rehabilitation focuses on the functioning of an individual and not the disease. It does this through a strong emphasis on educating and empowering people to manage their health conditions, adapt to their situation and remain as independent and active as possible (17).</p>

Secondary care	Specialist care provided on an ambulatory or inpatient basis, usually following a referral from primary care (15).
Self-care products	Electronic or non-electronic products which maintain or improve the ability of persons with functional impairment to carry out personal care activities. This includes chairs for bath/shower/toilet and continence products or absorbents (6).
Technological hazards	Hazards [that] originate from technological or industrial conditions, dangerous procedures, infrastructure failures or specific human activities. Examples include industrial pollution, nuclear radiation, toxic wastes, dam failures, transport accidents, factory explosions, fires and chemical spills. Technological hazards also may arise directly as a result of the impacts of a natural hazard event (1).
Tertiary care	The provision of highly specialized services in ambulatory and hospital settings, usually following a referral from primary or secondary care (15).
Universal assistive technology coverage	Everyone everywhere receives the assistive technology they need without financial hardship.
Universal health coverage	Universal health coverage is defined as “ensuring that all people can use the promotive, preventive, curative, rehabilitative and palliative health services they need, of sufficient quality to be effective, while also ensuring that the use of these services does not expose the user to financial hardship” (12).
Vision products	Electronic and non-electronic devices that maintain or improve the functioning of people with visual impairment or blindness. It includes aids or systems to access, enhance, interpret, record and retrieve visual and print information. Examples include digital and optical magnifiers, braille writing equipment, braille displays, spectacles, white canes and screen readers for computers (software) (6).
Vulnerability	The degree to which individuals, communities and systems are susceptible to or have diminished capacity to cope with exposure to risk factors (18).

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