# Environmental factors:
## classifications and measurement

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# Introduction

UNSD invited us to present information in order to start the discussions on environmental factors when measuring functioning/disability

We will share information regarding
1. Relevant classifications, standards
2. Examples of measurement

and end up with
3. Items for discussion

- WHO ICF Environmental factors classification

- ISO9999

- Potential other standards e.g. on accessibility, health interventions

## ICF Classification of Environmental Factors

- Least developed part of the ICF
- Definition: Environmental factors make up the physical, social and attitudinal environment in which people live and conduct their lives.
- They can act as facilitator and barrier
- The classification consists of 5 chapters

1 Products and technology *(e.g. for daily living, mobility, communication, education, employment, culture/recreation/sport, religion, buildings for public use and private use).*

2 Natural environment and human-made changes to environment *(e.g. climate, light, time related changes, sound, air quality)*

3 Support and relationships *(e.g. family, friends, colleagues, professionals)*

4 Attitudes *(e.g. family, friends, colleagues, strangers, professionals, societal attitudes)*

5 Services, systems and policies (*e.g. relating to architecture, communication, transportation, legal, media, economic, social security, health care, education, employment, political)*

# ISO 9999

**ISO 9999 Assistive products for persons with disability – Classification and terminology**

Definition: Assistive product is any product (including devices, equipment, instruments and software), especially produced or generally available, used by or for persons with disability for participation, to protect,  support, train, measure or subsitute for body functions/structures and activities or to prevent impairments, activity limitations or participation restrictions

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# Chapters ISO9999 - 2011

| ISO 9999 2011 | ISO Chapter |
|---|---|
| Assistive products for personal medical treatment | 04 |
| Assistive products for training in skills | 05 |
| Orthoses and prostheses | 06 |
| Assistive products for personal care and protection | 09 |
| Assistive products for personal mobility | 12 |
| Assistive products for housekeeping | 15 |
| Furnishings and adaptations to homes and other premises | 18 |
| Assistive products for communication and information | 22 |
| Assistive products for handling objects and devices | 24 |
| Assistive products for environmental improvement and assessment | 27 |
| Assistive products for employment and vocational training | 28 |
| Assistive products for recreation | 30 |

# Chapters ISO9999 – 2011
# Relation with ICF – e1 Chapter

| ISO 9999 2011 | ISO Chapter | ICF Categories (e1) | | | | Relation |
|---|---|---|---|---|---|---|
| Assistive products for personal medical treatment | 04 | e115 | e130 | | | "one to many" |
| Assistive products for training in skills | 05 | e115 | e130 | | | "one to many" |
| Orthoses and prostheses | 06 | e115 | | | | "one to one" |
| Assistive products for personal care and protection | 09 | e115 | | | | "one to one" |
| Assistive products for personal mobility | 12 | e120 | | | | "one to one" |
| Assistive products for housekeeping | 15 | e115 | | | | "one to one" |
| Furnishings and adaptations to homes and other premises | 18 | e115 | e120 | e150 e155 | | "one to many" |
| Assistive products for communication and information | 22 | e115 | e125 | | | "one to many" |
| Assistive products for handling objects and devices | 24 | e115 | e125 | | | "one to many" |
| Assistive products for environmental improvement and assessment | 27 | e115 | | | | "one to one" |
| Assistive products for employment and vocational training | 28 | e115 | e130 | e135 | e150 e155 | "one to many" |
| Assistive products for recreation | 30 | e140 | | | | "one to one" |

Accessibility standards developed by organizations such as ISO e.g. accessibility of environment, public and private buildings, web, etc

International Classification of Health Interventions (ICHI, WHO)

And other standards might be interesting for consideration later

We found different types of items, questions and instruments relating to environmental factors, used in personal/household interview surveys.

Different type: check of accessibility at the level of public buildings

We show examples for both of them and do not pretend to present a complete overview.

# Technical aids

The most simple questions relating to environmental factors: the use of

- glasses/contact lenses
- hearing aid

*e.g. in several surveys incl WG SS, WG/UNICEF CF modules and a lot of other surveys*

Use of other technical aids for hearing/seeing (*tv, telephone*)

*HIS NL*

# Technical aids (2)

Mobility, use of
- cane/walking stick
- walker/zimmer frame
- crutches
- wheelchair/scooter
- artificial limb


- someone's assistance


*WG ES-F, HIS NL*

# Help/assistance

Relating to self care (*e.g. eating, in/out bed, dressing, toilet, bathing*) and domestic life (*e.g. meals, telephone use, shopping, housework, managing finances*)

- Do you usually have help for any of these activities

- Would you need more help

*EHIS*

Which services, if any, are you 1 *aware* of and  2 *have ever needed* or 3 *received*?

A Medical rehabilitation

B Assistive devices

C Educational services

D Vocational training

E Counselling for persons with disability

F Counselling for parent/family

*Zambia Living Standards Survey*

## Life areas, participation and barriers

- Mobility
- Transport
- Accessibility to buildings
- Education and training
- Employment

- Attitudes and behaviour
- Economic life
- Leisure pursuits
- Social contact and support
- Internet use

For each: *barriers, lack of aids and personal help restricting or preventing participation*

*EHSIS*

# CHIEF

**Craig Hospital Inventory of Environmental Factors (CHIEF)**

includes 5 experienced barrier factors:

1 attitude and support

2 services and assistance

3 physical and structural

4 policy

5 work and school

*To be used in personal interviews, 25 questions, 10 items for children (2-12y)*

# MDS

## WHO Model Disability Survey

- Most extensive measurement of environmental factors in personal/household surveys
- two relevant modules
- 3000A Environmental factors (35 questions)
- 3000B Personal assistance, assistive products and facilitators (44 questions)

# MDS (2)

- **Module 3000A** Hindering or facilitating environment, assistance, assistive products and medicines, support and relationships, attitudes of others, accessibility to information

- **Module 3000B** Personal assistance, assistive products and facilitators incl. personal assistance, assistive products and modifications relating to mobility and self-care, seeing, hearing & communication, cognition, work, education, at home, in the community *(use and need)*

# CHEC

**Community Health Environment Checklist (CHEC)**

- Different approach, checklist for objective description of the accessibility of buildings
- Consists of 5 sections
  - Reaching and entering building (e.g. parking, doors)
  - Use of building
  - Restrooms
  - Amenities
  - Usability and area of rescue assistance

# 3 Items for discussion (a)

Which **classifications** (and which parts) and other standards are relevant in the context of measuring functioning/disability?

- ICF Environmental factors

- ISO9999

- Other standards

# 3 Items for discussion (b)

**Which items/aspects to be measured?**

- Technical aids (*use/need*)
- Help/assistance (*use/need*)
- Services (*awareness/use/need*)
- Facilitators/barriers incl. acessibility

# 3 Items for discussion (c)

**Which level of data collection for environmental factors do we need?**

- Personal level - as experienced, subjective (*e.g. census, general household survey, health interview survey, disability survey)*

- Environmental level
  - direct, objective (*e.g. check at the level of public buildings, transportation, etc.*)
  - conditional, at the level of  services, systems and policy – local, national

Tack

Vielen Dank

Obrigado

RAKHMET

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ありがとうございます

Bedankt

Takk

感謝您

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谢谢

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ขอบคุณ

Спасибо

Thank You

Kiitos

شكرا

Tak

Teşekkür Ederiz

감사합니다

Gracias

Σας ευχαριστούμε

Dziękujemy