



GROWING DISABILITY INCLUSIVENESS IN AGRICULTURE



Acknowledgments

This guidance note was developed by World Vision Australia Disability Advisor, Cashelle Dunn, in collaboration with Rob Kelly, Harry James and Sarah McKenzie (Climate Action & Resilience team) in 2024. It draws on World Vision Partnership and external organisation programs and practices. This guidance note has benefited from reviews by Mona Stella Mariano, Tracy McDiarmid, Viktoria Midelaury, Vincent Potier, America Ndlovu, Sarah Tanton, Colin Dyer, William Adero, Fransisca Novita, and Haron Kadieda.

For further information, contact cashelle.dunn@worldvision.com.au

Front cover photo: Receiving goats through World Vision has helped in empowering rural people with disability and their families in agriculture.



HOW TO INCLUDE AND EMPOWER PEOPLE WITH DIVERSE DISABILITIES IN AGRICULTURE

The World Health Organisation estimates that 16% of the global population have one or more disabilities and nearly 80% live in low- and middle-income countries.^[1] Across all societies, people with disability are subject to various forms of human rights violations, including violence, prejudice, denial of autonomy and neglect of their most basic needs. The labour force participation rate for people with disability is very low, where globally, seven in ten persons with disability are inactive, compared to four in ten without.^[2] It is particularly high for women with disabilities, not only higher than women without disability, but significantly higher than men both with and without. People with disability are more likely to experience adverse socio-economic outcomes, particularly those living in rural and remote areas, and these disadvantages are compounded when intersecting with other forms of discrimination, including gender and age.

World Vision has made global commitments to “give power to children and adults with disabilities to take part in their communities and take on leadership and decision-making roles”.^[3] More specifically, World Vision has committed to include youths and adults with disabilities in all of our livelihoods programmes by 2030 and giving them the skills and opportunities to achieve a decent living.

LIVELIHOODS PROGRAMMING AND DISABILITY INCLUSION

World Vision exists to improve child well-being outcomes for those living under difficult circumstances. The World Vision livelihoods approach recognises that the vast majority (approximately 80 percent) of vulnerable children where World Vision works, live in households that rely on agriculture for their livelihoods.^[4] Many of the world’s poorest people are smallholder farmers in rural and remote locations, who rely on their natural resources and farming practices to provide food and income for their household.

However, farming households that include one or more people with disability face an even greater set of barriers. These barriers can be experienced across the agrifood system (comprising the range of actors and activities associated with agricultural production) from training and education for producers, primary production, and through to storage, handling, transport, processing, distribution, marketing and consumption. Note that the focus of this guidance note is on addressing barriers related to agricultural production*, and not the post-production and market-related components of livelihood programming. Key barriers are attitudinal (e.g. prejudice, discrimination and stigma), environmental (physical and communication barriers) and institutional (e.g. policies, laws and rules).^[5] Due to our influence and opportunity, World Vision holds an important role in supporting the process of identifying and breaking down those barriers.

This guidance note provides ideas, tips and examples that focus on how to improve disability inclusion in the agriculture production end of the agrifood system. It will be relevant for livelihoods technical and field staff who design or implement agricultural livelihoods programming through World Vision International's Core Project Models, such as Regreening Communities (RGC) and Building Secure Livelihoods (BSL), particularly those that include approaches such as Climate-Smart Agriculture (CSA), Nutrition-Sensitive Agriculture (NSA) and Farmer Managed Natural Regeneration (FMNR), and Inclusive Market Systems Development (iMSD) programming engaged in agriculture.

[1] World Health Organisation (2022) '[Global report of health equity for people with disability](#)'

[2] International Labour Organisation (2022) '[New ILO database highlights labour market challenges of persons with disabilities](#)'

[3] World Vision (2022) [Commitment to Children with Disabilities](#)

[4] World Vision US (2020) [GESI-Responsive Food Security and Livelihoods \(FSL\) Programming Reference Guide](#)

[5] World Vision (2022) [Travelling Together](#), Handout 1: Models of Disability, Barriers to Inclusion, Disability Definition, p. 43-46.

*'Agriculture production' encompasses the activities involved in growing, harvesting and preparing food and non-food agricultural products (including cropping, animal husbandry, home gardens, aquaculture and forestry) for both commercial and non-commercial use.

KEY CONSIDERATIONS



DISABILITY IS DIVERSE!

Participating in farming and agricultural activities can be challenging for people with diverse disabilities in different ways depending on their impairment/s. For example, the barriers a person who uses a wheelchair experiences may be different from those with other physical impairments, as well as those with intellectual, hearing, vision, communication or neurological impairments.



PEOPLE WITH DISABILITY ARE DIVERSE!

Don't just consider 'people with diverse disabilities', but think about intersecting identities, such as gender, age, ethnicity, migratory and income status. For example, exploring barriers more specific to young women with disabilities in agribusiness.



OCCUPATIONAL RISKS

Agricultural activities have a high risk of accidents resulting in disability. Existing livelihoods may be lost if consideration isn't given to including people with acquired disability. The risks vary greatly depending on contexts and can be influenced by a variety of practice factors, such as type of farming, as well as social factors, like gender. Early risk analysis and mitigation measures are vital.



INCLUSION = ECONOMIC GROWTH

Even within well off households, people with disability can be extremely isolated, marginalised, and vulnerable. Inclusion can provide them with a valued social role and lead to broader benefits for families and communities, reducing the impacts of poverty and positively contributing towards a country's economic growth.



IDENTIFY OUR KEY STAKEHOLDERS

Identifying and locating (or "mapping") people with diverse disability in the proposed community is an essential start. Use the Washington Group Questions for identification and disaggregate by gender, age and other relevant characteristics. Organisations of People with Disabilities (OPDs) and/or community-level disability groups should also be identified and engaged to support the mapping, as they often have members that have not yet been registered/identified by the government.



UNDERSTAND THE ENVIRONMENT

Disability analysis is vital at the start of any agrifood program - exploring the diverse impairments in the area, the involvement people with impairments have in different agricultural roles, land ownership and their level of power and leadership within the community.



CREATE AN ENABLING ENVIRONMENT

Programs will need to use this information and the ideas of people with disability in design and intervention planning. Sites chosen must include plans for accessible modifications or construction. Initiatives should be mainstreamed to address the norms and attitudes that create barriers to people with impairments accessing livelihood opportunities.



THINK BIG PICTURE!

A holistic approach must be taken in any agricultural project, not only from physical involvement in agrifood systems, but also targeted and meaningful engagement with community-based institutions, and behaviour and attitude transformation toward people with disability within the community.

[6] For more information on the cycle of Poverty and Disability go to [End the Cycle](#)

APPROACH TO GROWING A DISABILITY-INCLUSIVE AGRIFOOD SYSTEM

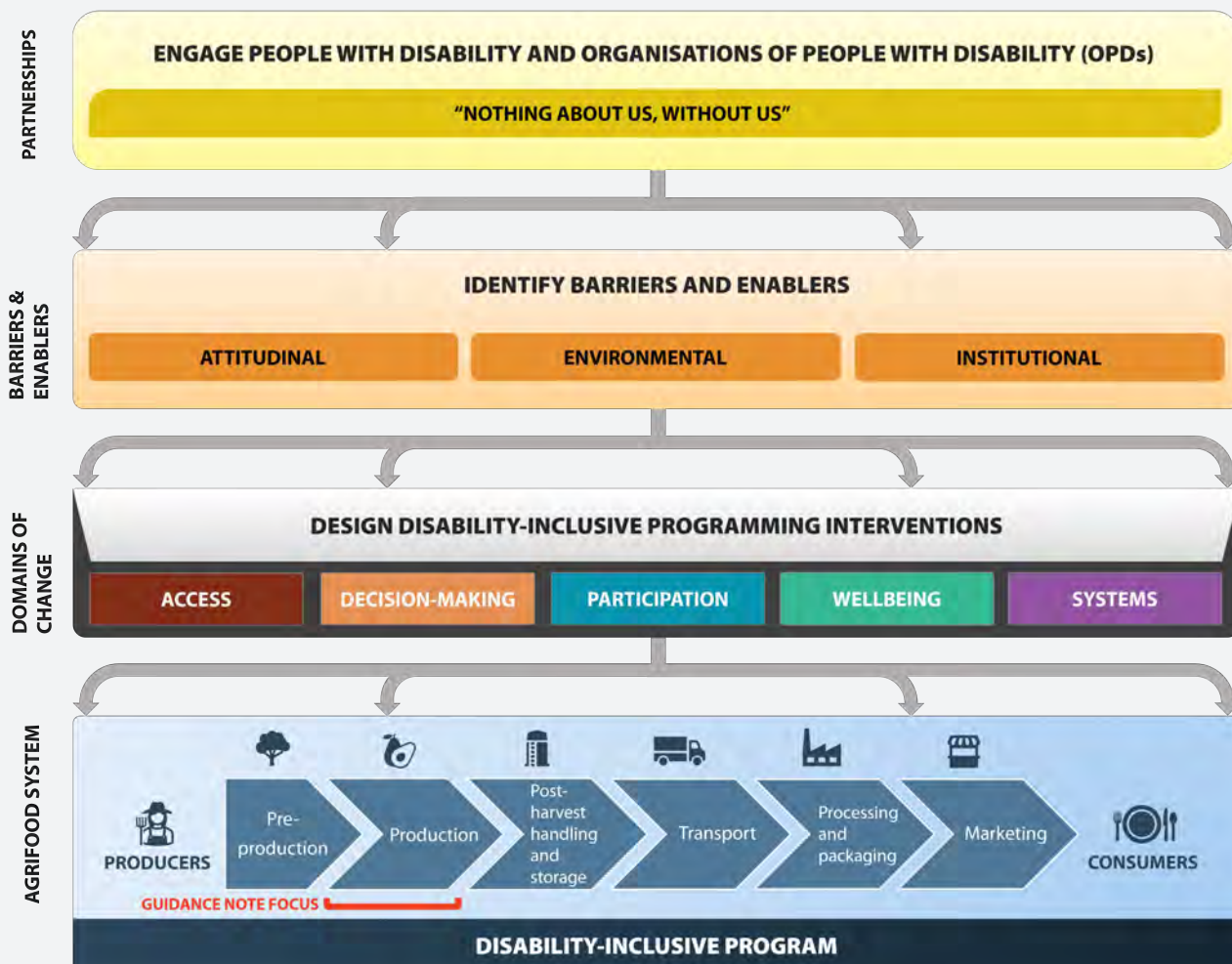


Figure: Schematic demonstrating steps to ensure disability-inclusive programming for projects working across the agrifood system, noting the focus in this guidance note on agricultural production.

World Vision uses five Domains of Change^[7] to build a common understanding of the pathways of change required to achieve Gender Equality, Disability and Social Inclusion (GEDSI) and to promote and guide their systematic integration within and across programming sectors.ⁱ These five Domains of Change are: access, decision-making, participation, systems, and well-being.

This guidance note uses those domains but has been developed with a specific focus on disability, as many of the barriers and experiences of people with diverse disabilities in agriculture are not experienced by those without disabilities and can require specific considerations and approaches.

These ideas, tips and examples are an addition to the expected World Vision Australia's GEDSI Minimum Standards.^[8] The eight minimum standards form the basis for all programming to be disability inclusive and reflect the clear building blocks for a more systematic, equitable and inclusive practice. These eight standards are to: 1) Conduct GEDSI Assessment; 2) Develop GEDSI Action Plan; 3) Partner with representative organisations and groups; 4) Ensure GEDSI is a shared responsibility (staff capacity and accountability); 5) Ensure GEDSI outputs and indicators; 6) Allocate budget; 7) Monitor, evaluate and report GEDSI progress; 8) Do no harm.

7] World Vision (2023) [Gender Equality and Social Inclusion Approach and Theory of Change](#)

8] World Vision Australia (2022) [Gender Equality and Disability Inclusion Minimum Standards and Advice](#)

TIPS

DOMAINS

ACCESS

The ability to access, use, and/or own assets, resources, opportunities, services, benefits, and infrastructure

PRE-DESIGN

- Consult people with disability and OPDs in conducting a gender-sensitive, disability inclusive mobility map, to understand mobility patterns, evaluate impact of certain interventions, and explore the accessibility and safety of the places and their gender and disability-based differences.ⁱⁱ
- Conduct a cost comparison analysis between farmers with and without disability to check equity in cost for agricultural inputs (e.g. seeds, fertilisers).

DESIGN / IMPLEMENTATION

- Make reasonable accommodations to ensure participation in program design and planning equitable (e.g. wheelchair accessible venues, allowing accompanying support person, providing accessible transportation to events and trainings, sign language interpretation and captioning).ⁱⁱⁱ
- Provide extension services to ensure that farmers with disabilities and their farmer groups benefit from sector interventions, such as new, accessible agricultural technology. This can be done directly through the project or working with market actors.
- Ensure that all public information, including best-practice guidance and market information is produced in formats that can be accessed by people with diverse disabilities (e.g. pictorial, audio, braille, videos with sign language and captioning).
- Consider Universal Design Principles at all points in production, processing, and marketing chains [see *Universal Design Guide 1.2.1: Rural Environments*].^{iv}
- Facilitate access to and/or development of low-cost adaptations to agriculture devices/technology [see *below examples of Individual/Household Investments*] and assistive devices to meet their needs. Some adaptations can be done at home but just require some creative thinking. Others with the support of local artisans or facilitated through organisations of people with disabilities (OPDs), government and/or other NGOs.
- Advocate to government and suppliers about any inequities in input or product costs identified in cost comparison analysis.
- Provide platforms for people with disability to advocate for their rights to access productive resources like land and affordable capital. Capacity building in rights and self-advocacy may be required beforehand.

DECISION-MAKING

The ability to make decisions free of coercion at individual, household, community, and societal levels. This can include control over assets and ability to make decisions in leadership

PRE-DESIGN

- Target people with diverse disabilities for inclusion in mainstream groups during farmer mobilisation and group formation. Where possible use targeted mobilisation techniques.
- During the engagement phase, use inclusive and accessible participatory engagement methods (drawings, visuals etc).
- Ensure both women and men with diverse disabilities are involved as active participants in the decision-making processes of program design and planning.
- Conduct Role Function Mapping exercise to identify potential entry points for people with diverse functional differences and consider the skills required for different roles within production.
- Recognise people with disability and OPDs as key stakeholders for food security and livelihoods interventions in design and throughout the project cycle.

DESIGN / IMPLEMENTATION

- In promotional or awareness campaigns related to World Vision's Agrifood or FMNR programming, ensure you show the positive work ethics, skills, decision-making and achievements of people with diverse disabilities to the public. Raise their voices. Have them as your 'Champions'. This will lead to respect and increased awareness on their working capacity.
- Make sure the user/management committees have representatives who are people with diverse disabilities.
- Ensure training/meeting venues, format and learning/informational materials are accessible for people with disability.^v
- Empower people with disability to find innovative ways to engage in agricultural opportunities that work for them, for example, designing raised garden beds, adapting garden/farming tools, using low-cost inclusive digital agribusiness technology.^{vi}

TIPS

DOMAINS

PARTICIPATION

The ability to participate in or engage in societal affairs and systems of power that influence and determine development, life activities, and outcomes.

PRE-DESIGN

- Budget for and conduct a census/mapping to identify and locate people with disability in the proposed community. Use the Washington Group Questions for identification and disaggregate by gender, age and other relevant characteristics. OPDs can be engaged to support identification.
- Consider how the intervention might involve household members with disability (children and adults) beyond those who received any initial training.
- Partner with a disability-focused local NGO or iNGO (e.g. Humanity & Inclusion, CBM) to provide technical advice and programming support.
- Collaborate with government entities overseeing/supporting disability inclusion and vocational training/education for sustainability measures.

DESIGN / IMPLEMENTATION

- Commence regular disability inclusion awareness training for all staff and volunteers (this should be an ongoing activity throughout implementation).
- Consider affirmative action in recruitment of people with disability into the sector (e.g. develop a targeted outreach strategy, set quotas for adult and youth men and women with diverse disabilities in farmer groups) to ensure their participation in agricultural activities on an equitable basis.
- Consider providing specific technical training, coaching and material support to persons with disability for negotiation and engaging in value-adding roles in the agrifood system.
- Put emphasis on the interdependency between group members. Create opportunities for skill development that encourages peer-to-peer support.
- Ensure sufficient time and resources for field staff, volunteers or leaders of groups (e.g. farmers groups) to make regular supportive visits to encourage participation and ongoing engagement of persons with disabilities in the program. Speaking with family members during these visits also can ease any family apprehension about the person’s participation.
- Speak to the families of people with disability and emphasize the income generation opportunities involving that person could create.
- Collect disability-disaggregated data throughout project activities, and monitor, evaluate and report on progress and good practice.

SYSTEMS

The availability of equal and inclusive systems that promote equity, account for the different needs of vulnerable populations, and create enabling environments for their engagement

PRE-DESIGN

- Explore partnerships with agribusinesses and rural development NGOs that promote/support disability inclusion and disability-inclusive methodologies.
- Explore whether existing environment, land and property and agriculture related laws, policies, regulations and practices are disability-inclusive and non-discriminatory.

DESIGN / IMPLEMENTATION

- Promote research into and design of accessible agricultural technology for small holder farmers with diverse disabilities.
- In partner meetings, public campaigns or publications, promote agricultural production in which people with diverse disabilities are currently engaged.
- Collaborate with the education sector to mainstream disability awareness and accessibility in the agriculture training curriculum.
- Encourage rural development personnel at all levels to visit remote villages and farms to understand the barriers faced by people with disability in these areas.
- Document good practices and innovative approaches and adaptations that have increased disability inclusion and empowerment.
- Work with people with disability and OPDs (build their capacity beforehand if needed) in advocacy for mainstream inclusion in livelihood programs and relevant government policies.
- Collaborate with traditional leaders, lead farmers and disability leaders to use regularly scheduled meetings to discuss the economic challenges that people with disability face in the agriculture industry and how to address these.
- Work with government, OPDs and other relevant leaders to make related laws, policies, regulations, and practices disability-inclusive and rights-based.

TIPS

DOMAINS

WELLBEING

The sense of worth, capability, status, confidence, dignity, safety, health, and overall physical, emotional, psychological, and spiritual well-being. This includes living free from all forms of stigma and discrimination.

PRE-DESIGN

- Conduct a formative assessment that explores the disability, age and gender-related attitudes and stereotypes held by people with disability, the community and leadership, as well as the roles and responsibilities of people with disability in the area you work. Consider expanding this analysis to include other intersecting identities, such as ethnic, religious or indigenous groups.
- Consider complementary activities that could be incorporated into the project to address the challenges of unmet needs due to prevalent harmful gender, disability and social norms and attitudes.

DESIGN / IMPLEMENTATION

- Incorporate disability awareness/sensitisation trainings and messaging within mainstream trainings and group meetings to address discriminatory norms and attitudes.
- Provide gender and age sensitive disability awareness training to all officials working in the sector.
- Link persons with disabilities to other service providers, such as rehabilitation equipment suppliers, rehabilitation services, and/or mental health services; or partner with other programmes and organisations offering these services in your program areas.
- Include activities that improve attitudes of people with diverse disabilities and their families toward themselves to improve their confidence, sense of skill and self-determination and capacity in self-advocacy.
- Create a trusted space where farmer groups and other community members speak freely about their experience interacting with persons with disabilities and the challenges/fears they face and accompany this with disability awareness sessions to improve these relationships and attitudes.

BUT WHAT ABOUT BUDGET?

Most of these tips are about what you need to consider when designing or implementing an agriculture-related program or activities. They encourage you to think about how you can adapt an existing program to better consider disability, including partners you should engage with and who or what you should promote in groups or when doing household visits. These do not require additional budget, just an adapted way of thinking.

The suggested considerations and mapping can be incorporated into national level assessments which inform Technical Program (TP) designs or Area Program (AP) design and assessments. Disability inclusion can then be reflected in logframe activities or in other ways of working - for example, how trainings are delivered, who is involved or the provision of tailored supports or community awareness. You can also explore disability barriers and inequities in the Vulnerability Assessments. For grants, these can be budgeted into the design phase accompanying other assessments, integrated into larger assessments or as a separate activity during implementation. It's about being intentional and forward-thinking.

Some initiatives may require additional budget - such as budget for tool adaptations, assistive devices, or specific trainings - but these are likely to be small. This can be integrated as a budget line into grants, but also annual AP budget submissions. This requires pushing back on the idea that allocating resources to identify, understand and adapt for people with disability (the largest minority group!) takes away from everyone else.

GOOD PRACTICE EXAMPLES

ANNEX 1: INDIVIDUAL / HOUSEHOLD INTERVENTIONS

Individual and household-level interventions are adaptive techniques that can be used to improve accessibility for individuals with diverse impairments undertaking agricultural activities. This generally involves engaging with individuals to identify the barriers they face in doing certain tasks, and then exploring what can be purchased, created, or done differently so individuals with diverse disabilities can equitably engage.

Investing in individual or household interventions can be life changing and can even prevent exacerbating or developing new impairments. It is important to remember that individual interventions can be done for people with different types of disability, not just those with physical impairments. Examples include raised garden beds, keyhole gardens, adapted seeders and weeders, and crop identification systems.

ANNEX 2: PROGRAMMING INTERVENTIONS

Interventions related to the inclusion and empowerment of people with diverse disabilities can be integrated into any livelihoods and agricultural programming. There are varied practices that exist globally and many programming interventions can be replicated or adapted to country, culture and World Vision models. Here are four examples of promising practices:

1. Full inclusion in 'Survival Yard' Program through mainstream access alongside disability specific supports (CBM)
2. Community Link Agents (CLAs) and peer learning in Farmer's Groups (Light of the World)
3. Collaborative design of low-cost, accessible farming technology (Massey University)
4. Using digital platforms for disability-inclusive Agribusiness (Oasis Agribusiness Ltd.)



Photo: Rose at her potato garden next to her home in Omoro District, Uganda. Rose has been elected Councilor on the sub-county council and represents the voices of people with disability in the Australian Government funded HANA Project.

ANNEX 1: INDIVIDUAL / HOUSEHOLD INTERVENTIONS

For many people with disability, assistive devices, such as crutches, canes, hearing aids, wheelchairs and spectacles can make a great difference in participation in society broadly, including livelihood activities. However, more specifically for agriculture, investment in low-cost assistive tools or making adaptations can be provided to individuals to increase inclusion of people with diverse impairments in agricultural activities. Examples include:

KEYHOLE GARDENS

Keyhole gardens are circular rock/debris formations, designed to suit the height requirements of the person using the garden. Indented on one side where the gardener can access the central water basket and tend the plants. By watering the keyhole garden at its centre, the moisture drains through the compost and into the rest of the bed. The shape and ease of access make these small gardens accessible to all, particularly people with a physical disability and the elderly, allowing easy access from a wheelchair or a garden stool.



Image 1. [Guyana Chronical](#) (2016)

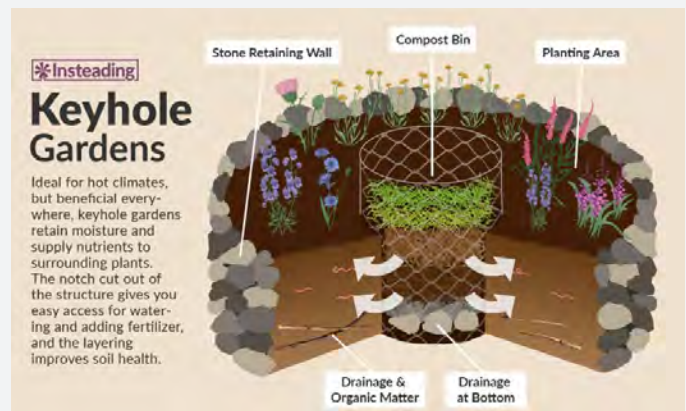


Image 2. Wren Everett, [Insteading](#) (2023)

RAISED GARDEN BEDS

Having a raised garden bed make a big difference for people with certain physical impairments, as the person will be able to sit beside the bed and twist their body around to work in the garden. The bed can be made more accessible to a wheelchair user by mounting the bed on top of the legs enabling the user to sit closer with his or her legs underneath. If the raised bed garden is for the use of a person with disability, then certain key considerations should be kept in mind. These include wheelchair access if required, the height and width of the raised bed, and its location in relation to the home.



Image 3. [Eswatini Farming](#) (2021)



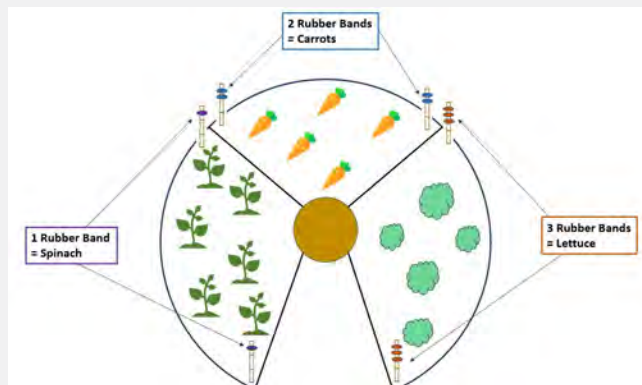
Image 4. [Creative Living](#) (2023)



Image 5. [Stoney Creek Farm](#) (2021)

GARDEN-CROP IDENTIFICATION SYSTEM FOR PEOPLE WITH VISION IMPAIRMENT

The Garden-Crop Identification System is simply varying numbers of rubber bands on the row-end stakes that signify what's been planted in each row - e.g., one rubber band means lettuce, two means onions, three means beets, etc. This can be also be laid out like a clock in a keyhole garden, with twine between stakes to separate the different crops, making it easier for a person with vision impairment to identify and tend to them.



ADAPTED TOOLS AND MACHINERY

Adapted tools and machinery can create opportunities for more disability-inclusive agriculture. Using adapted tools can help persons with disabilities modify traditional farming methods. Inclusive tools and solutions have often emerged from the grassroots and are designed for affordability. However, availability is limited in most markets and few farmers with disabilities have access to them. Low-cost innovations can be made to create new tools or adapt existing tools to be more accessible, however, projects need to make targeted efforts to support this process. The Agrability Toolbox^{vii} can be helpful in considering adaptive agriculture equipment. Some examples of adaptations include:

A fist grip and arm support can be fitted to a rake, spade or pitchfork to help lift it and is useful for persons who only use one hand.



Image. [Disability Horizons](#) (2024)

For people who experience difficulty lifting heavy vegetables or bending down, a farmer created an adapted pumpkin lifter using a conduit, pitchfork, rubber hose, and clamped arm support handle.



Image. [Instructables](#) (2022)

Homemade Back-Saving Pruning Shears can cut down scrub and other plants at ground level without having to bend over, made using a tube, wooden handles and a curved blade.



Image. [Agrability](#) (2023)

Homemade low-profile wheeled mobility aid allows people unable to walk or crawl to perform ground-level tasks, such as planting or weeding. It is made using two bicycle wheels, a rebar frame and a wooden platform.



Image. [Instructables](#) (2021)

A **wheelbarrow attachment** can make it easier for people with limb differences to use a wheelbarrow with relatively light loads and fairly level terrain. It involves attaching a strap to the wheelbarrow handle, wrapping padding around the strap, and attaching a wooden handle.

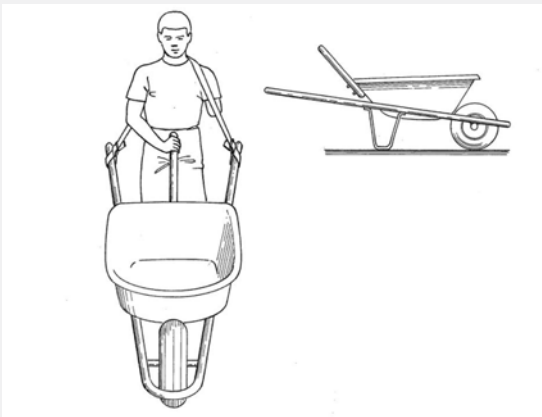


Image. [ILO Handbook: Tool Adaptation](#) (1997)

A **rope guide** is created when a rope is strung between two posts driven into the ground. This can then guide a person with vision impairment from one place in the yard or field to another.



Image. [Agrability](#) (2023)

ANNEX 2: PROGRAMMING INTERVENTIONS

1. Full inclusion in 'survival yard' agriculture programming through mainstream access alongside disability specific supports, Niger

Inclusion Made Easy, Disability Inclusion: Environment, The 'Survival Yard' Program, CBM (2012)

The 'survival yard' program in Niger was developed by disability-focused iNGO's CBM and Humanity and Inclusion (HI) following the 2005 drought and food crisis. It entered a second phase when it partnered with a local mainstream rural development NGO, to broaden it out to create resilience not only for people with a disability, but also for whole communities in a region with declining food security. The 'survival yard' program works together with people with a disability, their families and communities.

The survival yards (also known as survival gardens) created through this program were 25m x 25m yards, with a water well and simple watering canals. A border of productive bushy trees creates a micro-climate against harsh winds off the Sahara. Gardening and trees (fruit and other) provide vegetables and fruit to eat and sell, fodder for livestock and firewood – and therefore the means and incentive for people to stay in their communities. A key factor for the program's success is bio-diversity, ensuring there is a range of plants that can survive in the very hot, dry, harsh time of the year.

The proximity of the yard to houses means that people with physical disability do not have to travel far to work the garden or retrieve water from the garden's well. By having it as a community garden, other community members can share tasks based on their skill, time, and functional abilities. By seeing the commitment of people with disability to tending the gardens, the community began to recognise their value-add and adaptive abilities.

However, the program goes beyond development of a survival yard to considering broader, complementary activities that can improve the lives of people with disability.

Activities built into the program include:

- Distribution of goats to each household for breeding purposes, which they could sell for food if they faced shocks.
- Credit for additional small livestock (e.g. sheep, goats). As well as for income generation, these livestock are important 'social protection' as an animal can be sold to cover a medical intervention or school fees. Sheep are particularly useful as they can be stabled and fed on nutritious plants grown in the 'survival yard'.
- Community education on disability inclusion, health (including HIV prevention), nutrition, clean water, sanitation and hygiene.
- The construction of latrines and fuel efficient stoves.
- Loans for products, such as donkey carts, to make activities more accessible for people with certain disabilities and income generation through transport of goods.
- The program also promotes all the principals and domains of the World Health Organisation (WHO) Community Based Rehabilitation matrix.

The design and development of the program is based on full participation of people with a disability. Participants with a disability also receive any specific training or assistive devices needed in order to work with their families and communities in the 'survival yards'.

A key lesson learned is the need for ongoing monitoring, evaluation and adjustment to keep the program on track and ensure ongoing full participation of people with a disability.

2. Community Link Agents (CLAs) and peer learning in Farmer's Groups, Uganda

Disability Inclusion Insight Series: Disability Inclusion in Farmer's Groups, Light for the World (2019)

The SEE Acholi program (Skilling Employment and Entrepreneurship) was able to reach youth with disabilities, enabling them to participate successfully in the Farmer's Groups. The respective disability inclusive measures taken and/or positive insights from practice are grouped in four categories:

1. General program management and design for disability inclusion

- Community Link Agents (CLAs) and project staff were trained on disability awareness and communicating with persons with disabilities.
- CLAs started targeting parents and guardians of youth with disabilities in the community, aware they are often the gatekeepers for participation and can have apprehension about their child participating in community activities.
- Individual group members were asked to invite youth with disabilities they knew to join the group.
- Youth with disabilities participating in the program were put forward to act as role models to sensitise other groups in neighbouring communities.
- CLAs also created space in their personal work plans to make more frequent home visits to parents of youth with disabilities. These visits aimed at providing them with information on progress of the group, building a good relationship with parents and reduce drop-out rates.
- More focus was put on the practical part of the training, where group members interacted and learned from each other on the field.

2. Personal and professional development aspects of youth with disabilities

- Even though youth with disabilities surprised many with what they could do, group members without disabilities were able to fill in where necessary and provide assistance to those with disabilities as needed.
- Some youth with disabilities, particularly those with psychosocial impairments, experienced strong emotions such as frustration, lack of self-esteem, anxiety and anger at certain times. Parents of these youth provided useful insight on the cause of the outbursts, and how to deal with them. This knowledge was transferred to other group members and greatly aided group dynamics.
- Role models played a key role in inspiring and convincing the sceptical, with people with disability used to sensitise groups and staff on the concept of disability and types of support that could potentially maximise the abilities of persons with diverse disabilities.

3. Income generation and livelihood

- Pitching the likelihood of increased income and food security through the group enterprise turned out to be a strong convincing factor for parents to allow their children to participate.
- Being in the program meant that youth with disabilities also automatically started participating in VSLAs (Village Savings and Loan Associations). This not only allowed them to access small loans but also came with the encouragement to save money and contribute to the VSLA. For this, they were admired by other members and this boosted their self-esteem.

4. Community and social engagement

- Sessions on disability awareness that took place in each group changed exclusion of youth with disability. These open reflections on behaviour and biases led to mutual respect between the youth with disabilities and other group members and also built friendships.
- As the learning fields were located at a relatively central location, community members got to see youth with disabilities work, showcasing their ability, skills and determination.

3. Collaborative Design of Low-Cost, Accessible Farming Technology, Cambodia

Inclusive Agriculture Project, Massey University, Engineers Without Borders, Light of the World, Agile (2017)

The Inclusive Agriculture Project aimed to work with a community of people with disability in rural Cambodia to improve their ability to access agricultural livelihoods, through co-design of new technology and developing their innovation and problem-solving skills. Participants were aged between 17 and 80 years old and had a range of impairments, such as hearing, vision, mobility and cognition.

The project used a five-stage design process, known as the Adapted Making Framework, to structure planning, workshop activities and evaluation. The stages were 1. Creative Capacity Building, 2. Pre-Design, 3. Generative Design, 4. Evaluative Design and 5. Post Design.

1. Creative Capacity Building

The first stage involved conducting four training sessions with participants with diverse disabilities. These sessions aimed to introduce important concepts for innovation and problem solving and align these concepts with existing local practices.

2. Pre-design

This stage involves the use of activities which probe for information and insights about the user, their environment, and potential problems to address. The goal of this stage is to collaboratively formulate the opportunities which the project will focus on, to ensure buy-in from the involved community and to gain insights to help inform the rest of the project. From these insights the groups decided to design a solution to assist the elderly people and those with impaired mobility in direct seeding rice seed onto a field.

3. Generative Design

This stage is focused on generating concepts that address the opportunities identified in the pre-design stage. This can be done through investigating existing solutions, both locally and internationally, understanding participant aspirations and working with participants to generate ideas and prototypes. These prototypes can be used to experiment and combine ideas to form new, more detailed concepts. A concept was developed for a low-cost drum seeder to allow mobility and vision impaired individuals to sow rice seed more effectively.

4. Evaluative Design

This stage is focused on testing ideas, getting feedback about prototypes and selecting the concepts that seem to best meet the needs of the community. This can be done through co-constructive prototyping, testing and evaluation.

5. Post-Design

This stage is focused on implementation of developed solutions, support and fine-tuning after implementation and monitoring of long-term adoption and effectiveness. In this project, the low-cost drum seeder was developed and transferred to a motivated participant for further development, with only minor refinements required.

6. Evaluation

An evaluation was conducted focusing on both the technology created and the empowerment of the participants. The prototype achieved most of its requirements for effectiveness, including being affordable and using Universal Design.

Community members reported that they liked the design and continue to refine it outside of the workshop. They intend to share the design and how to use it with more communities.

4. Using Digital Platforms for Disability-Inclusive Agribusiness, Uganda

***Inclusive Digital Agriculture:** Making Value Chains work for Farmers with Disabilities, GSMA (2021)*

Oasis Agribusiness Limited (“Oasis”) serves over 2,300 farmers with disabilities in Alebtong, Northern Uganda, nearly a quarter of their customer base and a significant contributor to the business through input purchases. Oasis serves farmers with visual, hearing and physical impairments, selling them high-quality rice seeds at subsidised prices and buying their crops during the harvest season.

Community-based village agents provide inputs and extension services and coordinate purchase clerks or mobile money agents to pay the farmers. Oasis also provides training to community leaders using a “train-the-trainer” approach, and works with Light of the World, a disability and international development NGO, on research and training for agribusinesses.

Identifying the barriers facing farmers with disabilities

Oasis identified many barriers experienced by farmers with disabilities, including lack of access to markets and competitive value chains. They found that farmers with disabilities typically pay 30% more for agricultural inputs (e.g., rice seeds, fertilisers) than farmers without disabilities. For instance, farmers with hearing impairment are disadvantaged when negotiating prices for inputs and selling crops due to communication barriers and fraud. Even when farmers can access inputs, they often lack the information and timely extension services to use them appropriately. This causes some farmers with disabilities to frequently rely on family members for support with many agricultural activities.

Service and communication channels and platforms

Oasis has identified multiple channels to provide services and communicate with farmers. For instance, farmers can request assistance from a third-party provider by calling a dedicated call centre or using unstructured supplementary service data (USSD) on their phones. The system uses GPS to identify suitable service providers nearby and service selection is automated based on distance and current engagement. Farmers are connected through a cloud database in the most accessible way, depending on their preference. This is provided free of charge to the farmer.

Other Oasis services have been tailored to be more accessible. For instance, farmers with visual impairment who cannot see the scales are at risk of being defrauded by clerks. To address this risk, Oasis has installed digital, audible weighing scales that not only benefit farmers with visual impairment, but also those with low literacy levels. Oasis has also developed a fingerprint registration app that will allow farmers with disabilities, particularly those with visual impairments, to authorise payments using fingerprint readers brought to them by village agents. This means that farmers are no longer required to find an agent on their own, reducing mobility and transportation challenges.

Using digital platforms, such as an SMS platform and mobile money app, Oasis communicates real-time information to farmers, such as crop planting advice and market information. Oasis is planning to expand these communication channels by launching an IVR-enabled SMS platform suitable for persons with visual impairment or low literacy levels. They recently trialled a toll-free call centre to serve farmers in their language of preference, including a local language or sign language service.

Benefits of disability inclusion for Oasis

Disability inclusion has allowed Oasis to scale by adding over 2,300 farmers with disabilities, increasing its sourcing base from 8,000 to over 10,300. It has also created employment opportunities for persons with disabilities across the organisation. Meanwhile, farmers with disabilities receive the support they need to produce higher quality and higher volume outputs, which raises incomes and improves livelihoods.

FURTHER RESOURCES AND GUIDANCE

ⁱ For more information on GESI and Livelihoods see the [WVUS GESI-Responsive Food Security and Livelihoods \(FSL\) Programming Reference Guide](#).

ⁱⁱ Conducting a gender-sensitive, disability-inclusive mobility mapping can be done using a tool, like [Feed the Future Mobility Map](#) to understand movement patterns (e.g. Where people with diverse disabilities go and for what reason? What is important?) in conjunction with an accessibility assessment tool, such as [Humanity & Inclusion Accessibility Audit](#) or [UN Women Gender Accessibility Audit](#).

ⁱⁱⁱ CBM [Accessible Meetings and Events: A Toolkit](#).

^{iv} DFAT [Accessibility Design Guide: Universal Design Principles](#), Annex I: Rural Development, Section 2.1: Rural Environments.

^v See CBM [Accessible Meetings and Events: A Toolkit](#) and CBM [Digital Accessibility Toolkit](#), Section 3: Tools and guidance for creating accessible content.

^{vi} GSMA [Inclusive Digital Agriculture: Making value chains work for farmers with disabilities](#).

^{vii} For examples of adapted agricultural tools and technology see the [Agrability Toolbox: Assistive Technology database](#).

For more general information on disability-inclusive programming, see the World Vision Programming Guidance for the Inclusion of Children and Adults with Disabilities (2021).



Photo: Atith*, a vision impaired man, lives with his younger sister, Chan*, who has a chronic health condition. Through World Vision's Australian Government funded MASE2 Project in Cambodia, they work together using modern farming techniques, adapting to their different skill sets.



Farmers with disability lead regreening efforts to adapt to drought in Kenya.

For more information, contact:

Cashelle Dunn, Disability Advisor,
World Vision Australia: cashelle.dunn@worldvision.com.au

Rob Kelly, Senior Technical Advisor – Food Security and Resilience,
World Vision Australia: rob.kelly@worldvision.com.au

Sarah McKenzie, Senior Climate Action Advisor,
World Vision Australia: sarah.mckenzie@worldvision.com.au

Harry James, Climate Action and Resilience Technical Advisor,
World Vision Australia: harry.james@worldvision.com.au



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