

Accessible is Green: Disability-Inclusion as an Indicator for Sustainable Development

Abstract

A limited number of studies have examined the issue of disability as a cross-cutting development concern, vis-à-vis a health or human-rights issue. Moreover, no studies were found that had systematically explored its relevance to sustainable development, indicating a great need for evidence-based research to promote informed policy-making and accountable monitoring and evaluation.

The principal objective of this paper is to examine the key questions including: (a) how some of the key development issues, which are currently being scrutinized in the consultative processes of the Rio+20, are intricately interwoven with disability issue. These key sectoral or cross-sectoral development issues include, among others: agricultural development and food security; energy security; habitat and infrastructure; information and communications technologies (ICTs); employment; social protection; public health; humanitarian crises; and climate change; and (b) why enhanced accessibility for persons with disabilities will help countries to achieve sustainable development in each of the afore-mentioned area.

The present paper will serve as a comprehensive ‘reference work’ on the topic of accessibility and sustainable development, as it aims to explain what increased accessibility for persons with disabilities means for society at large with a view to achieving sustainable development for all from a human-centered perspective.

Key Words: sustainable development, accessibility, disability

1. Introduction

In the lead up to the United Nations Conference on Sustainable Development (UNCSD) in June 2012, often referred to as the ‘Rio+20 Conference’, the global community is currently engaging in active policy dialogues and consensus-building processes to identify the priority development issues and areas to formulate and promote the sustainable development goals (SDGs). There exists general consensus within the international community that the emerging SDGs will become central components of the emerging post-2015 United Nations development framework following the Millennium

Development Goals (MDGs). Against this background, it would be opportune to demonstrate the inter-links between disability and other major development issues to showcase how disability-inclusive development through enhanced accessibility for persons with disabilities can facilitate the effective implementation of the sustainable development agenda around the globe.

From a capability approach, persons with disabilities often suffer disadvantages in achieving the equality of capabilities, as they often experience multiple barriers in accessing different areas of life and society. Walker and Unterhalter (2007) suggests that “some of the functionings unavailable to persons with disabilities are unavailable not because they suffer from physical impairments, but because social institutions are set up so as to enhance the functioning of the ordinarily abled but not the persons with disabilities.” Highlighting the importance of personal characteristics and the greater needs facing persons with disabilities in access to public goods and services, the *Human Development Report* (2011) of the United Nations Development Programme (UNDP) points out that the “inequalities in outcomes are largely the product of unequal access to capabilities” and “the persons with disabilities need greater access to public goods and services to achieve equality of capabilities.”

The central theme of this paper is the need and the rationale of fully integrating disability and accessibility concerns into global development agenda and national development strategies, which will entail greater environmental gains as well as positive impacts across all Millennium Development Goals (MDGs).

II. Positive Synergies between Accessibility and Sustainable Development

The Economic and Social Council of the United Nations, through its resolution 2010/13, emphasized the need to promote accessibility and mainstream its related means in all aspects of development efforts. It is critical, however, to approach accessibility not only as an ‘add-on’ measure, but also as a ‘framing issue’, which catalyzes and drives the implementation of sustainable development agenda.

A number of core development issues, including those of cross-cutting nature, are closely interlinked with disability issue. Therefore, ensuring enhanced accessibility for persons with disabilities brings both intrinsic and instrumental benefits in advancing economic, ecological and social sustainabilities and achieving greater integrity among three dimensions of sustainable development. These positive interactions between accessibility and sustainable development will be explored in the following nine areas.

Agricultural Development and Food Security

In 2000, the Food and Agriculture Organization (FAO) reported the successful outcome of its pilot projects in Thailand¹ and Cambodia², which have shown that with due support, farmers and rural workers with disabilities proved themselves to be self-

sufficient and capable of earning household incomes and food for their families and communities. With a view to enhancing agricultural productivity for farmers and rural workers with disabilities, inventing accessible agricultural technologies and transferring such technologies through South-South or triangular cooperation are critical. The strategic investment in such accessible and assistive technologies in agricultural sector could create income-generating opportunities for persons with disabilities and facilitate the inclusive, job-rich growth and the sustainable agricultural development.

In addition, persons with disabilities are often vulnerable to suffer from malnutrition. According to the *World Report on Disability* (2011), the “households with a disabled member are more likely to experience material hardship including food insecurity.” The Outcome Document of the General Assembly’s 2010 High-level Plenary Meeting on the Millennium Development Goals, often known as the *2010 MDGs Outcome Document*, highlighted the need to make special efforts to meet the nutritional needs of persons with disabilities (United Nations, 2010, paragraph 70 v). Ensuring equal access to nutrient and food by persons with disabilities can enhance their capabilities and result in multiplier positive effects on ongoing efforts to promote inclusive and sustainable development.

Energy Security

Persons with disabilities tend to face more exclusion in accessing energy. The equal and sustained access to affordable energy by persons with disabilities could catalyze the economic activities of persons with disabilities and thus boost the job market and inclusive economic growth. Hence, it is economically and socially sustainable to eliminate barriers in accessing energy by persons with disabilities.

Moving towards the inclusive energy system requires concrete measures to diversify the energy sources and to use the renewable energy sources and the energy-efficient technologies. For instance, the effective rural electrification programs in Viet Nam, which utilized the renewable energy sources, had contributed to increase the energy access by marginalized groups including persons with disabilities (Asian Development Bank, 2011, p.12). This suggests the scope for positive co-relations among energy accessibility, economic growth, environmental sustainability and social cohesion.

Habitat and Infrastructure

Persons with disabilities often find themselves limited in their choices of living environment. According to the *State of the World’s Cities 2010/2011* by the United Nations Human Settlements Programme (UN-HABITAT) (2011), persons with disabilities, along with elderly and slum dwellers, are seen as the “three groups of people which appear to be the most systematically excluded in various cities in Asia, Africa, Latin America and the Caribbean.”

Ensuring equal access to national and local infrastructure system and promoting enabling living environments for persons with disabilities has economic, environmental and social implications, which can impact sustainable development. Pradhan and Jones (2008) shares the experience of WaterAid Nepal and its partners that “when the traditional water and sanitation project approaches had inadvertently excluded disabled people, it made it impossible to achieve the desirable community water and sanitation outcomes, such as an open defecation-free (ODF) environment.” It proved to be not feasible to ensure sustainable environment without fully integrating the accessibility needs of persons with disabilities into basic infrastructures including water and sanitation services delivery system.

In line with respective national sustainable development strategies, it is vital to promote an ‘integrated’ approach to building or re-building country’s infrastructure system based on the principle of ‘universal design’, which reasonably accommodates and benefits the broadest range of potential users including persons with disabilities, elderly, patients and pregnant women.

The universal design can promote sustainable consumption and production patterns. Duncan (2007) argues that many consumers benefit from universal design through more comfortable and safer products and environments, as well as the ability to confidently remain in place at times of temporary disability and as abilities change over time, while producers also benefit from an expanded market for fewer products. Also, the universal design is ‘economically sustainable’. According to the World Bank (2008), it is more ‘cost-effective’ to modify the plans for a new accessible building, rather than to adapt an existing building to make it accessible; on average, accessible facilities can be constructed from the outset only at the additional cost of 1.12 per cent. Furthermore, the universal design tends to be more ‘environmentally viable’ as it can decrease the future demands to re-construct buildings or facilities and therefore eliminates the possibility of wasting natural, human and financial resources.

Accessibility concerns of persons with disabilities needs to be taken into account to promote more inclusive and equitable green growth and green innovations. Given its potential to contribute to the achievement of sustainable development agenda, it is crucial to encourage the broad adoption of universal design through further empirical and theoretical research and evidence-based policy-making.

Information and Communications Technologies (ICTs)

The *World Report on Disability* (2011) suggests that with rapid development of new technologies, there is “a danger that accessibility for persons with disabilities will be overlooked and that expensive assistive technologies will be opted for, rather than universal design.”

Persons with disabilities can have better access to ICTs which incorporated the universal design. Accessible ICTs can improve social sustainability as they help to bridge

the social divides and empower the persons with disabilities to participate in and contribute to every aspect of society and development. The key potential role which ICTs can play in expanding the capabilities of persons with disabilities and promoting the social integration deserves far more attention from the policy-makers and requires further evidence from the academic community.

The Ericsson Press Release (2011) highlights the positive effects of technologies on economic growth. The Assistive Technology Industry Association (ATIA) (2010) also notes that “57 per cent of working age (18-64) computer users are likely to benefit from the use of accessible technologies as a result of some degree of physical impairment.” More empirical studies are required to prove the potential contributions of ICTs in catalyzing the income-generating activities of vulnerable populations including persons with disabilities and its instrumental role to facilitate the sustainable economic growth.

Additionally, ICTs can be mobilized as an effective means to protect our ecosystem and mitigate and adapt to climate change. A study shows the evidence that ICTs-enabled solutions can help to reduce enormous amount of emissions per year (Climate Group, 2008, p.6). It can be argued that the measures to integrate the accessibility concerns into ICTs can further enhance the positive environmental gains; more research is needed to take this inquiry forward.

Promoting affordable and accessible technologies for marginalized populations including persons with disabilities, based on the principle of universal design, and transferring them to developing countries through decentralized development cooperation are paramount to make socially, economically and environmentally sustainable development real for everyone in both developed and developing countries.

Employment

Persons with disabilities often face discrimination in various forms in access to vocational training, labour market and decent work. The *2010 MDG Outcome Document* highlighted the need to ensure equitable access to employment and economic opportunities for vulnerable populations including persons with disabilities (United Nations, 2010, paragraph 28 and 70 d).

The *World Report on Disability* (2011) underlines that the persons with disabilities at working age experience significantly lower employment rates and much higher rates of unemployment than persons without disabilities. The International Labour Organization (ILO) study also discusses the evidence that the primary reason for economic losses related to disability in countries including Ethiopia, Malawi, Namibia, Tanzania, Thailand, Zambia and Zimbabwe was their poor access to labour markets.” (Buckup, 2009, p.48).

It is critically important to highlight that excluding persons with disabilities from the world of work is ‘costly’. According to Murray (2010), “excluding disabled people

from the world of work, in terms of their productive potential, the cost of disability benefits and pensions and the implications for their families and careers, may cost countries 1 to 7 per cent of GDP.”

The employment status as well as the income levels can have significant impact on people’s capabilities. When investing in human capital and active labour market policies (ALMPs), the needs and the concerns of persons with disabilities need to be taken into account for inclusive and sustainable growth. It is vital to implement the macro-economic policies, which are proven to increase both employment and employability for persons with disabilities and decrease their unemployment and underemployment in the labour market.

The World Health Organization (WHO) (2011) estimates that over one billion people – about 15 per cent of the world’s population including children – are living with disability. Policies and measures need to be in place to ensure equal access by persons with disabilities to labour market, employability development programs and valuable work experience, while allowing them to expand human capacities and contribute to inclusive economic growth and sustainable development.

More evidence needs to be accumulated to support the argument that disability-inclusive labor market policies catalyze the job-intensive economic growth, social integration and sustainable development and can facilitate the positive interplays and synergies among them.

Social Protection

The *Report on the World Social Situation* (2011) of the United Nations notes that more governments have turned from fiscal stimulus to austerity measures in their economic policies following the global financial and economic crisis. It suggests that there is “a danger that government-led recovery in some countries may stall or even be reversed.”

The definition of social protection by the European Community (2010) underlines the ‘social inclusion’ efforts that enhance the capabilities of marginalized groups to access social insurance and assistance. Greater access by persons with disabilities to social protection floor can improve their capabilities, but also potentially contribute to reduce the poverty of entire population. The findings of a recent study by the ILO (2011), which was conducted in consultation with the International Monetary Fund (IMF), proposes for working-age population to “implement over four years an employment guarantee of 100 days, combined with social assistance for the disabled and training services to facilitate return to employment and creation of micro-enterprises, which would reduce the working-age population poverty rate from 12.1 per cent to 5.3 per cent and the disabled poverty rate from 25.8 per cent to 9.4 per cent, at a cost of 1 per cent of GDP.” The study also highlights the notable experience of Cape Verde, which extended the coverage of its social pension program, which had been established in 2006 for

elderly and persons with disabilities, and significantly reduced the poverty rate from 36.7 per cent of the population in 2001 to 26.6 per cent in 2007.”

According to Alderman and Yemtsov (2012), there is “a strong theoretical case for ‘productive’ role of social protection” and that “much is known about exactly how social protection can contribute to economic growth.” They maintain that productive social protection should not be seen as ‘special’ measures, such as public works, underlining the importance of discarding the popular misconception that social assistance has no ‘growth’ benefits due to inability of its recipients to work or to improve their productivity.

Social protection floor needs to be treated as a strategic instrument, which expands the capabilities of vulnerable groups including persons with disabilities and provides much needed impetus to address the inter-connected challenges posed by the current economic downturn, social unrest and environmental deprivations.

Public Health

According to the *World Report on Disability*, the persons with disabilities have poor health outcomes, possibly experiencing ‘greater vulnerability to preventable secondary conditions and co-morbidities, untreated mental health conditions, poor oral health, higher rates of HIV infection, higher rates of obesity and premature mortality.’ Enhancing access by persons with disabilities to quality health care, including affordable medicines and health commodities, is critical to reduce the poverty and promote the sustainable development.

Limited evidence has been found on the correlations between the accessibility of persons with disabilities to health care system and sustainable development. More research is in great demand to identify which public health policies are proven to be more compatible with the achievement of equitable access by persons with disabilities in the context of enhancing economic and environmental sustainability.

Humanitarian Crises

Hemingway and Priestley (2006) indicates that in the face of natural disasters, persons with disabilities face greater risk of death, injury and displacement, while encountering greater inequities in access to evacuation, food, water, sanitation, shelter and other relief services. The UNHCR Executive Committee Conclusion on Disability by International Disability and Development Consortium (IDDC) argues that in refugee settlements following humanitarian crisis or conflict, while priority is often given to marginalized groups, persons with disabilities often remain ‘invisible’ and consequently excluded from relief efforts. It is critical to ensure that disaster planning, response and long-term reconstruction processes take into account the accessibility needs of persons with disabilities. In addition, the universal design needs to be duly incorporated in re-

building country's physical infrastructure to promote socially, economically and environmentally sustainable development.

Climate Change

Persons with disabilities are amongst the most vulnerable to the devastating impacts of climate change by reason of pre-existing barriers and social exclusion they often experience. The Global Partnership for Disability & Development (GPDD) and the World Bank (2009) notes that there is general consensus within disability community that special adaptation policies need to be created and implemented in order to minimize the disastrous effects of climate change on persons with disabilities. Moreover, the situations of persons with disabilities need to be fully incorporated in both vulnerability and impact assessments to carefully assemble the evidence for the consequences of inaccessibility in every aspect of adaptation efforts in economic, environmental and social terms.

III. Conclusion and Future Research Agenda

As previously discussed in the Introduction, the intention of this paper was to investigate how disability-inclusion through enhanced accessibility policies and measures can promote sustainable development from a perspective of capability approach.

The positive co-relations and interface between sustainable development and enhanced accessibility were examined, from an integrated view of economic, social and environmental domains, in nine key areas of sustainable development including: agricultural development and food security; energy security; habitat and infrastructure; information and communications technologies (ICTs); employment; social protection; public health; humanitarian crises; and climate change.

While systematic disability-inclusion through increased accessibility was noted to be a critical factor in expanding the choices of persons with disabilities and in advancing the sustainable development agenda, there remain a number of questions that require further research. More empirical studies need to be undertaken, including through eclectic and interdisciplinary approaches, on the interconnections between sustainable development and accessibility, including in all nine afore-mentioned areas, to strengthen the arguments raised in this paper and to provide due courses for disability-inclusive policy-making.

The United Nations through its *Brundtland Report* (1987) defines *sustainable development* as the 'development that meets the needs of the present without compromising the ability of future generations to meet their own needs'. The notion of *accessibility* is found in Article 9 of the *UN Convention on the Rights of Persons with Disabilities (CRPD)* as a fairly comprehensive concept, representing accessible and

enabling living environments that accommodate the widest range of users' needs, preferences and abilities, which goes far beyond the 'wheelchair ramps'.

The key concept in both sustainable development and accessibility is “equity” – albeit the former places greater emphasis on inter-generational aspect, while the latter on intra-generational dimension. The *Human Development Report* (2011) notes that greater equity is positively associated with better environmental outcomes. One of the greatest challenges in advancing sustainable development agenda would be to mainstream accessibility concerns in global development agenda and to build sufficient evidence on how this integration expands the capabilities of all people, including persons with disabilities, and turns out to be economically viable, environmentally manageable and socially equitable.

Building an inclusive and equitable society is a key precondition to achieve sustainable development. Time has arrived to re-shape our market, our resources management, our relationships, our motives and re-define our well-being and our development. It is time to take urgent and decisive steps to go accessible and go green – towards ‘the future we want’.

Notes

¹ A mushroom training project in Ubon Ratchathani for farmers with disabilities.

² A community Integrated Pest Management Programme which had engaged in farmers with disabilities.

References

- Alderman, H. and Yemtsov, R. (2012) ‘Productive Role of Safety Nets: Background Paper for the World Bank 2012–2022 Social Protection and Labor Strategy’, *Social Protection & Labor Discussion Paper No.1203*, World Bank, Washington, DC. p. 27, 29.
- Asian Development Bank (ADB) (2011) *Energy for all: Viet Nam’s success in increasing access to energy through rural electrification*, Asian Development Bank, Mandaluyong City. p.12.
- Assistive Technology Industry Association (ATIA) (2010) ‘Overcoming Obstacles to Accessible Technology Development: Interpretations of the 2010 ATIA/AIA Developer’s Survey on Accessibility.’ *Summary Interpretations of the 2010 ATIA/AIA Developer’s Survey on Accessibility*, Assistive Technology Industry Association (ATIA), Chicago.
- Brundtland, G. (ed) (1987) ‘Our Common Future: The World Commission on Environment and Development’, Oxford University Press, Oxford.
- Buckup, S. (2009) ‘The price of exclusion: the economic consequences of excluding people with disabilities from the world of work’, *ILO Employment Working Paper*

- No. 43, International Labour Organization, Geneva. p. 48.
- Duncan, R. (2007). 'Universal Design', presented at the first conference of the *National Disability Authority's Centre for Excellence in Universal Design (CEUD): Universal Design for the 21st Century: Irish and International Perspectives*, Dublin, October.
- Ericsson Press Release (2011) 'New study quantifies the impact of broadband speed on GDP', [<http://www.ericsson.com/news/1550083>], accessed 11 May 2012.
- European Community (2010) *The 2010 European Report on Development: Social Protection for Inclusive Development - A New Perspective in EU Cooperation with Africa*, European University Institute, San Domenico di Fiesole. p.1.
- Hemingway, L. and Priestley, M. (2006) 'Natural Hazards, Human Vulnerability and Disabling Societies: A Disaster for Disabled People?', *The Review of Disability Studies: An International Journal*, 2 (3).
- International Disability and Development Consortium (IDDC) 'UNHCR Executive Committee Conclusion on Disability' [http://www.iddcconsortium.net/joomla/images/IDDC/emergency/lobby_paper_hcr_jun09.pdf], accessed 11 May, 2012.
- International Labour Organization (ILO) (2011) *Social Protection Floor for a Fair and Inclusive Globalization: Report of the Advisory Group*, International Labour Office (ILO), Geneva. p. 45.
- New FAO Newsroom (2000) 'Putting ability before disability in Thailand and Cambodia', [<http://www.fao.org/english/newsroom/highlights/2000/001106-e.htm>], accessed 11 May, 2012.
- Pradhan, A. and Jones, O. (2008) 'Creating user-friendly water and sanitation services for the disable: the experience of WaterAid Nepal and its partners', Discussion Paper, WaterAid, Kathmandu. p.15.
- The Climate Group on behalf of the Global eSustainability Initiative (GeSI) (2008) 'Smart 2020: Enabling the low carbon economy in the information age.' Creative Commons. p.6.
- The Global Partnership for Disability & Development (GPDD) and the World Bank (2009) *The Impact of Climate Change on People with Disabilities: Report of the e-discussion hosted by the Global Partnership for Disability & Development (GPDD) and the World Bank (Human Development Network - Social Protection/Disability & Development Team)*, GPDD and World Bank, Washington D.C.
- United Nations (2011) *The Global Social Crisis: Report on the World Social Situation 2011*, United Nations publication, New York.
- United Nations (2010) 'Keeping the promise: united to achieve the Millennium Development Goals', Resolution referred to the *High-level Plenary Meeting of the United Nations General Assembly at its sixty-fourth session (A/65/L.1)*, New York, NY, 20-22 September. paragraph 70(v).
- United Nations Development Programme (UNDP) (2011) *Human Development Policy Report 2011*, Palgrave Macmillan, New York. p. 8, 19.
- United Nations Human Settlements Programme (UN-HABITAT) (2011) *State of the World's Cities 2010/2011 - Bridging The Urban Divide*, Earthscan, Sterling. p.130.
- Walker, M. and Unterhalter, E. (2007) *Amartya Sen's Capability Approach and Social Justice in Education*, Palgrave Macmillan, New York. p.75.
- World Bank (2008) *Building Resilient Communities: Risk Management and Response to*

Natural Disasters through Social Funds and Community-Driven Development Operations, World Bank, Washington, D.C. p.193.
World Health Organization (WHO) (2011) World Report on Disability, WHO Press, Geneva. p.10, 29, 169-170, 250, 263.
