The NCD Alliance
Putting non-communicable diseases on the global agenda

NCD ALLIANCE BRIEFING PAPER

Tackling Non-communicable Diseases to Enhance Sustainable Development

The global epidemic of non-communicable diseases (NCDs*) is now widely acknowledged as a major development challenge in the 21st century and a significant threat to achieving internationally agreed development goals.[1] NCDs are the leading causes of death worldwide. Almost two-thirds of all global deaths are due to NCDs. Increasingly, it is low- and middle-income countries (LMICs) and the poorest and most vulnerable populations that are hardest hit by these largely preventable diseases. In addition to being the leading causes of death, NCDs often impose years of disability on those affected and their families. The onset of many NCDs can be prevented or delayed by addressing their common risk factors: tobacco use, harmful use of alcohol, unhealthy diet, and insufficient levels of physical activity.[2]

As the sustainable development agenda garners renewed attention and increased political momentum, the global dialogue on sustainable development must address health and NCDs as a major component of preventable ill health and death. This policy brief explains how NCDs are linked to the three pillars of sustainable development: economic growth, social equity, and environmental protection. The brief describes how the NCD epidemic constrains economic development, and it discusses the social and environmental factors that are common to the NCD epidemic and to sustainable development issues of food security and agriculture, urbanization, and clean energy.

* The four major NCDs, as defined by WHO, are cancer, cardiovascular disease, chronic respiratory diseases and diabetes. Other NCDs include mental and neurological disorders such as dementia and Alzheimer's disease; autoimmune disorders such as psoriasis; bone and joint conditions such as osteoporosis and arthritis; and renal, oral, eye and ear diseases.

NCDs and the three pillars of sustainable development

Sustainable development is defined as development that *"meets the needs of the present without compromising the ability of future generations to meet their own needs."*[3] Improving the health of populations, including preventing and controlling NCDs, is integral to ensuring progress across the three pillars of economic growth, social equity, and environmental protection—with the ultimate goal of achieving sustainable development.

Numerous UN declarations, resolutions, and international agreements demonstrate that governments recognize the interconnections between health, NCDs, and sustainable development. The 2002 Johannesburg Declaration on Sustainable Development indicates early recognition of this relationship, and more recently, the 2012 UN Political Declaration on the Prevention and Control of NCDs acknowledges that the global burden of NCDs "*undermines social and economic development throughout the world.*"[4,5] Despite political recognition, however, the global response to the NCD epidemic has been slow, and the epidemic continues to grow, hindering progress on sustainable development.

The UN Conference on Sustainable Development, or Rio+20, presents a crucial opportunity to fully integrate health and NCDs into the sustainable development agenda in order to protect and promote the health and wellbeing of current and future generations. The imperative to recognize NCDs in the Rio+20 outcomes is reinforced by the likelihood that Rio+20 will result in agreement to launch a process to develop a set of Sustainable Development Goals (SDGs). These goals will have a significant impact on the post-2015 development agenda, which must ultimately include a strong focus on health and NCDs, if progress is to be made to reverse the epidemic.

NCDs and development in international documents

- In the **2002 Johannesburg Declaration on Sustainable Development**, Member States affirmed their "*pledge to … fight against the worldwide conditions that pose severe threats to the sustainable development of our people, which include … communicable and chronic diseases*".[6]
- The concurrent **Johannesburg Plan of Implementation** committed Member States to "*address non-communicable diseases and conditions, such as cardiovascular diseases, cancer, diabetes, chronic respiratory diseases, injuries, violence and mental health disorders and associated risk factors, including alcohol, tobacco, unhealthy diets, and lack of physical activity.*"[7]
- The **2009 Economic and Social Council (ECOSOC) Ministerial Declaration** recognized NCDs as "*imposing a heavy burden on society … with serious social and economic consequences.*"[8]
- The outcome document of the **2010 High-level Meeting of the General Assembly on the Millennium Development Goals** called for accelerated progress to address "*evolving health challenges such as the increased incidence of non-communicable diseases.*"[9]
- The **Political Declaration on the Prevention and Control of Non-Communicable Diseases**—passed with unanimous approval at the UN High-level Meeting on NCDs in September 2011—outlines how this "*challenge of epidemic proportions*" affects development, and commits to UN system-wide action to combat NCDs and control their modifiable risk factors particularly in low- and middle-income countries.[10]

The Economic Pillar: Addressing NCDs is critical for economic growth and poverty alleviation

NCDs hamper economic growth at the global and national level by adversely affecting labor supply and productivity, and diverting resources from productive purposes to treat preventable diseases. They also create and prolong impoverishment in vulnerable households and among individuals.

- **Foregone national income:** Economic costs imposed by NCDs are expected to soar over the next two decades. NCDs are estimated to cause cumulative global economic losses of $47 trillion USD by 2030—equivalent to approximately 75% of the 2010 global GDP. The economic toll for low- and middle-income countries alone is projected to reach $21 trillion USD by 2030.[11] This constitutes a huge strain on the development process.
- **Lost productivity:** NCDs strike people in LMICs during their prime working years—much younger than in high-income countries. Close to half of all NCD deaths in LMICs occur below the age of 70, and nearly 30 percent occur under age 60.[12] Most NCD deaths are preceded by long periods of ill health. Prolonged illness and early death of the main income earner result in loss of productivity, which leads to slowed economic growth and development.[13] There is also an indirect productivity impact when people limit their economic engagement to care for family members with NCDs.
- **Household poverty:** Out-of-pocket payments for NCD treatment and care can trap poor households in cycles of catastrophic expenditure, impoverishment, and illness, particularly in LMICs that lack universal health coverage.[14] Estimates from India in 2004 show that up to 2 million people experienced catastrophic spending, and more than half a million were impoverished due to costs related to cardiovascular disease.[15]

The impact of the NCD epidemic on economic growth indicates that health is an important factor in economic development and affirms a more holistic approach to development. National, regional, and global wellbeing increasingly depends on a development process that values healthy social and environmental systems along with economic growth in the drive to achieve sustainable development.

The Social Pillar: Equity is the common denominator for reducing NCDs and accelerating sustainable development

The social dimensions of sustainable development have received less attention than the economic and environmental, but they are critical for health, poverty eradication, and sustainable development. Equity is at the heart of a socially, economically, and environmentally stable and sustainable future. Inequalities are a major driver of the NCD epidemic, and social factors—the conditions in which people are born, grow, live, work, and age—are at the root of much inequality.

Social determinants, such as education and income, influence vulnerability to NCDs and exposure to their modifiable risk factors. People of lower education and economic status are increasingly exposed to NCD risks and are disproportionately affected by NCDs.[16] For example, in countries such as Bangladesh, India, Philippines, and Thailand, tobacco use is highest among the least educated and poorest segments of the populations.[17] At the same time, NCDs may also contribute to social inequalities. The costs associated with NCDs

increase the risk of children missing school and becoming at risk of poverty for the rest of their lives.[18]

Addressing the social determinants of NCDs and health more broadly will augment progress towards poverty eradication and foster a more equitable society that supports sustainable development. If LMICs are to continue their upward trajectory towards better health and improved economic conditions, they must address the social conditions that expose their populations to NCDs and remove the barriers preventing access to health services.[19] This requires multisectoral action beyond the health sector alone, including social protection measures such as universal health coverage. Bangladesh is an example of a country that has made progress in this regard. The government is aiming to protect against catastrophic expenditure among the poor by including NCDs in their Strategic Investment Plan and publicly financing insurance and health vouchers.[20]

The Environmental Pillar: Unsustainable environmental systems increase NCD risks

The natural environment has a significant impact on human health. Approximately one-quarter of all global death and disability is due to environmental factors.[21] NCD risks often stem from unsustainable environmental systems and practices, such as those related to agriculture and urbanization. Industrialized agriculture and food systems can be a contributing factor in unhealthy diets that are low in fruits, vegetables, pulses, nuts, and whole grains. An increasingly commercialized food system has led to greater availability of processed foods that are high in fats, sugar, and salt—often at the expense of localized food production.[22] People in LMICs are increasingly exposed to these NCD risks as their environments around them change faster than their resources and capacities can protect them. For example, more people in middle-income countries are dying from causes related to overweight or obesity than from underweight.[23]

The agricultural system produces up to a third of greenhouse gas emissions worldwide, which includes emissions from food production and land conversion.[24] Food from animal sources is a significant contributor to emissions.[25] As global demand for meat and dairy products rises, populations are at increased risk of developing cardiovascular disease, and they face a host of environmental impacts: land degradation, water pollution, greenhouse gas emissions, and loss of biodiversity.[26,27] Modern, intensive agriculture has focused on a limited number of crops, leading to decreased crop diversity with adverse effects on food security, nutrition, and dietary diversity.[28] The rise in palm oil consumption—a risk factor for cardiovascular disease—has been responsible for destruction of rain forests and for soil and water pollution, especially in key palm oil-producing countries, such as Malaysia and Indonesia.[29] Tobacco farming, which contributes to deforestation and soil degradation, has also been responsible for displacing food crops, such as vegetables and pulses in Bangladesh and cassava, millet, and sweet potatoes in Kenya.[30]

In addition to changing agricultural trends, unplanned and uncontrolled urbanization also contributes to environmental risks. Poor air quality from greenhouse gas emissions increases the risk of developing NCDs such as cancer, cardiovascular disease, and chronic respiratory diseases.[31] Cities account for more than 70 percent of global carbon dioxide emissions, and almost one-quarter of carbon dioxide emissions from global energy use are due to transport.[32,33] Urban development and transport systems that are not built at a communal scale and pace can also be a factor in lower levels of physical activity, which increase the risk for developing cardiovascular disease, diabetes, and some cancers.[34] Another environmental health risk is indoor air pollution. Household pollution and indoor smoke from inefficient biomass and coal stoves can lead to respiratory and cardiovascular diseases, especially among women and children who spend more time at home. Indoor air pollution from solid fuel use is responsible for almost 2 million deaths per year.[35]

Integrated interventions for NCDs and Rio+20 priority issues

Efforts to address NCDs and their risk factors are closely aligned with the sustainable development agenda and three of the seven Rio+20 priority areas in particular: food security and sustainable agriculture, sustainable cities, and energy. Integrated interventions to address these priority areas could at once protect health and the environment, and ultimately contribute to sustainable development.

Nutritious Food for All

- Enabling sustainable agriculture can play a role in providing people healthy diets that can help prevent NCDs. A diverse diet with access to healthy food, including fruits and vegetables, and one that is limited in processed foods is important for preventing NCDs.[36,37] A *"sustainable food system"* is *"one that provides healthy food to meet current food needs while maintaining healthy ecosystems that can also provide food for generations to come with minimal negative impact to the environment."*[38]
- Ensuring food security—when all people have access at all times to sufficient, nutritionally adequate and safe food—is a precondition for preventing NCDs. Both under- and over-nutrition are important drivers of the NCD epidemic in LMICs. Policies and programmes to improve maternal and infant health and nutrition can reduce a child's susceptibility for developing NCDs later in life, particularly diabetes and cardiovascular disease.[39] Policies to encourage shifts in agricultural production from commodities such as meat, dairy, palm oil, and tobacco to more fruits and vegetables would reduce greenhouse gas emissions and protect the environment, while also contributing to NCD prevention efforts.[40,41]

Safe and Sustainable Cities for All

- Improved urban planning and transport policies can support a shift from private motorized transport to walking, cycling, and public transport—helping to prevent heart disease, diabetes, some cancers, depression, and dementia through increased physical activity.[42,43] Research from Sao Paulo, one of Brazil's two megacities, has shown a decline in death rates from cardiovascular disease between 1980 and 2005, which may be partly attributable to prevention efforts, including the city's Promotion of an Active Lifestyle project.[44]
- The shift away from motorized transport can also help prevent respiratory and cardiovascular diseases through reductions in air pollution.[45,46] Given that more than half of the world's population lives in urban areas, and by 2030 two-thirds of the world's population are projected to be urban dwellers, the issue of urban planning will become increasingly important.[47]

Sustainable Energy for All

- Cleaner cookstoves can help prevent illness and death from respiratory and cardiovascular diseases among women and children exposed to household air pollution and indoor smoke from stove emissions.[48,49] Cleaner cookstove programs have been implemented in countries such as China, India, and Guatemala. Research from Guatemala has shown that cleaner cookstoves had a 90 percent reduction in carbon monoxide levels in the kitchen, while those field-tested in India showed a 50 to 60 percent reduction in indoor air pollution.[50]

Conclusion

A healthy global population is essential to supporting progress across the three pillars of sustainable development economic growth, social equity, and environmental protection. The linkages highlighted above demonstrate that securing and promoting good health for all hinges upon the integration of NCD prevention and control into sustainable development policies and programs. By doing so, governments will mitigate the negative impacts of unsustainable development practices and reverse the trajectory of the NCD epidemic, and affirm the first principle of the 1992 Rio Declaration, which promotes *"a healthy and productive life in harmony with nature."*[51]

Recommendations

- **Integrate health and NCDs into existing and future sustainable development policies and frameworks, including the Rio+20 Conference and follow-up.**
- **Improve the social protection mechanisms, particularly access to universal health care, that will enable people to adequately prevent and control NCDs.**
- **Reduce exposure to the modifiable NCD risk factors through agricultural policies that ensure food security and prevent land degradation, urban planning and transport policies that promote healthy and active cities, and policies that reduce pollution and support access to clean energy.**

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