World Health Organization

UNDP

WHAT MINISTRIES OF ENVIRONMENT AND ENERGY NEED TO KNOW

Noncommunicable diseases

KEY POINTS

- Ensuring sustainable environmental management and tackling noncommunicable diseases (NCDs) are two sides of the same coin.

- Ministries of environment and energy can advance the right to health alongside environment and climate goals, and advocate for NCD action accordingly.

- Regulations, fiscal policies and clean technologies are powerful win-win tools.

- Support exists for countries seeking to improve environment, energy and health policies.

- Local and municipal governments are key.

1. Ensuring sustainable environmental management and tackling NCDs are two sides of the same coin.

- Ensuring sustainable environmental management and tackling climate change are amongst the world's greatest challenges.

- The environment and human health are interconnected. Globally, in 2012, one in four deaths (12.6 million) resulted from an unhealthy environment. Air pollution alone causes 6 million deaths from NCDs each year – with most of these in low- and middle-income countries (LMICs).[1]

- Household air pollution (HAP) – largely from polluting fuels and technologies such as wood, charcoal, dung and coal – contributes to climate change and deforestation and leaves women and children especially vulnerable to NCDs. Globally, HAP accounts for 4.3 million premature deaths each year. Many of these deaths could be averted by increasing access to clean fuels and affordable modern energy.[2]

- Hazardous substances, including chemicals in water, soil and food, natural disasters, environmental degradation, and ultraviolet radiation are major contributors to over 100 types of disease, including asthma, cancer and cardiovascular disease. Much of this burden falls on vulnerable and marginalized groups.[3]

- Reducing people's exposure to NCD risk factors is good for the environment and climate change mitigation.

  - Tobacco use kills more than 7 million people each year, while cigarettes butts are the most discarded waste item worldwide (1.69 billion tons of toxic trash each year), with millions of these polluting the world's oceans and coasts.[4] Tobacco farming is one of the most aggressive causes of deforestation; it accounts for up to 5 percent of global deforestation and drives greenhouse gas (GHG) emissions.

Achieving the NCD-related SDG targets will deliver gains across Agenda 2030, given the relationship between NCDs, poverty, inequalities, economic growth, climate action and other goals and targets. WHO and UNDP, as part of a larger UN system-wide response, support whole-of-government NCD responses. WHO, in line with its thirteenth General Programme of Work, provides technical assistance to the health sector to map the epidemic, set national targets, develop multisectoral policies and plans, and enable health systems to respond. UNDP, in line with its Strategic Plan 2018-2021[5] and HIV, Health and Development Strategy 2016-2021[6], supports NCD action within and beyond the health sector, leveraging its work to keep people out of poverty, strengthen effective and inclusive governance, and build resilient and sustainable systems for health.

What are NCDs and why must government work together?

There are four main NCDs: cardiovascular diseases (which include heart disease and strokes), cancers, diabetes and chronic respiratory disease.

40 million people die from NCDs each year, including 15 million people who die between the ages of 30 and 69. Over 80 percent of these 'premature' deaths from NCDs occur in low- and middle-income countries. Most premature NCD deaths are from four main behavioural risk factors – tobacco use, harmful use of alcohol, physical inactivity and unhealthy diet. Environmental risks (e.g. air pollution) also contribute significantly to NCDs.

Population exposure to risk factors for NCDs is determined largely by policies in environment, energy, urban planning, trade, labour, tax, education and other 'non-health' sectors. This means that early illness, death and disability from NCDs are largely avoidable through better policy coherence across sectors.

Given the social, economic and environmental burdens of NCDs, it is possible to identify strategies and approaches that deliver shared gains for all sectors involved.

1   WHO (2016). http://www.who.int/mediacentre/news/releases/2016/deaths-attributable-to-unhealthy-environments/en/
2   WHO (2014). Burden of disease from Household Air Pollution for 2012. http://www.who.int/phe/health_topics/outdoorair/databases/FINAL_HAP_AAP_BoD_24March2014.pdf
3   Norman, RE, et al. Environmental exposures: an underrecognized contribution to noncommunicable diseases. *Reviews on environmental health* 2013, 28(1), 59-65.
4   UNDP (2017). Tobacco: A Threat to Our Oceans. http://www.undp.org/content/undp/en/home/blog/2017/5/24/-Tobacco-a-threat-to-our-oceans.html
5   UNDP Strategic Plan, 2018-2021. http://undocs.org/DP/2017/38
6   UNDP (2016). HIV, Health and Development Strategy 2016-2021. http://www.undp.org/content/undp/en/home/librarypage/hiv-aids/hiv--health-and-development-strategy-2016-2021.html

- Consumption of alcohol and diets rich in animal fat, beyond contributing to the NCD epidemic, also rely upon agricultural practices that release significant amounts of GHG into the atmosphere.[7] Current livestock practices are responsible for almost 15 percent of human-induced GHG emissions; negative impacts on ecosystems and biodiversity make production and consumption of fruits and vegetables – protective against NCDs – more difficult in turn.[8]

- Encouraging walking, cycling and use of public transport, instrumental for environmental protection and reducing carbon emissions, is also key to health due to the NCDs caused by physical inactivity and vehicle emissions.

2. Ministries of environment and energy can advance the right to health alongside environment and climate goals, and advocate for NCD action accordingly.

The 2030 Agenda for Sustainable Development, Paris Climate Agreement, and Sendai Framework for Disaster Risk Reduction all recognize the inter-dependence of people, planet and prosperity.[9] Examples of action to address environment, energy and health together include:

Tackling fuel and emissions

- Optimizing fossil fuel subsidies (e.g. implementing targeted subsidies for clean fuels such as liquefied petroleum gas (LPG) and removing subsidies for polluting fuels such as kerosene), instituting road-user charging schemes/urban road pricing, and taxing fuel and motor vehicles.

- Promoting low-emission technologies, active, environmentally-conscious transport (e.g. walking, biking, low-emission public transport),

and renewable energy (e.g. greater reliance on hydropower, wind and solar energy).

- Ensuring households have access to affordable clean fuels and energy, with specific attention to the gender and inequity dimensions of household cooking and heating (e.g. by increasing affordable access to clean cookstoves).

A call to action

Through the 2030 Agenda for Sustainable Development, entire governments – not just health ministries – have committed to support national NCD responses.

The environment and energy sector is an essential part of the government's response to NCDs.

"*By depleting the ecological infrastructure of our planet and increasing our pollution footprint, we incur an ever-growing cost in terms of human health and well-being. From air pollution and chemical exposure to the mining of our natural resource base, we have compromised our life support systems.*"[10]

- Achim Steiner, UNDP Administrator

Making workplaces safe

- Banning asbestos in new buildings and promoting its substitution in existing ones;[11] implementing comprehensive legislation on the production, import and use of other cancer-related chemicals.[12]

- Implementing measures to prevent and manage occupational NCDs such as cancer and chronic respiratory diseases in work settings (e.g. construction, mining, shipbreaking, agriculture, workshops).

- Supporting multi-component interventions that increase sun-protective behaviour amongst outdoor workers (e.g. education, providing UV protective clothing and creams).[13]

7   FAO (2014). Agriculture's greenhouse gas emissions on the rise. http://www.fao.org/news/story/en/item/216137/icode/
8   WHO and Secretariat of the Convention on Biological Diversity (2015). Connecting Global Priorities: Biodiversity and Human Health. https://www.cbd.int/health/SOK-biodiversity-en.pdf
9   UNDP (2017). Planetary Health – Issue Brief. http://www.undp.org/content/undp/en/home/librarypage/hiv-aids/issue-brief---planetary-health.html
10 UN News (2016). UN Environment Assembly opens in Nairobi aiming to ensure 'healthy planet, with healthy people'. https://news.un.org/en/story/2016/05/530002-un-environment-assembly-opens-nairobi-aiming-ensure-healthy-planet-healthy
11 WHO (2016). Preventing Disease through Healthy Environments. http://apps.who.int/iris/bitstream/10665/204585/1/9789241565196_eng.pdf?ua=1
12 Using guidelines such as the European Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH). See also Rigolle, C, et al. How effective is the European legislation regarding cancer-related chemical agents? *J Epidemiol Community Health* 2013, 67(7): 539-541.
13 Horsham, C. et al. Interventions to decrease skin cancer risk in outdoor workers: update to a 2007 systematic review. *BMC Res Notes* 2014, 7:10.

- Supporting the introduction and enforcement of smoking bans in workplaces, bars, restaurants and all other public places.

Addressing harmful substances and conserving natural resources

- Managing hazardous substances, chemical contaminants, and waste including medical and pharmaceutical waste (e.g. recycling and safe disposal of mercury and electronics).
- Advocating for a reduction in the use of pesticides, chemicals and harmful use of antibiotics in food production.
- Adopting legislation and incentivizing action on forest and biodiversity conservation and protection of green areas and spaces.
- Promoting the end of tobacco growing and supporting tobacco farmers to transition to alternative economic activities.

Forming partnerships

- Partnering with civil society so that it can help raise public and political awareness on health and the environment, as well as hold government and the private sector accountable for action and fulfilling commitments made.
- Promoting and collaborating with businesses and industries to raise awareness on the social and environmental benefits of considering links between economic activities and health.

Monitoring progress

- Assessing and monitoring the health implications of energy and environment policies, programmes and projects, particularly on vulnerable and marginalized groups, for example through health impact assessments (HIAs) and integrating health considerations into environmental assessments.[14,15,16]

3. Regulations, fiscal policies and clean technologies are powerful win-win tools.

Countries around the world are realizing the multiple health and development benefits of effective regulations, smart fiscal policies and transitions to clean and more efficient technologies.

- Regulations and measures to prevent household radon exposure in the UK and Germany – for example, improving ventilation systems, installing protective materials and avoiding use of materials that emit radon gas – are cost-effective in reducing cancers.[17]
- Jamaica recently raised its Special Consumption Tax (SCT) on alcohol, tobacco, gasoline and motor vehicles.[18] The tax increases will generate billions in revenue while protecting the environment. Jamaica reinvests much of this revenue into its National Health Fund.
- The Mae Hong Son province of Thailand, in collaboration with the national government and UN agencies, provided residents with affordable (US$ 4-6) cookstoves which reduce household smoke, preserve forests, reduce the need for fuel collection, and generate additional income for food vendors by freeing up their time and increasing the diversity of foods they can prepare.[19]

14   WHO (2017). The Health and Environment Linkages Initiative. http://www.who.int/heli/impacts/hiabrief/en/
15   The Southern African Institute for Environmental Assessment (2011). Integrating Health and Social Issues into Impact Assessments for the Planning and Execution of Capital Development Projects in Eastern and Southern Africa.
16   UNDP (2017). Guidelines on Integratng Health and Gender into Environmental and Social Impact Assessments in Sub-Saharan Africa. Prepared for UNDP Regional Centre for Eastern and Southern Africa by the Southern African Institute for Environmental Assessment. https://hivlawcommission.org/wp-content/uploads/2017/11/EIA_New-Guideline-2017.pdf

17   Coskeran, T, et al. A new methodology for cost-effectiveness studies of domestic radon remediation programmes: quality-adjusted life-years gained within primary care trusts in central England. Sci Total Environ 2006, 366(1), 32-46.
18   Jamaica Observer (2017). "Increased taxes on gasoline, alcohol, motor vehicle licensing." http://www.jamaicaobserver.com/news/Increased-taxes-on-gasoline--alcohol--motor-vehicle-licensing
19   UNDP (2016). UNDP provides access to clean cooking solutions in northern Thailand. http://www.th.undp.org/content/thailand/en/home/presscenter/articles/2016/03/03/undp-provides-access-to-clean-cooking-solutions-in-northern-thailand.html

Environment, energy and NCD prevention and control – overlapping economic opportunities

Investments and interventions connecting environment, energy and health can support the 'bottom line.' The Organization for Economic Co-operation and Development notes that integrating climate change measures into regular economic policy would net a 5 percent GDP *increase* for G20 countries by 2050. Meanwhile, investing in the prevention and control of NCDs can help LMICs avoid the US$ 21.3 trillion in losses that NCDs are projected to impose on them over the 2011-2030 period, due to lost productive capacities and medical costs.[20]

WHO advises that: (1) removing energy subsidies by placing a tax on carbon that is consistent with countries' national interests would raise approximately US$ 3 trillion dollars per year, or 3 percent of global GDP[21]; and (2) raising cigarette excise taxes by US$ 0.80 per pack in all countries would generate an extra US$ 141 billion in revenue globally.

These revenues can be reinvested in growth-enhancing public spending, for example in infrastructure, health and education.[22]

4. Support exists for countries seeking to improve environment, energy and health policies.

Environment, energy and health sectors can benefit from international support for technical assistance and capacity building. Examples include:

- UNDP's *Solar for Health* initiative intends to support African, Central Asian and Arab State governments to work with communities, local governments and industry to increase access to quality health services by equipping health centres with solar panels. This ensures access to basic electricity while mitigating the impact of climate change.[24]

- The Global Environment Facility complements action on Articles 17 and 18 of the WHO Framework Convention on Tobacco Control by supporting tobacco farmers to engage in alternative economic activities.[25]

- The Global Alliance for Clean Cookstoves (GACC) works with a network of public, private and non-profit partners to accelerate the production, deployment, and use of clean and efficient cookstoves and fuels in developing countries. This work is in line with *WHO Guidelines for indoor air quality: household fuel combustion* to reduce reliance on wood, coal and other polluting cooking sources. Women benefit most.[26]

- Several networks and initiatives (e.g. GAHP, C40 Cities, ICLEI, WHO's Urban Health Initiative, and WHO's Healthy Cities Project) support local action on environment and health.

Investment in academic partnerships can strengthen the evidence base and engagement with civil society can support advocacy and help ensure accountability of all actors.

5. Local and municipal governments are key