

OurPlanet

United Nations Environment Programme

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Healthy Planet, Healthy People



Massoumeh Ebtekar
Enabling Breathing
of Clean Air

Khaled Fahmy
Time to Act

Maria Neira
Development's
Healthy Heartbeat

Nina Cromnier
Within Reach



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Achim Steiner

Reflections

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Achim Steiner

United Nations Under-Secretary-General and UNEP Executive Director



Margaret Chan

Director-General of the World Health Organization

In a few months, the international community will gather to finalize the Sustainable Development Goals (SDGs) and create the foundations for the post-2015 sustainable development agenda that aims to build a brighter future for humankind.

The environment cuts across virtually all of the goals, as it should: the Earth's natural resource base props up much of human existence—furnishing us with agricultural land and fisheries; supporting livelihoods and growth; giving us air, water, energy and so much more.

But perhaps nowhere is the importance of a well-managed environment as clear as in human health—which is not only a standalone goal and itself an enabler of other goals such as those on education, economy and societies, but a way of measuring how we are performing across the board. This latter aspect is one the World Health Organization (WHO) will emphasize at the upcoming World Health Assembly in Geneva.

These sustainable development aspirations have come not a moment too soon. As a result of the impacts our rapid development have

wrought on the environment, our planet is straining to sustain human life in good health. The evidence to support this assertion is clear.

In March last year, for example, WHO estimated that in 2012 exposure to indoor and outdoor air pollution killed around 7 million people worldwide, making it the world's largest single environmental health risk. This air pollution is due in large part to a fossil-fuel based economy that pumps particulate matter and other harmful materials into the air. A century or so ago, perhaps we had the excuse of ignorance and a lack of alternative technologies. Today, we do not.

We have examples of sustainable urban transport systems across the globe. We have access to cleaner fuels and more-efficient vehicles. We have created more advanced renewable energy and energy-efficient technologies. We can produce clean cookstoves to slash the 4.3 million annual deaths from indoor air pollution.

Happily, all of these crucial initiatives are spreading, most notably renewables. In 2014, we saw a \$270 billion surge in investment, up 17 per cent on the previous year,



according to research from the Frankfurt School UNEP Centre and Bloomberg New Energy Finance. With further expansion of renewable energy and the other opportunities above, we can provide universal access to clean energy without compromising human health.

We have similar challenges and opportunities in how we manage chemicals, a topic that is particularly pertinent given that this May the Basel, Rotterdam and Stockholm Conventions met to boost efforts to minimize human health and environmental impacts from chemicals, including pollution, and from waste.

Chemicals are an integral part of today's world, and this is not about to change. Global chemical output was valued at US\$171 billion

in the 1970s, and grew to US\$4.12 trillion by 2010. Global chemicals sales are projected to grow about 3 per cent per year to 2050.

But the gains that chemicals provide must not come at the expense of human health and the environment. The health impacts include both disease and illness and death by poisoning.

And new issues are emerging. In a 2012 report UNEP and WHO concluded that despite substantial advances in our understanding of endocrine disrupting chemicals, uncertainties and knowledge gaps still exist that are too important to ignore.

The list of challenges may seem daunting, but past successes show they are not insurmountable—and tackling them head-on is imperative to the success of our post-2015 agenda. Take the Montreal Protocol, for example—under which the world collectively tackled the damage ozone-depleting substances were causing to the ozone layer, and thus human health through increased skin cancer and cataract cases.

We are now on track for recovery to pre-1980 levels, and the benefits are astonishing: new data released by the US Environmental Protection Agency showed that actions under the Montreal Protocol will have prevented 283 million cases of skin cancer by 2100. Extrapolated across the globe, this means billions of cases, and millions of lives saved.

Another achievement comes in the form of the Minamata Convention on mercury, a toxic element that can cause serious health impacts. After years of negotiation, the Minamata Convention was adopted in early 2013 and subsequently discussed at the World Health Assembly. It now has 128 signatures and 11 ratifications, and preparatory work is well underway to support nations in meeting their obligations.

This is all encouraging, but health challenges also emerge from environmental

issues that are not so obvious—climate change chief amongst them. Emerging evidence from the Intergovernmental Panel on Climate Change shows that climate change has altered the distribution of some infectious disease vectors, altered the seasonal distribution of some allergenic pollen species, and increased heatwave-related deaths.

If we do not act to reduce greenhouse gas emissions, then we will see even greater health impacts. Extreme weather events will claim many lives, while changing weather patterns will increasingly affect agricultural production. In Africa alone, climate change could reduce crop yields by up to 20 per cent by 2050 as the population nearly doubles. The health consequences of such a scenario are obvious.

This is why the second major process taking place this year, the meeting in Paris designed to produce a binding agreement on mitigating and adapting to climate change, will hold equal importance for human health. A weak agreement would undoubtedly hamper sustainable development. A strong agreement—one which commits nations to deep emissions cuts and innovative ways to build resilience to the impacts of climate change—would give us a far better chance of delivering on this ambitious agenda.

There are so many other areas we could touch upon: how human health is supported by biodiversity and ecosystem services; growing plastic contamination in the oceans and food chain; the ever-increasing amounts of e-waste that expose workers to hazardous substances.

The web of interactions between the environment and human health is undoubtedly complex, but the top-level message is simple: how we manage and use the planet's resources has a clear and obvious impact on how healthy we and future generations will be.

UNEP, WHO and many other committed organizations, governments and individuals have come a long way—both in building the evidence base that enable policies to improve human health, and implementing initiatives that reduce environmental risk factors.

This year, with the SDGs and climate negotiations concluding, we have a golden opportunity to elevate these efforts to the next level. We should not waste it. ▲

In Africa alone, climate change could reduce crop yields by up to 20 per cent by 2050 as the population near doubles.

Massoumeh Ebtekar

Enabling Breathing of Clean Air

Iran's experience in abating air pollution shows the importance of long-term planning and social mobilization



Massoumeh Ebtekar

Vice President of the Islamic Republic of Iran and Head of Department of Environment

Champion of the Earth 2006

Iranians were the first to refer to air pollution in the scientific literature. Avicenna, in his Canon of Medicine completed in 1025 AD, classifies and describes various types of air and water with potential to harm humans. Now the World Health Organization has repeatedly named air pollution as a major threat to human health and a carcinogen, showing that it is not only an environmental issue, but a global economic and public health challenge.

Air quality is important for over 35 million Iranian citizens in major cities. Rapid industrialization and urbanization has seen more than 70 per cent of the population migrate to urban areas in recent decades, creating many environmental

vehicles on the roads, inefficient fuel consumption and a lack of pollution control facilities in industrial plants burning fossil fuels.

The late Professor Taghi Ebtekar began research on air pollution in Iran as early as 1974, at Tehran University and as an advisor to the mayor of Tehran. He set forth a strategy for substituting natural gas (CNG) as a cleaner fuel for public transportation. His studies and plans later became the basis for Tehran's roadmap to combat air pollution. This project now spans one and a half decades. In 1998, multiple studies on air pollution in Tehran were compiled, and a comprehensive plan to combat it was drawn up. After adoption by the cabinet in 1999, and allocation of resources, the scheme was implemented as seven major projects.

From 1999 up to 2005, cars came under strict emission controls, emitting 80 per cent fewer pollutants due to engine modifications and the installation of catalytic converters and filters. Lead was completely phased-out from petroleum during those years. Electronic automobile inspection centres were established, CNG-operated buses were introduced, public transport (including the underground metro

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