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The impact of an unhealthy environment on human health in South Africa

A healthy society and productive workforce play an important role in long-term economic growth and sustainable development. Yet avoidable environmental hazards are placing an unnecessary burden on the country's productive workforce in terms of days lost due to sick leave, lower productivity, invalidity and early retirement.

The CSIR, together with key stakeholders, play a crucial role in improving national understanding of the effects of the environment on human health, through the provision of scientific evidence.

Dr Caradee Wright

Ms Linda Godfrey

CSIR Opinion Pieces and Briefing Notes are signed pieces by CSIR researchers on current research developments, social, environmental and policy topics.

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CSIR
Natural Resources and the Environment
PO Box 395
Pretoria, 0001

Tel: +27 12 841 2911
Fax: +27 12 349 1153
Email: query@csir.co.za

There is a clear link between the state of the environment and human health and well-being. According to the World Health Organization (WHO) an estimated 23% of all deaths in Africa are the result of avoidable environmental hazards such as contaminated water, poor hygiene, inadequate sanitation, poor water resource management, use of unsafe fuels, atmospheric pollution and poor infrastructure.

According to the same WHO report South Africa is "strongly underestimating" its own environmental burden of disease: currently 16% of all deaths in the country are related to the state of the environment, with an estimated 69 disability adjusted life years (DALYs) per 1 000 persons, lost due to the environmental burden of disease. Disability-Adjusted Life Years (DALYS) are the number of healthy years of life lost due to premature death and disability – this translates into 69 economically productive years lost for every 1,000 people.

South Africa faces quadruple burden of disease

Environmental hazards have a greater tendency to impact upon the poor and most vulnerable groups in developing countries. For example, more than a third of disease in children under the age of five years is due to environmental hazards.

The three main diseases influenced by environmental factors are diarrhoea, respiratory diseases and malaria. In South Africa, environmental health outcomes of concern are:

- Water-borne diseases
- Respiratory tract infections
- Lung diseases
- Vector-borne diseases (like malaria)
- Food-borne illnesses and
- Chemical poisoning.

However, apart from facing up to the burden of communicable and chronic diseases as well as violence and injuries, the Medical Research Council states that South Africa's profile has "rapidly changed into a quadruple burden of disease with the major addition of HIV and AIDS".

What should be done?

Environmental health can be improved through simple interventions such as

- Safe household water storage
- Better hygiene measures by providing toilets and maintaining efficient waste water removal
- Improved water resource management
- The use of cleaner and safer fuels
- Increased safety of the built environment
- More careful use of toxic substances in the home and workplace
- An environmental health strategy and policy to provide critically-needed direction
- Environmental health education to inform people of how best to interact with their environment and remain healthy.

The CSIR, together with key stakeholders, is focusing research efforts to provide scientific evidence necessary to improve national understanding of the effects of the environment on human health. In so doing, informed decision-makers are in a position to reduce the impact of environmental hazards on vulnerable communities.

However, the ability of scientists to do the required research in South Africa is currently severely impacted upon by the lack of reliable health and environmental data.

To support environmental health research, the country needs an effective **Health Information Management System** to coordinate improved data capture and accessibility. Data made available to and translated by researchers into rigorous science and meaningful information may then be taken up by decision-makers to inform policy and interventions among communities at grass roots level.

Useful resources

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