



GOING GREEN: Liam Thorn harvests a vegetable garden started by pupils of Greenlands Primary School in Bishop Lavis. Stellenbosch University’s medical school is taking care of the environment by emphasising its importance to health care students. PICTURE: ARMAND HOUGH

W Cape a trailblazer for sustainable health care

The FMHS has developed a strategic plan to address issues and develop solutions

LAST month, thousands of students flocked to universities across South Africa to take the first steps towards a future career. Many future health professionals found their way to Stellenbosch University’s Faculty of Medicine and Health Sciences (FMHS) on the Tygerberg Campus where one of the first activities they engaged with was harvesting a worm farm, planting indigenous saplings and working on a vegetable garden.

This shows that living sustainably and being conscious of environmental health issues is becoming central to health science education. It is possible that future generations of students will be taught by a Department of Planetary Health.

Concern for our planet’s health and the implications of this for human health are well-documented.

We face an environmental poly-crisis due to a convergence of factors such as an unprecedented increase in global population; destruction of ecosystems that provide essential services such as food, fresh air, clean water and building materials; rising inequality illustrated by the finding that the richest 62 people now own as much wealth as half the world’s population; rapid urbanisation and proliferation of informal settlements; increasing food insecurity; and climate change which also implies that most of our known reserves of fossil fuels cannot be used if we want to limit global warming.

Human health can be affected by unsafe drinking water, poor sanitation and hygiene, indoor and outdoor air pollution, workplace hazards, industrial accidents, climate change, poor land use practices and poor natural resource management.

Poverty further reduces one’s ability to adapt to changing circumstances and challenges, and migration and conflict over scarce resources also increase people’s vulnerability.

The World Health Organisation estimates that a quarter of all human disease and death can now be attributed to environmental factors.

While most scientists focus on the impact of these environmental factors on people’s health, there is growing evidence that the health sector itself may paradoxically be part of the problem.

In the UK, for example, the National Health Service is the largest public sector contributor to climate change in Europe, emitting 21 million tonnes of carbon dioxide a year.

Health workers around the world have expanded their interpretation of the Hippocratic Oath “first do no harm” to include not only harm to the

Bob Mash

patient, but also harm to the environment.

As a result, the Global Green and Healthy Hospitals network is linking health systems, hospitals and clinics across the planet to create more sustainable health care without harm.

Members are committed to reducing the health sector’s environmental footprint and advocating for policies that promote environmental and public health.

On the African continent the network already includes 10 hospitals, two health systems and one university faculty, representing the interests of 93 hospitals and 71 health centres.

Included in this relatively small but growing membership on the continent are the Western Cape’s Department of Health and the FMHS. This makes the Western Cape one of the trailblazers for sustainable health care on the continent.

Membership of the network implies a commitment to take action in at least one of the 10 focus areas: Leadership, chemicals, waste, water, energy, transportation, food, pharmaceuticals, buildings, and purchasing.

The FMHS has developed a strategic plan to address these issues and to develop solutions.

Shaping the values and attitudes of future health-care workers to include a concern for sustainability is a key issue which is addressed not only through formal teaching, but also through modelling a more sustainable lifestyle on campus.

Students are encouraged to attend environmental conferences, to compete for an annual prize for the most sustainable residence, and to get involved in leadership on the issue.

The FMHS has reduced its energy use by almost half, from a very high level of 20 million KWh in 2011 to 11 million KWh in 2014, through the retrofitting of infrastructure for air conditioning, hot water heating, lighting and more efficient information technology systems.

The amount of waste going to landfill has been reduced by the introduction of a central depot and 3-bin system to sort all waste into recyclable, non-recyclable and compostable waste.

The amount of total waste being recycled increased to 65 percent. Food waste from the student centre now flows to an industrial sized worm farm and bokashi system that turns it into liquid plant food and compost.

This year, the FMHS intend to use this to create a herb and vegetable garden to feedback produce to the kitchens and students that are struggling.

The purchase of all air tickets by staff on campus automatically contributes money to offset carbon emissions by planting indigenous trees.

The campus now has 644 trees and has also increased biodiversity by planting indigenous fynbos areas. The main food provider on campus is now assessed for sustainable practices and given feedback on an annual basis.

New residences on campus are being planned to achieve a 4-star green building rating with features that include use of prefabricated recycled steel frames, heat pumps, grey water and solar photovoltaic alternative energy systems.

The Western Cape Department of Health focuses on emergency medical services and disaster planning as well as reducing electricity and water consumption at identified hospitals.

These targets are formally included in the annual performance plan of the department and so progress is monitored on a quarterly basis and annual reports are tabled in Parliament.

Smart meters have been ordered for many of the facilities to enable better monitoring at a local level. Reducing energy use not only reduces the carbon footprint, but also saves money from the facilities’ budgets that can be used for health services. New clinics and hospitals are planned to be environmentally friendly and good progress has been made in eliminating the use of mercury in medical equipment.

The Department of Health has not only joined the network as a health system, but has also encouraged individual hospitals to join.

Lentegeur Hospital, for example, has helped patients stigmatised by mental health problems to become green ambassadors through tree planting, garden development and fruit production.

Victoria Hospital has been empowering hospital staff members to become advocates for reduced energy usage and cost savings within the hospital. The new Khayelitsha District Hospital has been saving energy consumption by using solar energy and wind turbine energy to reduce carbon footprint and costs.

The hope is to reduce the environmental footprint of the hospitals and promote public environmental health.

Globally we are now in an era of the sustainable development goals, which recognise the need for human development, environmental sustainability and health care to work together for future generations.

● *Professor Bob Mash is head of the Division of Family Medicine and Primary Care at the Faculty of Medicine and Health Sciences at Stellenbosch University.*