

Sanitation habits increase global health stresses

The negative effects of pollution and sanitation on health have reached such staggering proportions that only scientists from different disciplines working together will be able to reverse the problem, says an author of the United Nations Environment Programme's most recent *Global Environment Outlook*.



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Nearly 2 billion people in the world live in areas that are under water stress.

While the report echoes dozens of other warnings of impending doom delivered by international experts in recent years, it is unique in its emphasis on solving the health effects of environmental stresses, says Walter Rast, associate director of the River Systems Institute of the Texas State Department of Biology and 1 of 4 lead authors of the Outlook's chapter on water.

Because of the complex interrelationship between the environment and health, multi- and transdisciplinary scientific efforts will be needed if solutions are to be found, Rast says. "Because nature is so complex, we need to have a better idea of the linkages between these components, and this book made the best effort to date."

Water is chief among the concerns listed in the Outlook. Worldwide, more than 1.8 billion people live in areas under "water stress," according to the report,

which was released last October and points out that North America is having trouble keeping its reservoirs full.

In developing countries, sanitation habits are a major stressor on the availability of clean water. The report says about 3 million people worldwide die each year because of water-borne diseases such as Hepatitis A.

"People figure they need safe drinking water, but they sometimes go and poop on a tree without thinking about it," Rast says. "As long as you don't

have basic sanitation, that form will continue unabated. And it spreads enormous disease around the world."

Canada's Arctic faces a different problem: persistent organic pollutants often found in pesticides. These chemicals accumulate in animal fats and the environment, remaining for decades until natural processes break them down.

Aboriginal people who traditionally live off of the land will, like the creatures they eat, have more trouble having children and will get sick more often, the global forecast says.

Because health has such an effect on human productivity, taking care of the environment is a chief economic priority, Rast adds. "If we can show that taking care of the environment is profitable, we'd live in a very different world." — Elizabeth Howell, *CMAJ*

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The new architecture of medical education

It will be much more than just another glittering multi-million dollar facility in booming Wild Rose Country.

In fact, proponents believe the new \$900 million state-of-the-art Edmonton Clinic, scheduled to open in 2011, will embody a revolutionary experiment in medical education: an attempt to instruct students in the nuances of multi-disciplinary "team" approaches to providing care.

A joint project involving the Capital Health region, University of Alberta and the provincial government, the clinic will feature a fully staffed ambulatory clinic, medical specialists, diagnostic services and rehabilitation services so that patients can navigate from primary care to rehabilitation in 1 location.

However, one-half of the new facility will be devoted to a new model of medical education, where students from the faculties of medicine, nursing, pharmacy, dentistry and even agriculture will train and work together. It will feature teams of physicians, nurses, pharmacists, rehab specialists, nutritionists, dentists and public health workers devising collaborative plans to tackle each patient's medical needs.

"There is going to be an important philosophical shift in medical education," says Dr. Terry Klassen, chair of pediatrics at the University of Alberta Faculty of Medicine. "We're moving into a trans-disciplinary era. The physicians of tomorrow will be working with other disciplines more closely. And this will be one of the first times anyone has planned an entire building around that concept. We think this will be quite revolutionary."

Building the clinic within Alberta's overheated economy has proven a challenge. Already, construction prices have been driven through the roof. It was originally pegged to cost \$450 million but when Alberta Premier Ed Stelmach broke ground on the first phase of construction in early October, the price had more than doubled. And that was with the scope of the clinic scaled back 15%.

The origins of the clinic date back over 15 years to the university's devel-