

NORTH AMERICA

G L O B A L E N V I R O N M E N T O U T L O O K

The fourth *Global Environment Outlook – environment for development (GEO-4)* assessment report is published in 2007, exactly two decades since the World Commission on Environment and Development (WCED) published its seminal report – *Our Common Future* – which placed sustainable development on the agenda of governments and other stakeholders. *GEO-4* is the most comprehensive UN report on the environment prepared by about 390 experts and reviewed by more than 1 000 others across the world.

Embargoed until after 11.30am New York time, 25 October 2007.

Energy and climate change

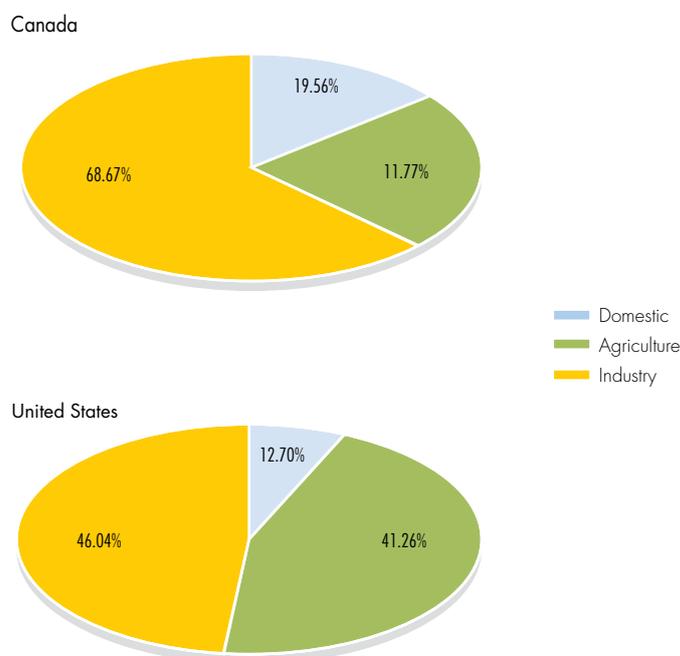
Over the past 20 years, North America has made progress in using energy more efficiently. Total and per capita energy consumption increased since 1987, however, and the region remains among the most energy-intensive in the industrialized world. The US transport sector accounts for 40 per cent of total domestic energy used, while the region's total transport energy consumption rose by 30 per cent between 1987 and 2004. Over the last decade, heavy reliance on imported fossil fuels has heightened concerns over US energy security. Canada is the most important source of US oil imports and heavy investments have been made in Canadian oil sand production, which doubled to about 150 000 tonnes/day between 1995 and 2004. In addition, US oil and gas exploration increased dramatically over the past 20 years. Fossil fuel exploration, extraction, infrastructure, production and distribution have significant environmental impacts including the release of greenhouse gases, dangerous tailings and wastewater, air pollution, and radical landscape alteration.

The energy sector is also a major greenhouse gas (GHG) emitter. From 1987 to 2003, CO₂ emissions from fossil fuels in North America increased 27.8 per cent. With its large output of GHGs, North America has an impact on the changing climate in other parts of the world, disproportionately affecting poor and more vulnerable countries and people. In addition, air pollution caused the premature deaths of an estimated 70 000 people a year in the United States and some 5 900 in Canada in the early 2000s and it is known to exacerbate asthma, which is on the rise, especially among children. On the other hand, urban air pollution is less severe than it was thirty years ago due to the introduction of effective market-based programmes. Since the 1990s, North American governments also focused on market-based, voluntary and technological measures to address climate change, but have not mandated short-term caps on emissions.

Freshwater quantity and quality

Despite North America's apparent abundance of freshwater, users are not always close to water sources. For example, with a yearly average rainfall of less than 10.2 centimetres, the western United States is one of Earth's driest regions, but it is home to about one in five US citizens. Limited water supplies have led to increased competition for water in parts of western North America, the Great Plains and the Great Lakes basin. Glaciers and snowpacks, a major source of the Canadian Prairies' water, are declining and hydrological variability is expected to worsen with climate change, exacerbating competition for water among agriculture, the oil and gas industry, and municipalities. United States and Canada are the two highest per capita water users in the world.

North American water use by sector, 2002



Source: GEO Data Portal, compiled from FAO AQUASTAT 2007

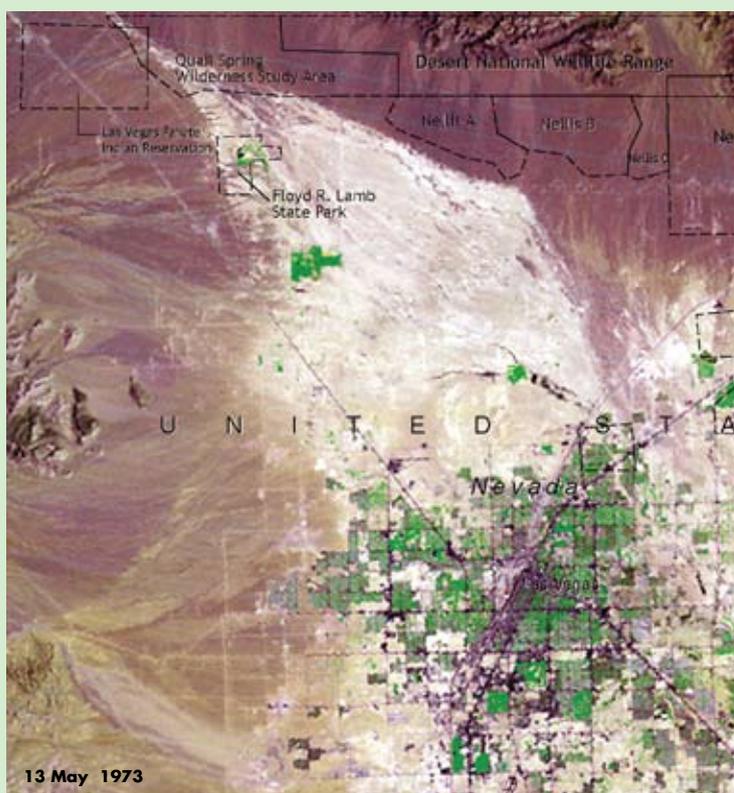
Significant gains have been made in protecting water quality from point sources of pollution, while non-point contamination, especially from agriculture, the largest source of freshwater impairment, has become a priority in both countries. About 40 per cent of major US estuaries are highly eutrophic due to nitrogen enrichment. Agricultural fertilizer accounts for about 65 per cent of the nitrogen entering the Gulf of Mexico from the Mississippi Basin. As a result of nutrient run-off, the Gulf of Mexico, as well as Chesapeake Bay, are subject to “dead” zones and associated large algae blooms that kill fish and destroy shellfish habitat. Nitrogen contamination has also increased in freshwaters such as Lakes Erie and Manitoba.

Overall, drinking water in North America is the cleanest in the world. The region is not immune to the effects of contaminants in water from urban and agricultural waste, though, and pathogens in drinking water have been responsible for numerous health-related incidents in the past decade, prompting new measures in both countries to manage waste discharges.

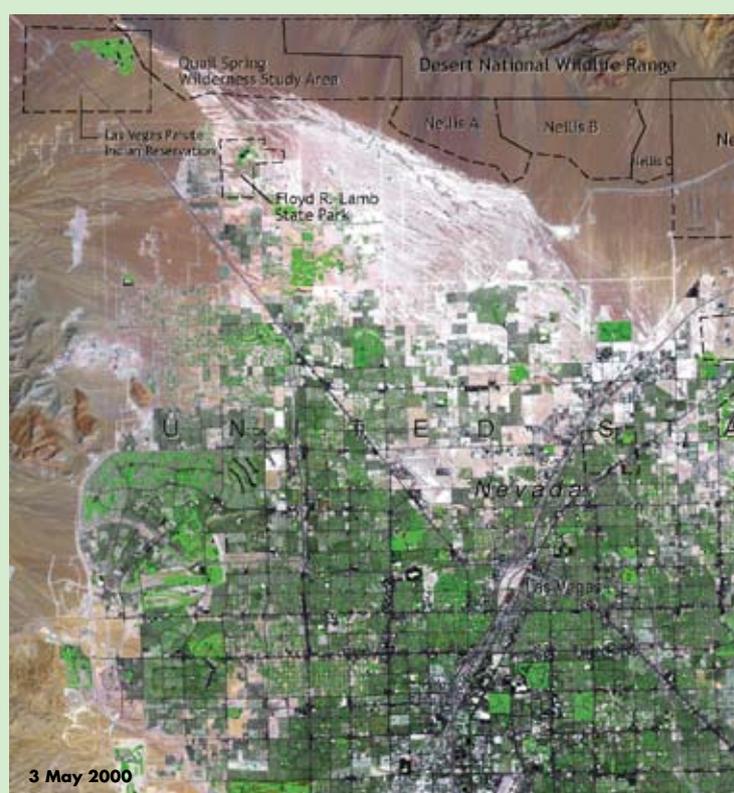
Sprawl and the urban-rural interface

Urban sprawl, a low-density settlement pattern and process on the outskirts of cities, continued unabated over the past 20 years. It contributed significantly to increases in the number of cars, vehicle kilometres travelled and the length of paved roads. In addition, exurban sprawl, characterized by clusters of large-lot housing developments beyond the urban fringe, has expanded creating extensive areas of urban-rural interface where developments press up against open spaces, threatening natural (and protected) areas and their ecosystem services. The increased intermingling of housing with flammable forests and grasslands contributed to a rise in the number of “interface” fire incidents over the past decade. Such fires destroy property, threaten human health and wildlife, and can foster pathways for invasive species. A number of states, provinces and municipalities have designed and implemented “Smart Growth” and other strategies that include a wide variety of policy tools to manage sprawl.

North America is a leader in research in environmental science and reporting, integrating the public into environmental decision making and providing public access to environmental information.



Urban sprawl, Las Vegas



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