

# Scientists still debating greenhouse effect

by Alex Shetsen

Of all the recent concerns about mankind's handling of the environment, the greenhouse effect occupies a unique position. It is sure to be mentioned whenever the weather is particularly freakish. But scientists

are meanwhile still debating hotly what the full impact of the effect might eventually be.

In fact, the greenhouse effect has always been with us. Like the walls of a greenhouse, the earth's atmosphere retains solar radiation and

keeps our planet warm, at an average annual temperature of about +15 °C.

The problem is that we have been upsetting the atmosphere's balance. Fossil fuel burning at a steadily increasing rate over the last 200 years, doubling each decade this century to 1980, has released much extra carbon dioxide (CO<sup>2</sup>), into the air. Steady deforestation has at the same time removed many trees to convert the CO<sup>2</sup> back into oxygen.

As a result the level of atmospheric CO<sup>2</sup>, considered to account for much of the heat retention, has increased. Thought to have been about 290 parts per million (ppm) in the 1890's, (the level was measured to average about 306 ppm in 1950, and rose to 345 ppm in 1985.

This is an increase of 11 per cent over only 35 years.

Studies have shown that about half the extra CO<sup>2</sup> emitted is re-absorbed by ocean water. The oceans, however, may possibly be reaching the saturation point. If the water proved unable to dissolve more CO<sup>2</sup>, and the burning and deforestation continued, the rise in atmospheric CO<sup>2</sup> would likely accelerate.

The 1980's have seen five of the warmest years on record, although temperatures were only about 0.6-0.7°C warmer than 100 years ago, when reasonably uniform records were first kept. With some fluctuation, global temperatures have risen fairly steadily since then.

The greenhouse effect is currently by the most popular theory to

explain the warming trend. The many projections based on it are uniformly gloomy:

—If atmospheric CO<sup>2</sup> were to double, average surface temperatures might go up about 4°C. This would melt the polar icecaps, raising the sea level by 60 metres and flooding all the coastal areas of the world.

—A temperature rise of about 0.5°C in the next decade would affect the global environment drastically. Overall freshwater resources would be significantly redistributed. Drought would sweep the mid-latitude continental interiors (Edmonton), wreaking havoc with agriculture, natural vegetation, and wildlife. Conversely, coastal areas

continued on p 7



## Sewage problem conflicts

by Arthur Redillas

"There is no major problem," said Dr. Margaret Armour, Faculty Service Officer in Chemistry, referring to recent concern expressed by Environment Minister Ralph Klein over the dumping of sewage into the North Saskatchewan River.

Rod Love, Klein's executive assistant, disagreed. "Absolutely, there is a problem. It's just the principle of the thing. In our day and age, we should not tolerate untreated sewage being dumped into a river."

At present, sewage is dumped into the North Saskatchewan only in extreme cases of heavy rainfall, which place a toll on the city's sewer systems. Such situations are always short-lived and therefore, do not cause difficulties, according to Armour. In fact, she sees the

process as necessary. "I see a far greater danger in sewers backing up into people's basements than in dumping into the river." This is due to the fact that people would be in close proximity to harmful pathogenic bacteria.

Armour believes that Edmonton's present sewage treatment plant is very effective in bacterial degradation and that recent coverage of the perceived problem has been "overblown." She admitted: "Ideally, we would have a sewer system that could handle the situation without dumping into the river. However, we must balance the cost of such a system with our actual needs. We must make priorities, and right now the money is not there."

Love sees the present situation differently. The subject of dumping sewage into the river deeply con-

cerns the Environment Minister's office. Earlier this year Ralph Klein indicated to the City of Edmonton that city council must come up with a plan to resolve the problem, or else the city will be subject to heavy fines from the province every time sewage is dumped into the river.

According to Love, the City of Edmonton is expected to foot the bill for a new sewer system. He said that Calgary was in a similar situation ten years ago and has since built a new sewer system to avoid dumping sewage into the Bow River.

Alberta Environment will have Edmonton follow Calgary's lead. Despite evidence, such as Dr. Armour's, that the sewage in the river causes minimal damage, Alberta Environment feels they have proof which shows otherwise.

# INVOLVEMENT OPPORTUNITIES

There is more to the University than textbooks . . .

## STUDENTS' UNION BOARDS AND COMMITTEES

### ACADEMIC AFFAIRS BOARD

- requires 1 student-at-large member

#### The Academic Affairs Board:

- Makes recommendations to Students' Council on academic affairs and academic relations
- Assists and advises the Vice-President Academic on implementation of Students' Union policy
- Promotes cooperation and coordination with faculty associations and the General Faculties Council Student Caucus
- Administers Students' Union Awards Committee
- For further information contact Suresh Mustapha, 259 SUB, 492-4236

### ADMINISTRATION BOARD

- requires 2 student-at-large members

#### The Administration Board:

- Considers recommendations concerning the Students' Union budgets and applications for non-budgeted expenses
- Considers applications for financial assistance from all faculty associations and Students' Union Registered Clubs
- Aids in financial policy making with respect to Dewey's, RATT, L'Express, SUB Theatre, Games, and other areas of the Students' Union
- For further information contact Peter Chu, 259 SUB, 492-4236

### DISCIPLINE, INTERPRETATION AND ENFORCEMENT (D.I.E.) BOARD

- requires 8 student-at-large members who must be in their second or further years of studies

#### The D.I.E. Board:

- Acts as administrative tribunal for Students' Union Constitution and Bylaws
- Has "court-like" powers
- Investigates and tries alleged breaches of discipline
- Interprets Students' Union Constitution and Bylaws
- For further information contact David Tupper, 259 SUB, 492-4236
- Term of Office: until 30 May 1990

### NOMINATING COMMITTEE

- requires 9 student-at-large members

#### The Nominating Committee:

- Selects the Students' Union Senators and Commissioners
- Selects the Speaker of Students' Council
- Selects the members of other Students' Union boards and committees
- For further information contact David Tupper, 259 SUB, 492-4236

### BUILDING SERVICES BOARD

- requires 1 student-at-large member

#### The Building Services Board:

- Makes recommendations to Students' Council concerning building policies in the Students' Union Building (SUB)
- Makes policy recommendations to Students' Council concerning services offered by the Students' Union
- Approves allocating of space in the Students' Union Building according to building policy
- Considers applications for Dinwoodie cabarets
- For further information contact Aruna D' Souza, 259 SUB, 492-4236



For Applications and Information, Contact the SU Executive Offices, Room 259 SUB, 492-4236.