7. CLIMATE CHANGE

Officer responsible Environmental Policy and Planning Manager	**Author** Jenny Ridgen, Environmental Scientist, DDI 371-1407
Corporate Plan Output: Environment Conservation	

The purpose of this report is to inform the committee of the recent release of an international report on climate change.

REPORT RELEASED

The Intergovernmental panel on Climate Change (IPCC) have finalised their latest report "Climate Change 2001: The Scientific Basis" and on 22 January 2001 they released a summary of this report for policymakers. Hundreds of scientists from many countries have been involved in the preparation and review of the full report which runs to over 1000 pages.

Since the previous report of 1995 scientists have developed a greater understanding of climate change and have become more confident of the models used to predict the climate of the future.

WARMER WORLD DUE TO HUMAN ACTIVITIES

There is new and stronger evidence that most of the global warming observed over the last 50 years is attributable to human activities. Since the 1860's the world has warmed by 0.6 ^{o}C. The projected increase from 1990 - 2100 is a further 1.4 - 5.8 ^{o}C. The increase in temperature in the 20th century is likely to have been the largest of any century during the last 1000 years and it is likely that the 1990s were the warmest decade and 1998 the warmest year.

The present concentrations of carbon dioxide and methane in our atmosphere have not been exceeded during the past 420,000 years and, in the case of carbon dioxide, it is likely that they have not been exceeded during the past 20 million years.

SEA LEVEL RISE

Global mean sea level is projected to rise by 0.09 to 0.88 metres between 1990 and 2100. These projections are slightly lower than for the IPCC's 1995 report (0.13 to 0.94 metres), primarily due to improved models which assume a smaller contribution from glaciers and ice sheets. However, the effects of global warming will continue to affect sea levels long after greenhouse gas concentrations are stabilised. Rising sea levels caused by thermal expansion of the ocean is projected to continue for hundreds of years after greenhouse gas concentrations have stabilised. Ice sheets will continue to react to climate warming and contribute to sea level rise for thousands of years after the climate has been stabilised.

UPDATE ON COUNCIL CLIMATE CHANGE POLICY DOCUMENT

Over five years have passed since the Council approved its policy document "Implications of Climate Change for Christchurch" and it is now due for review. The information in the IPCC report will be used to update the Council's policy document.

Chairman's Recommendation: That the information be received.