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## **PCIC presentation at CCCma Lunchtime Seminar series**

**Title:** Impact of Climate Variability and Change on Total Water Level Extremes in Southern BC

**Presenter:** Dilumie Abeysirigunawardena

**Location:** University of Victoria, ISC 370 <http://www.uvic.ca/buildings/isc.html>

**Date:** 11 October 2007    **Time:** 12:00-1:00

### **Abstract:**

In order to adapt to impacts of climate variability (CV) and change (CC), the critical first step is to determine how quickly and by how much, exactly, the threat is increasing. In the low lying Fraser Delta region of the Southern BC Coast, these could range from mandatory evacuation plans from the vulnerable seaside neighbourhoods to multi-billion dollar storm surge barriers spanning the vulnerable coastlines. To that end, my study attempts to incorporate the effects of CV and CC into the analysis of extreme total water level (TWL) return periods and, to make such analysis physically more meaningful. The statistical models show convincing evidence towards significant increases in the frequency of occurrence of extreme TWL events due to longer term accelerated SLR trends and warmer ENSO regime. These results raise our level of awareness on impacts of CV and CC, particularly for long-range scenario development against vulnerability to CC and CV. Since policy decisions are mainly driven by potential societal impacts of climate change as presented here, it is believed that a broad range of evolving community, commercial, and conservation interests would find this study informative.