# WELCOME ADDRESS

*Dr. John Le Marshall*
*Bureau of Meteorology*

Good morning Ladies and Gentlemen,

I would like to welcome you to Lorne on behalf of the Local Organising Committee and the Bureau of Meteorology. This venue on the Surf Coast is very appropriate for the first meeting in the new millennium of the International Winds Workshop. Activities in this area have been strongly influenced by winds and their predictability. In the past, more than 140 ships have been wrecked along this section of coast and many lives have been lost as a result of adverse weather and wind conditions. A prime example of this was the Loch Ard wreck where only two people survived the catastrophic sinking.

The importance of wind, here, has not changed, with the activity of the surfing and fishing communities being dictated by wind conditions and forecasts. Of course, we understand that measurement and forecasting of wind conditions are important for many tasks. In NWP, it is well established that wind measurements are of prime importance. In the case of tropical cyclone or hurricane forecasting, we know that, in the United States, for instance, evacuation of 1 mile of coastline as a result of a hurricane warning costs of the order of $100,000. Therefore an improvement in landfall accuracy of 10 miles and its translation into evacuations saves $1 million.

The start of the new millennium is a significant time to be meeting in Lorne. We are now beginning a new era where we will have better spatial and temporal resolution data; we have new instruments on the drawing board which will observe at better and considerably more frequencies. The assimilation methods now available to use the resulting near quasi-continuous data have developed considerably in the late nineties and hold great promise in terms of improved analysis, initialisation and forecasting potential. Importantly, the burgeoning computer power, now available in operational meteorological centres, provides us with the means of collecting, processing, assimilating and forecasting with data from these new instruments and clearly points to improvement in forecast capability in the near future.

I think that to underline what will be available, soon, in the new millennium, a brief description of some of the capabilities of the GIFTS (Geostationary Imaging Fourier Transform Spectrometer) instrument is appropriate. This instrument will take 16,384 soundings, every 10 seconds, at 4 kilometre resolution and less than 1 degree RMS in the vertical. It will allow wind determination, using 3,000 channels at 4 kilometre resolution in the infrared and, even in comparative darkness, it will provide 1 kilometre resolution, quarter moonlight visible imaging for wind estimation.

This, combined with the considerable wind fields provided by QuikScat at the surface and the mooted flight of a Doppler Wind Lidar certainly paint a positive picture for the future and make it a pleasure for scientists and technologists to work in this area, optimistic of producing significant benefits for humankind.

I hope that, during your stay in Lorne, you are able to address many of the issues needing consideration. The generation and use of quality flags, optimal observing methods for wind generation and continuous data assimilation are amongst many issues requiring attention. In closing, I also hope that your stay on the Surf Coast is both personally and professionally rewarding and I trust that it will benefit future activities.