REMARKS BY THE HONOURABLE PETER UNDERWOOD AC, GOVERNOR OF TASMANIA, TO OPEN THE 2014 AUSTRALIAN METEOROLOGICAL & OCEANOGRAPHIC SOCIETY NATIONAL CONFERENCE WEDNESDAY 12TH FEBRUARY 2014.

It is a great privilege for me to be here this morning – even though it is very early morning for a Governor – to welcome to Tasmania so many distinguished guests who have come from all parts of Australia and overseas. To those who are making their first visit to Tasmania, I urge you to try and find a little time while you are here to look around our island for it has much to offer by way of natural beauty as well as intellectual and artistic stimulation, such as the relatively new Museum of Old and New Art, or MONA, as it calls itself.

Less than a month has passed since I was similarly privileged to open the 2014 Partnership for Observation of the Global Ocean Conference. Some of you may well have attended the conference, but if that is so I am sure those of you who were here at the POGO Conference will forgive me if I explain to those who were not at POGO that, although Tasmania is Australia's smallest State with a population of only half a million people, the capital city of Hobart prides itself on being an important scientific centre for the Antarctic and the Southern Ocean. It is the supply base for the Australian and French bases in the Antarctic and, I might add, very keen to expand that work to include other countries; just the other week the American Antarctic research vessel *Nathaniel B Palmer* called in here for supplies. It is also home to a critical mass of scientists engaged in global research in the fields of climate change and rising sea levels. The secretariat of the Commission for the Conservation of Antarctic Marine Living Resources is located here, and once a year Hobart welcomes hundreds of scientists from all around the world to the four-week annual CCAMLR meetings. In

addition to the CCAMLR secretariat, the Australian Antarctic Division is located just south of Hobart. The CSIRO is located in the port of Hobart and next door to the CSIRO is the University of Tasmania's brand new high tech building which houses the Institute for Marine and Antarctic Studies. The Tasmanian University is also host to the Antarctic Climate and Ecosystems Cooperative Research Centre which, as you know, is a multidisciplinary partnership of 21 national and international organisations that provides science, knowledge and understanding to help Australia meet the challenges of climate change. So, you have come to the Australian epicentre of scientific research pertaining to climate change and oceanography in the Southern Ocean and on the great white continent.

Like the POGO conference, today and the following two days will be very busy ones for you. I see from your programme that, as well as plenary sessions, you have concurrent breakout sessions plus other short sessions that will not only be breakout but also have to be conducted at break neck speed called "Lightning Lectures"; 2 minutes; 2 slides and no questions. Phew!!

This sort of programme always reminds me of a story a friend of mine told me about a conference that he went to as a keynote speaker that also had many concurrent sessions. He said that he had put together a presentation and turned up at the conference on the appointed day. In good time, he found the room in which he was scheduled to speak and went in, but no one was there. Just a minute before he was due to start speaking a man came in and sat down in the middle of the front row and waited. So my friend thought well, I know that there's only one person here, but I've prepared a paper and come all

this way to deliver it, so I might as well start and so he did. The solitary listener seemed to appreciate the talk for he laughed at the jokes and nodded agreement with the serious points and clapped loudly at the end. Of course, when he had finished my friend went down and thanked him and said that although he was the only one in the audience he really seemed to appreciate the presentation and was there anything that he could do to repay the man for being such a good listener. He replied, "Well, actually there is something. Would you mind staying for a bit, because I am the next speaker?"

The proportionally high number of scientists on Tasmania highlights a sharp intellectual divide in the State's population. There are those who are educated and literate, and there are those who are functionally illiterate. When the Australian Bureau of Statistics took part in an international survey, it found that no less than 49% of Tasmanians aged between 15 and 74 years were functionally illiterate. It's not much better in the rest of Australia where the proportion of functionally illiterate people was measured at 47% and, indeed, it is much the same in other economically developed countries like America, the United Kingdom and Canada.

The Australian Bureau of Statistics tells us that [quote] "approximately 174,000 people in this State do not have the basic skills needed to understand and use information from newspapers, magazines, books and brochures and that overall, Tasmania has the lowest level of adult literacy skills in the nation."[1] Worse, the same data tells us there has been no improvement in adult literacy levels since they

[1] Australian Bureau of Statistics 2008. Adult Literacy and Life Skills Programme, Summary Results 2006. Cat No. 4228.0

were last measured in 2006. The same source tells us in a report released on 15th February last year[2] that 47% of all Australians aged between 15 and 74 years are functionally illiterate and that there has been little improvement over the last few years.

While illiteracy refers to a total inability to read or write, functional illiteracy is much more difficult to define, as functionally illiterate adults can generally read and write to a limited degree. The ABS utilised four domains for the measures of literacy in their Adult Literacy and Life Skills Survey, Australia, 2006:

- Prose literacy: the ability to understand and use information from various kinds of narrative texts, including texts from newspapers, magazines and brochures.
- Document literacy: the knowledge and skills required to locate and use information contained in various formats including job applications, payroll forms, transportation schedules, maps, tables and charts.
- Numeracy: the knowledge and skills required to effectively manage and respond to the mathematical demands of diverse situations.
- Problem solving: goal-directed thinking and action for which no routine solution is available.[3]

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[2] Programme for the International Assessment of Adult Competencies, Australia, 2011-2012. http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/4228.0main+features992011-2012 accessed 16th September 2013.

[3] ABS, *Adult Literacy and Life Skills Survey*, Australia, 2006, < http://www.abs.gov.au/AUSSTATS/abs@.nsf/Previousproducts/4228.0Main%20Features22006%20(Reissue)?opendocument&tabname=Summary&prodno=4228.0&issue=2006%20(Reissue)&num=&view= >

Now, my wife and I share a passion for education and recognise the importance of drastically improving the functional illiteracy rate – I should add that it's not the only passion we share – and while this is neither the time or place to develop the issues involved in functional illiteracy and possible solutions, reference to it highlights the importance of education in the discipline that interests all of you. Education is, as it should be, one of the aims of AMOS - a society that supports and fosters interest in meteorology, oceanography and other related sciences.

I see that there is a lunch-time session on the last day of your conference called "AMOS Education and Outreach Day." I am not sure what this involves, but I read the call for papers web page and read that "The education and outreach special session at AMOS 2014 welcomes contributions from all education sectors and industry working in weather and climate to showcase and exchange ideas, tools and practical tips on pedagogy and student/community engagement with the sciences related to weather and climate."

I am sure that there is no one here who would disagree with the proposition that to be prepared for today's workforce, informed about important issues, and able to understand the complex world in which we live, all Australians must have a solid education in science, mathematics, and technology.[4] The evidence is irrefutable that they do not have it now, and so I would urge every member of this Society and the Society as an entity to do everything within his/her/its power to provide that necessary education. Perhaps a lunch meeting could be extended for the next conference to become a plenary session, or a

[4] Adapted from "Preparing for the 21st Century; the Education Imperative" http://www.nas.edu/21st/education/

debate to discuss how your knowledge can be better shared, particularly with the younger generation. After all, your area of science and keeping the atmospheric and oceanographic balance right is critical to the maintenance of life on this planet as we know it. What could be more important than that?

So, I wish you all well in your important discussions. I hope each of you has an interesting and stimulating time here in Hobart and I have pleasure in formally declaring open the 2014 Conference of the Australian Meteorological and Oceanographic Society.