



Second WMO Conference on Women in Meteorology and Hydrology

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Opening address**

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*not an official document,
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Honourable Secretary-General of the WMO, Prof. Obasi,
honourable female meteorologists and hydrologists,
honourable guests,

It is a great privilege to speak at the opening session of the “Second Technical Conference on the participation of Women in Meteorology and Hydrology”. I congratulate Prof. Obasi for hosting this conference on World Meteorological Day. As a female professional, it is just as great a privilege to address so many fellow female professional scientists from more than 80 countries across the globe and to welcome you to this important conference. As Executive Secretary of the United Nations Framework Convention on Climate Change, I am partial not only to the substantial aspects of your day-to-day working lives, but also to your efforts aimed at ensuring the greater involvement of women in hydrology and meteorology.

Women have fought hard battles over many years to be accepted, appreciated and accredited as full-fledged scientists, to be elevated onto the same level as their male counterparts, especially in recent history. However, taking a step back and looking at our collective history over so many millennia, a different picture presents itself, compelling one to ask: “For how long have women been active scientists?” The answer is quite simple really: for as long as human beings have lived on this planet. Although we have no or very few records of early scientists, we do know that both women and men have always been active in science. Ancient literature on stone tablets first refers to the name of a female scientist some 4000 years ago. Her name was En Hedu’Anna and she lived around 2350 BC. She was the Chief Priestess of the moon-god in Sumeria, which was to become the empire of Babylon. En Hedu’Anna is said to have been one of the most important and respected individuals in her community on account of the scientific progress she made. Her astronomical and mathematical endeavours were recorded in Sumerian writing on stone tablets, which she



signed. This ancient scientist was one of many women all over the world, who participated in uncovering the secrets of nature.

The definition and purpose of science includes no separation in terms of gender. As we all know, the common attributes of scientists are luck, education, ability and sweat. The test of science, on the other hand, is whether work can be tested, repeated and used by others. The fact that scientific progress and advancement is not determined by or linked to gender was increasingly “re-realised” by societies. Although there are still many goals that we may wish to achieve in terms of gender balance in scientific professions - as the aims of this conference clearly show - we should not forget that much has been achieved over the past 60 years. The following excerpt from an announcement by the United States Weather Bureau appealing to women in 1942 might clarify my point. It reads as follows:

“Although there has been much prejudice against and few precedents for employing women generally for professional work in meteorology, perhaps a dozen women have obtained meteorological positions in the last few years. [...] Since there is currently an acute shortage of both trained meteorologists and men for observers [...] in the Weather Bureau [...] women with the proper qualifications - same as for men - are now being welcomed in many places where they were not encouraged even last year. (In England women have already taken over many meteorological posts, we hear.) [...] Women should thus apply immediately. [...] This will be an opportunity to join the vanguard of the many women who will very likely find careers in meteorology in the not too distant future. [...]”

From where we stand today, it seems as if the last sentence in this appeal announces the dawning of a new era. Here we are now, some 61 years later, the first “International Expert Meeting on the Participation of Women in Meteorology and Hydrology” well behind us, with a view to examine what progress - if any - has been made in the past five years. This will be done in the careful conference deliberations during the next four days.

At this conference, we will concern ourselves with the *nexus* between the *substance* of our respective scientific fields and the *methodology* of getting more women involved in our fields. It is not an easy task reconciling deeply scientific issues with a moral, practical and long over-due need to reflect the composition of our population in all the various fields of science we concern ourselves with as human beings. Yet it is urgent that it be achieved, for there is much work that needs doing. As is commonly known, the more diverse the minds that focus on a set of problems, the more diverse, far-reaching and creative the results and possible solutions to these problems become. This is as true for the involvement of diverse cultures as it is for the balanced involvement of both genders.

I trust that the current discussion on climate change is of greatest interest to you. It is a long-term issue that, if unabated, will impact negatively on the quality of our world. Projections of increased flood risks due to sea level rise and heavy rainfall, of less water availability in water-scarce regions, lower agricultural yields, health impacts resulting from an increase in vector borne diseases, changes in productivity and composition of ecosystems, have made the headlines over the past years.

The United Nations Framework Convention on Climate Change sets an objective that can only be achieved through long-term efforts: “stabilization of greenhouse gas



concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Such a level should be achieved within a time-frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner". A tall order indeed!

Science, e.g. through the IPCC process, can tell us part of the story regarding the level at which atmospheric concentrations need to be stabilized to be considered as "safe". But the choice of a safe level is a political judgement as well as a scientific assessment. How should we deal with scientific uncertainty? What risks are we prepared to bear? How should we balance the consideration of those who will suffer climate impacts and those who will not? A choice of a safe level of concentrations will need time. Any choice we make at an earlier stage will almost certainly require review as scientific knowledge develops. What is clear, however, is that safe concentrations will be considerably below any levels that would result from current emission trends. Ultimately, a carbon-constrained energy economy will be required.

It is important to note that the Convention, with 186 ratifications, has achieved near universal membership. It has established institutions and processes for promoting scientific understanding, international cooperation and national action. This is a significant achievement. The Kyoto Protocol is an important first step, but much more is needed to meet the objective of the Convention. Science is of the essence when it comes to defining the longer term mitigation and adaptation options. As climate change impacts on development, and as solutions must be consistent with development objectives, it becomes imperative to link the physical sciences that you are involved in, with the social sciences.

The research needed to guide and inform policy options requires an unprecedented effort of individual collaboration, well beyond the scope of individual groups, countries or regions. I am proud to note that women have been actively involved in the work of the IPCC that informs our negotiations. Permit me to mention some genuinely outstanding names: *Susan Solomon*, co-chair of the IPCC working group on science; *Dr. Irina Esserkepova (Kazakhstan)*, a meteorologist and an IPCC lead author; *Anne Henderson-Sellers (Australia)*, an analyst in climate models; and *Joyce Penner (USA)*, a world leader in research on aerosols. My apologies to those who for reasons of time I have been unable to mention. I am also pleased to note that the COP has successfully elected the first woman as the chair of one of its subsidiary bodies: *Daniela Stoycheva* from Bulgaria. She continues the tradition of excellence of women negotiators, of which we have seen many in the past.

I am also proud to be a member of the network of Women Environmental Leaders of the world, which was created on World Women's Day 2001 at a conference hosted by the then Finnish Minister of Environment, Satu Hassi. The notion of mutual support that women give each other is the driving force behind this network.

Let me conclude that, in my view, dedication, persistence and passion are the trade marks of women in science and policy. They will pave the way to a better future. The Climate Change Community counts on you!

I thank you ladies and gentlemen.