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AOML Director Retires

Kristina Katsaros, Director of AOML, retired from federal service on September 30, 2003. She had served as the AOML Director since July 1997.

Born and raised in Sweden, Katsaros completed her education at the University of Washington, becoming the institution's first woman to earn a Ph.D. in atmospheric science in 1969. For the next 23 years, she was a faculty member with the University of Washington's Department of Atmospheric Sciences. Throughout her affiliation with the University, Katsaros was a visiting scientist and lecturer at a number of national and international organizations and institutions. In 1992, she became the Director of the Department of Oceanography from Space at the Institut Francais de Recherch pour l'Exploitation de la Mer (IFREMER) in Brest, France, a position she held until being named the Director of AOML in 1997.

Katsaros' scientific pursuits included all aspects of air-sea interaction: turbulent and radiative fluxes, wave generation, and surfactant effects. Her research also included the use active and passive microwave remote sensing for studies of storms, cloud systems, and the physics of wind and waves.

As an administrator, her leadership and effective management of personnel and resources were vital to AOML's successful operation and advancement of mission objectives. In her absence, Dr. Peter Ortner will serve as the AOML Acting Director.

Katsaros will continue conducting research on a part-time basis from her home in Washington on Whidbey Island, in close vicinity to children and grandchildren.

Dear Friends:

As I depart from my post as Director of AOML and official editor of *Keynotes*, I want to express my thanks and good wishes to my colleagues at AOML and all of our partners who read this newsletter. No man or woman is an "island," for we live in an ecosystem of human relationships that nourish and support us. Sometimes the environment gets overheated and threatens us with "coral bleaching," but in all circumstances this environment we live in is vital to our success as individuals and as a "system."

Saying farewell the other night to so many colleagues and friends from the Virginia Key science community and to folks from further afield who had come, it struck me how much I have gained personally from the associations the directorship of AOML has granted me and how seriously important one's role as the leader of a major government research laboratory is. I always felt the responsibility, but also served with great confidence because of the strength, courage, and abilities of all the folks around me, especially my inner circle of deputy director, division directors, administrative officer, and many others.

AOML is a fantastic place, rich in knowledge and the pursuit of new knowledge. Our fields of research—climate and climate variability, oceanography, tropical meteorology and hurricanes (the likes of Fabian and Isabel!), ecosystem science, the challenges of the Everglades, coral reefs and our coastal environments, even the effects of humans on whales—all of these subjects matter in a big way; that is our inspiration for each day we come to work.

It has been a privilege and an honor to be associated with the folks that make up AOML and the NOAA Research team all over the country.

I will certainly remain interested and in touch and wish you all great successes to come. Thank you!

Kristina Katsaros

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- Basket of homemade sweets, including cookies and brownies
- Car wash at AOML
- Boquet of flowers

For more information contact:

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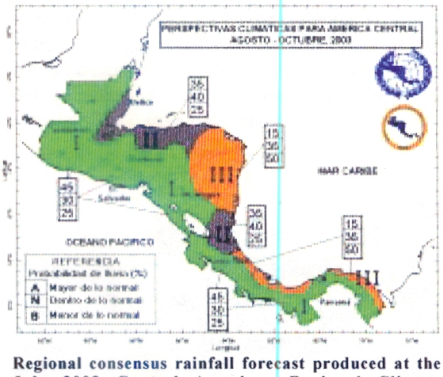
Climate Forecasts Improve for Latin America

David Enfield, Physical Oceanography Division

NOAA/AOML and its partners at the University of Costa Rica (UCR) are improving the way climate forecasts are prepared at Regional Climate Outlook Forums (RCOFs) in Latin America. The RCOFs, which began in 1997, bring outside experts together with national meteorological service representatives from regional countries. Collectively, they create composite climate expectations (typically for rainfall) for one or two ensuing seasons and assemble the information into a regional picture, or consensus forecast, for the benefit of stakeholders and decision-makers.



Regional consensus rainfall forecast produced at the July 2003 Central American Regional Climate Outlook Forum in Guatemala using the beta version of the climate forecast software. Green (A), brown (B), and gray (N) represent predominantly wet, dry, and neutral rainfall outlooks, respectively, under a postulated climate scenario of neutral-to-cool ocean conditions in the tropical Pacific Ocean.

The approach taken for deriving the consensus forecast has been to estimate the expected probabilities for the highest (wet), middle, and lowest (dry) one-thirds (terciles) of the statistical rainfall distributions. When taken over many years, the tercile probabilities are simply 33.3% each ("normal"), summing to 100%. For example, in situations where El Niño conditions are expected, a country that typically gets more than a normal amount of rainfall during El Niño episodes might see outlook probabilities of perhaps 50% (high), 30% (middle), or 20% (low). Once determined, the various national tercile estimates are integrated into the consensus forecast to aid the individual meteorological services in their various outreach activities. Unfortunately, in the past, the RCOF process has not been fully successful due to a lack of in-depth statistical expertise, uniform methods, and the use of common predictors required to produce a regionally integrated, objective, and quantitative forecast.

With the help of a grant from NOAA's Office of Global Programs and the work of scientists at UCR, an easy-to-use software program has been created that incorporates standard statistical methodologies with uniform predictor indices. The user-friendly program requires no statistical expertise and objectively produces tercile climate forecasts using the local climate data of each Latin American country. The methodology is one in which the probabilities for rainfall are derived from a set of two-variable contingency tables between a predictor index (*e.g.*, El Niño index) and a useful predictand (*e.g.*, local rainfall), along with a set of statistical reliability indices.

David Enfield, an oceanographer with AOML's Physical Oceanography Division, leads the project. Enfield channels resources to the UCR staff, who developed the software and documentation, and administers support for special software training days appended to RCOFs in Central America, South America, and the eastern Caribbean. A "beta" version of the software has been produced and was used to train 15 regional meteorologists at a Central American RCOF in Honduras this past April. Most of the involved meteorological services subsequently used the software to bring objective national tercile forecasts to the following RCOF held in Guatemala in July 2003. The software-derived contributions enabled the July RCOF to quickly and efficiently piece together the regional consensus forecast and dedicate more time to the all-important task of properly disseminating a well-crafted and understandable outlook to stakeholders and decision-makers (see figure above).

Additional software training is currently planned for South America (Guayaquil, Ecuador, November 2003) and the Caribbean (Kingston, Jamaica, April 2004). Under a partnership arrangement with UNESCO (United National Educational, Scientific, and Cultural Organization), the International Hydrological Programme will edit, translate, and publish the users' manual in English and Spanish to accompany distribution of the software to future RCOF participants in Latin America and elsewhere in the world.