



Bulletin

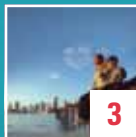
Vol. 63 (1) - 2014 Feature articles | Interviews | News | Book reviews | Calendar

www.wmo.int



WEATHER AND CLIMATE: ENGAGING YOUTH

Hot, Sour and Breathless –
Ocean Under Stress



Towards Integrated Urban
Weather, Environment and
Climate Services



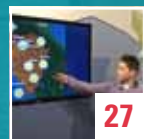
Junior Professional Officers



How African Youth are Participating
in Global Climate Change Politics



Who Wants to be a
Weather Forecaster?



Ice Sheet Observations
from Space



The Special Committee for Politics and Decolonization debated:

- The threat of rogue nations or terrorist groups in possession of nuclear weapons.
- Climate change awareness raising and knowledge amongst young people.

The Human Rights Council debated:

- Whether climate refugees should be considered as a new category by the UNHRC?
- CCTV surveillance in cities.
- Surveillance of the global flow of information.

The Security Council debated:

- Conflict over water control in the Middle-East.
- The resolution of the conflict in Syria.

The G20 Economic Committee debated:

- The negative economic impacts of global warming.
- The development of efficient desalination technologies as a source of fresh water.
- The relocation of telecommunication infrastructures vulnerable to weather disasters.

The FerMUN 2014 Forum on Child Online Protection debated:

- The impact of developing standard processes for handling user generated content (social networks, mobile phones and interactive media policies).
- The impact of the development of e-financial transactions on youth online safety.
- The impact of online behavior on good digital citizens (gaming, hacking, illegal downloading).
- Issues pertaining to grooming and online bullying.

The United Nations Office in Geneva hosted the FerMUN 2014 opening ceremony. Conference Secretary-General Juliana Rademaker reminded the audience that “global warming is our issue: this challenge concerns us all, particularly the younger generation which builds tomorrow’s world.” She stated that the conference would be an eye-opener and would “make us think about concrete solutions to change our way of life.”

Each committee had an average of six resolutions on which to vote by the last day, when the General Assembly would meet! On the final day, controlling the length of debates on each resolution in the General Assembly proved challenging, but by 3:30 pm everyone was preparing for the closing ceremony. ITU Director General Hamadoun Touré joined the ceremony by Skype from his home in Mali, and the UN Secretary-General’s Envoy on Youth, Ahmad Alhendawi, sent a video message. Mr. Alhendawi told the audience, “We always have a Plan B, but we don’t have a Planet B.” FerMUN delegates were excited and thrilled to hear that selected resolutions from their debates would be presented to UN Secretary-General Ban Ki-moon by Dr Touré.

Today’s youths are tomorrow’s leaders. We have to start taking issues into our own hands and, as Dr Touré said, “just go and do it.”



©ITU/J.M. Planche

Engaging Youth on Global Climate Issues – Model UN Conference hosted by ITU, 8 - 10 January 2014.

Who Wants to be a Weather Forecaster?

Engaging students in meteorology



by Valentina Grasso, CNR IBIMET – Consorzio LaMMA

The theme “Weather and Climate: Engaging Youth” of the 2014 Meteorological Day addresses the relation between today’s Met services and the next generations. The next generation is the ultimate stakeholders of the weather and climate services provided by governmental assets. Education on meteorology is essential to enable youth to take advantage of the information provided by the public services. To that respect, in Italy there are several initiatives carried on by relevant state and regional entities in academia and the education sector in accordance to the guidelines given by WMO. In addition to those structured, high-level education initiatives, it is important to have initiatives targeting very young students such as the Air Force National Meteorological Service has put in place for this World Meteorological Day (www.meteoam.it/?q=giornata_meteorologica_mondiale_2014). The initiatives of LaMMA described in the article are in the sector of primary schools and are valuable in raising awareness of meteorology at an early age.

- Col. GArn Luigi De Leonibus, Permanent Representative to WMO for Italy

The LaMMA Consortium is in charge of the weather forecasting service in Tuscany, Italy. It combines the scientific research skills of the Italian National Research Council (CNR) and the public service commitment of the Region of Tuscany, its two parent organizations, to monitor atmospheric conditions and produce daily weather bulletins and reports as well as customized weather services. The coordination of environmental education and informative scientific activities for primary and secondary schools in Tuscany is a priority for LaMMA.

Scientific institutions can play an important role in education by fostering opportunities for students and teachers to learn. Laboratory visits and “learning by doing” activities offer the most effective means of doing this. The research sectors involved in meteorology, climatology, remote sensing, oceanography, the carbon cycle, biometeorology, energy efficiency and environmental sustainability all participate in LaMMA’s education and outreach activities.

LaMMA collaborates with CNR’s Institute of Biometeorology (IBIMET) to offer opportunities for researchers to get involved in responding to requests from schools. There are training seminars for teachers, such as the 2012/2013 project “A Pact for Water,” which provided learning modules on climate change and water resources to more than 600 teachers in Tuscany; visits to the Meteorology Room, where students can meet meteorologists and see how forecasts are generated; and outreach activities such as open days and science festivals.

Meteorology for schools

When LaMMA was launched, teachers immediately started asking if forecasters could participate in educational activities. A small group of individuals dedicated to



scientific education and meteorology took the initiative to respond. Educational activities, mainly lessons in classrooms, contributed to spread the LaMMA “brand” within Tuscany over the ten years that followed. This pushed researchers to produce educational materials for classrooms, and thus an informal network of passionate individuals became institutionalized.

In 2010, LaMMA developed a new communication strategy and website. This led to the decision to play a more active role in structuring educational modules for students at different grade levels. The new website includes an education section that presents opportunities for schools to visit LaMMA. It offers electronic booklets and publications by IBIMET colleagues on climate, climate change and sustainability. Education and outreach activities have always been an important aspect of IBIMET’s work, they have produced class materials for different grade levels on topics in meteorology, climate change and the carbon cycle. IBIMET is also a WMO Regional Meteorological Training Centre for Region VI and is responsible for organizing international training courses for developing countries.



Learning about weather at LaMMA

Any school in Tuscany can attend a lesson on meteorology at LaMMA, which includes a visit to a fully functional weather operating room. They can select any of four 2-hour modules.

Weather for kids - This lesson for children aged 4–6 years old is playful and humorous. Children learn to recognize the main weather conditions and to connect them to icons on the weather bulletin. Each student then receives a set of sketched weather icons to colour, cut out and paste on big maps of the Tuscany region to produce their own weather bulletins that they can take home to their parents.

Basic weather lesson - This module is for students from kindergarten to middle school (14 years old). It presents the basic meteorological concepts – atmospheric composition, altitude and temperature, the water cycle, cloud composition and rain, thermal conditions and winds, wind patterns. Tuscany’s main weather conditions are described. The lesson concludes with a presentation on how LaMMA meteorologists produce forecasts using observations and atmosphere-sea models. Much focus is placed on the issuing of weather alerts. Students get to see LaMMA meteorologists broadcast the morning weather forecast.

What’s up there - This module is for students aged 9 to 15. Two researchers use basic physics experiments to explain the main concepts of meteorology while students observe. The researchers introduce new knowledge and concepts after each experiment concludes, and the students form possible hypotheses to define a scientific basis for further experimentation. The experiments are very effective from the didactic point of view, especially for younger people, as they stimulate their natural curiosity and help them to formulate appropriate questions and verify possible answers. This module aims to spark the students’ interest and make them passionate about science.

Who wants to be a forecaster? - This module is highly participative and interactive to stimulate a passion for meteorology within its participants – students, aged 12 and up. The exercises demand creativity and originality. First forecasters explain the “ingredients” needed to prepare a weather bulletin. Special attention is paid to the communication of weather forecasts. Videos of weather bulletins – old and new, Italian and foreign – are shown to the students. The goal is to make students aware of the communication process behind the weather bulletin: the daily challenge that forecasters have to be precise and use plain and clear language. The students then work in groups of four or five to “cook-up” their own weather forecasts, for their own recorded weather bulletins. The videos are edited with proper covers, titles and credits, and uploaded to the LaMMA website (www.lamma.rete.toscana.it/didattica/video-ragazzi), Vimeo channel and Facebook page, where the students can watch them and share them with friends.



Over the past three years, LaMMA has provided about 150 hours of lessons and taped more than 320 minutes of student videos.

Evaluating the impact

During the 2011/2012 school year, more than 2 000 students participated in LaMMA events. LaMMA researchers used a survey to evaluate the educational impact of their activities on the students. Of the 730 respondents more than 90 per cent rated their overall experience as “good” or “very good.” The most popular module being “Who wants to be a weather forecaster” rated “good” or “very good” by 97 per cent of the 182 surveyed. The open-ended questions in the survey received responses such as :

“LaMMA is very interesting, and after this visit I’m very keen to understand everything about meteorology.”

“The best thing for me was the recording of the weather forecast – it was very funny!”



“I think it was very interesting, because we learned how the weather service works.”

“It was very interesting because it made me understand that familiar things like weather forecasts that are seen every day by people are the fruit of hard work.”

Educating the public remains a priority

Easy access to weather information, mostly due to the proliferation of mobile and handheld devices, has increased public interest in weather – but that does not necessarily translate into interest in understanding weather. However, investment in educating the public on weather and climate variability and change is more relevant than ever if society is to benefit from the opportunities and mitigate the risks of climate change.

In recent years, LaMMA has invested time and effort to set up outreach and education activities on meteorology and climate issues in order to increase awareness and resilience in face of more frequently occurring severe weather events. LaMMA aims to prepare all communities in Tuscany for weather related emergencies.

Acknowledgements

The educational activities carried out by LaMMA are possible thanks to the commitment of many people working directly and indirectly with LaMMA, namely: Giorgio Bartolini, Riccardo Benedetti, Giulio Betti, Valerio Capecci, Elena Cristofori, Lorenzo Giannelli, Bernardo Gozzini (LaMMA’s Director), Valentina Grasso, Susanna Lotti, Ramona Magno, Simone Montagnani, Andrea Orlandi, Francesco Piani, Francesco Sabatini, Claudio Tei, Tommaso Torrigiani, Federica Zabini.

For more information visit the Education section at www.lamma.rete.toscana.it/en/