Tempest news

Posted by **Michele Redmon** • **March, 2020**

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Good morning! Today in Tempest News: An interview with Petteri Taalas, Secretary-General of the World Meteorological Organization, a look at how weather may impact the spread of coronoavirus, and a new term to learn: the circularity gap. Like what we're doing? Share with a friend and they can **sign up here** to get Tempest newsletter each month.

BRAVE NEW WORLDS

What was your biggest accomplishment in college? If you're University of British Columbia astronomy student Michelle Kunimoto, you **discovered 17 new planets**, including a potentially habitable world around the size of earth.

WARM WEATHER VS. CORONAVIRUS

Warm weather has been known to provide a respite from seasonal viruses, like the flu and common cold. However, with little known about the new coronavirus (COVID-19), it's unclear **if warm weather will have an impact** on this novel disease and its spread.

let's talk about the weather

…..with Petteri Taalas, Secretary-General, World Meteorological Organization

We met at the annual AMS 2020 100th anniversary celebration. His keynote address announced the new mandate for WMO to develop more action-based activities around weather, climate and water services including a public/private partnership initiative.

[Flooding in the Gritti Palace in Venice. One of the goals of the new Public-Private Engagement initiative is to enhance preparedness for hydrometeorological extremes. Marco Bertorello—AFP via Getty Images.]

Tell us about your public-private initiative.

Taalas: We've recently gone through a total revision of our business structure at the WMO with an emphasis on action. The WMO Public-Private Engagement (PPE) Office was established in January 2020 to set the strategic direction of expanding the engagement between the public, private, and academic sectors operating in the global weather enterprise and leverage their respective strengths and resources in achieving common goals. Simply put: We want to get rid of parallel universes in how we handle weather, water, and climate.

The Global Risks Report issued in January by the World Economic Forum showed again the environmental risks related to climate change and extreme weather are among the top five risks in both short and long terms. The Report states clearly, that:

"Coordinated, multi-stakeholder action is needed quickly to mitigate against the worst outcomes and build resiliency across communities and businesses."

The new WMO strategy is building such a holistic approach and community around weather, climate, and water actions. And those divisions – observing systems, science and services are to be integrated and under one umbrella.

But the private sector engagement is the big change. Before we had been keeping the private sector out of WMO, but now the private sector doors are opening! It's a great opportunity to enhance the impact of WMO worldwide. We are working out how to do it in a smart way and it's a learning exercise for all of us.

How will the private sector be part of WMO business now? How do you propose to work collaboratively with competitive, market-focused weather companies?

It's true the private sector doesn't want to share secrets, but we have to have common interface with the them. WMO serves the interest of the governments, 193 governments, and we have a wider perspective. An integrated global observing system is the backbone of our work. WMO sets the standards for observations. We are supposed to serve this whole enterprise, including private sector interest, not just the public sector.

The private sector engagement is a great opportunity. With big weather disasters, the private sector is helping. We are already starting pilot projects with the private sector because there are areas of the world with no data and there is a growing amount of private satellite programs that have been contributing positively to the quality of forecasts. In past 10 years, forecasting, satellites and modeling are really improving, which is especially useful for forecasting. And while the basic observance system has to be improved, in some areas, complementary data from phones and drones and satellites, are useful and contributing positively but they are not the ultimate solution.

In the US, the private sector tells the government not to invest in NOAA and that private sector can solve the problem alone. That's not the case. Weather and climate need a complementary approach. Public private partnership is the optimal way of running the business of weather. All week at AMS, there is very strong support for the public sector running basic system and the big US private players are really supportive for the NOAA – because that's the backbone of their business as well. That's the positive part— the private sector needs NOAA and that's the case worldwide. Met services in poorer countries and private sector have a common interest.

Big picture – there is a need for our expertise, disasters are growing, impacts of climate change are more visible. Look at the water sector—flooding drought, lack of water and impacts of fire, on agriculture - all growing. What's unique is we are working like a family organization, sharing know-how and data. That's a big change. It's a new way of running the business and working in cooperation with the private sector and allows us to provide more services for members as it relates to resilience actually worldwide.

What's in place for early warning systems, more specifics about the NWP - and how do you work with others (maybe more market-based operations) who want to put their own warnings out and don't heed WMO goals?

We have started offering early warning services for UN orgs, humanitarian organizations and others dealing with disasters to help them be prepared in advance. WMO issues seasonal forecasts for food security, hurricane and typhoon cyclone warnings one week in advance to all the humanitarian players of the UN. We are now building a global warming platform so all members have access to warning info, and can use it in their national businesses.

This single voice has to come from public – government authorities. There can only be one authentic voice in a single country. Of course, private sector can play a complementary role in disseminating info. But you have to be on your guard with private sector – what is the real case and what is the marketing story – often a scary story. The warning business has to be in the hands of government.

Private weather companies should echo government information, and disseminate to as many players as possible. Some sectors— aviation, transport services— you have no way to communicate, early warnings, it varies from country to country. So, the public sector has limitations with some services and those we have left on purpose to the private sector who typically have commercial arms and already provide wider services to business sectors.

How do you account for the shift from weather to climate and almost a total focus on climate at AMS this year? Has there been an about-face in thinking?

There has also been a climate change mentally!! There is a growing attention to climate change, because we have started seeing impacts. It's so visible across so many measurements— temperatures, precipitation, oceans melting, concentration of greenhouse gases. It's so visible and also more and more people are getting desperate.

For some in the private sector, it's a political issue. For WMO it's fact based, based on measuring and calculating – not a matter of opinion. This message has been clear since the 80's. WMO organized the first climate conference in 1979 and seeing the impact already has been eye opening.

Interview by Ann Marie Gardner. Find her on Instagram **@thenewweather**

THE CIRCULARITY GAP

"About two-thirds of the material we scratched from the planet slipped through our fingers. More than 67 billion tons of hard-won stuff was lost, most of it scattered irretrievably. Plastic trash drifted into rivers and oceans; so did nitrates and phosphates leaching from fertilized fields. A third of all food rotted, even as the Amazon was deforested to produce more. **Think of an environmental problem, and chances are it's connected to waste**."

WEIRD WINTER STORMS

Hyper-localized bands of snow are a common occurrence within much of the US, making them difficult to forecast using large-scale models. This difficulty was highlighted when passengers on a flight noticed an unusual **narrow snow strip winding its way through Kansas**.

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