

## World News Roundup

## Climate

## Women "uniquely placed"

## Prepare to deal climate threats: military officials

THE HAGUE, Feb 23, (RTRS): Militaries must prepare now to deal with more frequent disasters, new conflicts and other risks as accelerating climate change brings threats that could draw in troops at home and abroad, military and defence officials said.

"The threats are real. We already see them. And the threats will grow as the temperature rises," warned James Clayden, of The Netherlands Ministry of Defence, speaking at a conference on climate change and security at The Hague this week.

About a thousand Dutch troops, for instance, were called out for a month to provide humanitarian help and security when powerful Hurricane Irma slammed into Sint Maarten, a Caribbean island that is part of The Netherlands, in 2017.

That was manageable – but as hurricane disasters become more frequent and devastating, as warming oceans spur larger storms, the pressures on military resources will grow, as will the costs, Clayden said.

Jane Neilson, a senior policy analyst for the New Zealand Ministry of Defence, said her country's military forces regularly



Phillips

turn out to help South Pacific island neighbours hit by cyclones and other disasters.

But New Zealand officials worry that the country's relatively small forces could struggle to cope with bigger, harsher and more frequent disasters, or the threat of several crises happening at once.

"Our worst nightmare" is another big earthquake hitting New Zealand just as a Category 5 hurricane hits the South Pacific she said.

"Globally, militaries are going to be more stretched with operations deriving from climate-induced impacts," she said, calling climate change "the single greatest threat to the security, livelihoods and well-being of people of the Pacific".

For many nations, threats at home are also growing. The Hague sits 3 metres (10 feet) below sea level, protected by a system of dikes and pumping stations, said retired General Tom Middendorp, a former Dutch defence chief.

Dutch forces already spend about 25 percent of their efforts supporting civil authorities, including by protecting the anti-flood systems, Middendorp said.

But if sea level rises significantly – by a metre or more by the turn of the century, under some scenarios – "imagine the impact it could have. The military needs to be ready for that," he told the Thomson Reuters Foundation.

"It's crucial in any country that the civil responders and military sit together and do risk analysis, see how they will cope in an emergency and translate that into standing arrangements," the general said.

## Preparations

In the United States, such preparations have been difficult, despite worsening floods, wildfires and storms, because President Donald Trump's administration has been reluctant to accept climate change as a risk, military officials said.

In fact, the White House is readying a presidential panel that would question US military and intelligence reports showing human-driven climate change poses risks to national security, according to a document seen by Reuters this week.

But retired US Navy Rear Admiral Ann C., who sits on the advisory board of the US-based Center for Climate and Security, said climate threats – including to the country's military facilities – are clear, and the forces are already addressing them.

That includes preparing bases for expected sea level rise and providing better flooding protections, as well as working to cut emissions from military operations.

"We are moving forward on this issue. We are being impacted by it and we can't deny it," she said, pointing to bases on the country's eastern and Gulf coasts already hard hit by floods and storms.

Middendorp said it's key for countries to understand that it will not be only poorer and more vulnerable nations hard hit by climate change.

"It will affect all countries with a coastline, all islands. Countries that up until now have been very peaceful will now be in harm's way," the general warned.

He urged politicians to put aside political divides to tackle the increasingly evident risks.

"Climate change was always a left-wing issue and security was a right-wing, hard-line issue. We were completely different worlds – but we've learned to appreciate each other," he said.

Now, looking at both issues together is "of essential importance to everyone, regardless of your political background. We should de-politicize this," he urged.

Climate change threatens to drive violence and conflict that could spill over borders or draw in other countries as it brings worsening food and water shortages, more migration and other pressures, Middendorp said.

Clayden, of the Dutch defence ministry, pointed to Egypt, which he said will face losses of land to sea level rise and growing water security threats in an already fragile political climate.

"What will happen there? We don't know. But are we already preparing to take measures? No, we're not. We as a Ministry of Defense are reacting to the problems of today, which for us is Venezuela," he said.

"We know it's a problem, we know it will impact on the security situation, but we are not tackling it," he said.

Middendorp said he saw similar risks in a range of places, particularly Africa and the Middle East "where big rivers are drying out, the population is increasing, demand is piling up and we can't supply them with water and food," he said.

Some of the countries "also have poor governments, internal tensions, poor security," he said. "This fuels tension, drives migration flows, creates grounds for terrorists and extremism."

Azzam Alwash, the Iraqi founder and CEO of Nature Iraq, which has advised on restoration of Iraq's southern marshes, said rising population in his country, combined with collapsing agriculture as droughts worsen and uncertain oil revenue, meant migration to Europe was likely to surge.

"If you think 2016-2017, where you had waves of migrants coming up, was bad, wait until 2030. That's just around the corner," he said.



Virgin Galactic's VSS Unity rocket plane flown into the atmosphere before launching on Feb 22 in Mojave, Calif. Virgin Galactic says its rocket plane has reached space for a second time in a test flight over California on Friday. In addition to two pilots, the spacecraft carried a third crew member to evaluate the cabin from a passenger perspective. (AP)

## Space

## Virgin Galactic reaches space again

## NASA, SpaceX approve 1st test flight

CAPE CANAVERAL, Fla, Feb 23, (AP): NASA and SpaceX on Friday approved a first test flight next week of the new commercial Dragon capsule designed for crew.

No one will be aboard, only an instrumented dummy in a white SpaceX space-suit. But the capsule will still fly to the International Space Station, following its planned March 2 liftoff from NASA's Kennedy Space Center.

Officials gave the green light after conducting a safety review.

NASA's head of human exploration and operations, William Gerstenmaier, called the upcoming test flight "an absolutely critical first step" to eventually putting astronauts on board.

A phenomenal amount of work has gone into ensuring the capsule does not endanger the space station and its three occupants as it pulls up and docks, Gerstenmaier said. It will remain at the orbiting lab just under a week before aiming for a splashdown in the Atlantic off Florida. Radiation monitors and supplies are going up, and science samples and used equipment are coming down.

Human spaceflight is the company's core mission, said Hans Koenigsmann, a SpaceX vice-president, and for now, there's nothing more important than this endeavor.

"It's a really big deal for SpaceX," he told reporters.

## Shipments

SpaceX has been making space station shipments since 2012. The private company had to overhaul its cargo capsule for astronauts. If the upcoming demo goes well, two NASA astronauts could strap in for the next test flight this summer. Officials stressed much work remains to be done, with problems possibly solved through redesign, before the capsule is qualified to carry humans.

It would be the first launch of NASA astronauts from US soil in eight years, since NASA's shuttle program ended. They have been riding Russian rockets to get to and from the space station, costing NASA tens of millions of dollars per seat.

The SpaceX Falcon 9 rocket scheduled to soar at 2:48 am EST on March 2 is brand new. NASA does not want recycled boosters for these crew capsule missions. SpaceX plans to conduct a high-altitude launch abort in April, reusing this same capsule.

Boeing is also in the commercial race to transport space station astronauts. Its first Starliner demo is targeted for April, and the second, with astronauts, no earlier than August.

Meanwhile, Virgin Galactic's rocket plane reached space for a second time in a test flight over California on Friday, climbing higher and faster than before while also carrying a crewmember to evaluate the long-awaited passenger experience.

The winged spaceship soared at three times the speed of sound to an altitude of 55.8 miles (89.8 kilometers) before gliding to a safe landing at Mojave Air and Space Port in the desert north of Los Angeles, Virgin Galactic said.

In addition to chief pilot David Mackay and co-pilot Mike "Sooch" Masucci, the crew included Virgin Galactic's chief astronaut instructor, Beth Moses.

Moses, described as an expert microgravity researcher who is in charge of evaluating the passenger cabin, floated free to test elements of the interior.

Virgin Galactic is working toward commercial operations that will take passengers on supersonic thrill rides to the lower reaches of space to experience a few minutes of weightlessness and a view of the Earth below.

The company intends to operate a fleet of spaceships out of Spaceport America in the high desert of southern New Mexico.

The flight was delayed two days due to winds, and company founder Richard Branson tweeted that he had to miss it so he could attend a concert in Colombia to raise money for humanitarian aid to crisis-stricken Venezuela.

"Sad to miss spaceflight but looking forward to the concert," he wrote.

The spaceship, named VSS Unity, is carried aloft by a special carrier aircraft and released at high altitude where it ignites its rocket. It first reached space on Dec 13 in

a flight to an altitude of 51.4 miles (82.7 kilometers) at slightly less than Mach 3.

Earlier this month, the rocket motor from that flight was donated to the Smithsonian's National Air and Space Museum in Washington, DC, and pilots Mark "Forger" Stucky and Rick "CJ" Sturckow were awarded commercial astronaut wings by the US Department of Transportation.

The only previous commercial astronaut wings went to pilots Mike Melvill and Brian Binnie, for their 2004 flights in SpaceShipOne, the predecessor to Virgin Galactic's rocket plane, which is a design called SpaceShipTwo.

## Evaluating

A major goal of Friday's flight was evaluating its handling during descent with its twin tails rotated upward relative to the fuselage.

The "feathered" configuration is used to slow and stabilize the craft as it falls back into the thickening atmosphere. The name came from designer Burt Rutan comparing the mechanism to the feathers of a badminton shuttlecock. The tails rotate back to normal position for the glide to Earth.

Altitude and speed were not specific targets for the flight, Virgin Galactic CEO George Whitesides said in an interview earlier this week.

"If we have sort of a nominal-duration burn we will get up pretty high, but that is not one of the formal test goals for this one," he said.

Whitesides indicated that cabin esthetics, including coloration and the play of sunlight across surfaces, are considered important and that the focus on it also shows the program is advancing.

"That's not to say that we are fully done with vehicle testing, but we really are starting to move into the interiors testing phase, and that's a really important milestone for the company," he said.

Whitesides said he could not say how many more test flights remain.

"We're getting there. I mean we're making good progress, and I don't think it's a huge remaining number now. There's light at the end of the tunnel now," he said.



Dan Kurtzman, of San Francisco, stands on a mound of snow to get a better view of a snow-covered landscape in Yosemite National Park, Calif on Feb 20. (AP)



Thunberg



Ovchinin

## Discovery

'Probe' lands on asteroid: A Japanese space probe named after a falcon, Hayabusa 2, has touched down on an asteroid more than 300 million km (186 million miles) from Earth on a mission to seek clues about the origins of life. Japan's space agency said on Friday.

The spacecraft's landing on the asteroid Ryugu, just 900 metres (3,000 feet) in diameter, came after an initial attempt in October was delayed because it was difficult to pick a landing spot on the asteroid's rocky surface.

The Japan Aerospace Exploration Agency, or JAXA, said on Friday Hayabusa 2 fired a small projectile into the surface of Ryugu to collect particles scientists hope the spacecraft will bring back to Earth for analysis.

It is the second Japanese spacecraft to land on an asteroid after Hayabusa touched down on a near-Earth asteroid named Itokawa in 2005. It was the first to bring asteroid dust back to Earth, although not as much as hoped.

Asteroids are believed to have formed at the dawn of the solar system and scientists say Ryugu may contain organic matter that may have contributed to life on Earth. (RTRS)

## Teen leads students march:

Swedish teenager Grete Thunberg led a march of thousands of Belgian students who are skipped classes for the seventh Thursday in a row to march through Brussels and draw more attention to fighting climate change.

The 16-year-old Thunberg first addressed a European Union conference, chiding adults for their inaction in the face of such climatic global dangers. She said youngsters are being forced to skip school and protest because adults are not addressing climate issues quickly enough.

She told the European Economic and Social Committee plenary session that "we are school striking because we have done our homework" on the dangers facing the Earth.

Thunberg has become her generation's voice on climate change after inspiring students around the world to go on strike to express

their anger and angst over global warming.

Also at the conference was EU Commission president Jean-Claude Juncker who said he was "glad to see that young people are taking to the streets for climate change." (AP)

Space crew unfazed: Two astronauts who survived a midair rocket failure in October said on

Thursday they had received counselling following their brush with death and felt ready to fly again next month.

Russian cosmonaut Alexei Ovchinin and US astronaut Nick Hague appeared relaxed in Russia's Star City as they discussed preparations for their first space flight since then.

Together with NASA astronaut Christina Koch they are due to

blast off for the International Space Station shortly after midnight on March 15.

A sensor failure two minutes after launch on Oct 11 forced Ovchinin and Hague to perform an emergency landing from which they escaped physically unscathed.

"We had conversations with psychologists ... I understood they were assured both that everything was in order with us and that we felt that everything was in order psychologically," Ovchinin told reporters.

"So I think ...everything will work out for us this time."

Hague said he had not experienced lingering problems since the launch failure. (RTRS)

Giraffe dies in accident: Kansas City Zoo officials say an adult male giraffe died after suffering a spinal cord injury in a zoo barn.

The zoo says that on Wednesday the 9-year-old male, named Hamisi, caught his head in an area of the barn that allows keepers to reach the animals. The officials believe Hamisi panicked and damaged his spine.

The Kansas City Star reports Hamisi sired two giraffes last year. He came to Kansas City from Disney's Animal Kingdom in 2016.

Sean Putney, senior director of zoo operations, says the barn was built in 1995. He said no animal had been previously injured in the barn.

The zoo's remaining giraffes are housed in a separate area of the giraffe barn that does not have the same configuration as Hamisi's area. (RTRS)

## Israel's first lunar launched:

A SpaceX Falcon 9 rocket blasted off from Florida on Thursday night carrying Israel's first lunar lander on a mission that if successful will make the Jewish state only the fourth nation to achieve a controlled touchdown on the moon's surface.

The unmanned robotic lander dubbed Beresheet – Hebrew for the biblical phrase "in the beginning" – soared into space from the Cape Canaveral Air Force Station at about 8:45 pm EST (0145 GMT Friday) atop the 23-story-tall rocket.

Beresheet, about the size of a dish-washing machine, was one of three sets of cargo carried aloft by the Falcon 9, part of the private rocket fleet of billionaire entrepreneur Elon Musk's California-based company SpaceX.

The rocket's two other payloads were a telecommunications satellite for Indonesia and an experimental satellite for the US Air Force.

Beresheet was jettisoned into Earth orbit about 34 minutes after launch, followed 15 minutes later by the release of the two satellites, according to a SpaceX webcast of the event. (RTRS)



Thousands of visitors line up to visit the Great Temple of Ramses II, to observe the sun to send a beam of light into the ancient temple's dark inner chamber for over ten minutes in Abu Simbel, 870 kilometers (540 miles) south of Cairo, Egypt on Feb 22. Thousands of people visited the temple to watch the sun illuminate colossal statues, a rare 3,200-year-old astronomical ceremony that happens twice a year. (AP)