

Coronavirus

Indonesia faces catastrophe

Australia offers adults AZ to speed up rollout

CANBERRA, Australia, June 29. (AP): Australia is offering AstraZeneca to all adults in a bid to rapidly ramp up sluggish vaccination rates as more of the country on Tuesday locked down against the spread of COVID-19.

The government late Monday agreed to indemnify doctors who administer the AstraZeneca vaccine that has been blamed for at least two fatalities from a rare blood clot complication in Australia since April.

That exceeds the single death from COVID-19 in Australia this year, and vaccine hesitancy has increased with only 5% of the population fully inoculated.

Pfizer has been the recommended vaccine for people younger than 60 since a 52-year-old woman died in May of blood clots in the brain blamed on AstraZeneca.

But supply of Pfizer, the only alternative to Australian-manufactured AstraZeneca, cannot keep up with demand.

"There's a preference for Pfizer until the age of 60. That's a preference," Chief Medical Officer **Paul Kelly** said on Tuesday.

"It's a discussion for doctors to have with their own patients and work through their own risk and benefit in relation to that," Kelly added.

The Queensland state capital Brisbane and surrounding cities will be in lockdown for three days from late Tuesday after the government reported two new COVID-19 infections.

Sydney reported 19 new infections in that east coast city, Perth reported two new cases on the west coast and Darwin reported two new cases on the north coast. Those three cities and their surrounds are already in lockdown.

Australia has been relatively successful in containing clusters throughout the pandemic, registering fewer than 31,000 cases and 910 deaths within a population of 26 million. But the new clusters of a variant thought to be more contagious have highlighted the nation's vulnerability through a slow vaccine rollout.

Vaccination

AstraZeneca was supposed to be the mainstay of Australia's vaccination rollout free of the uncertainties of international supply chains. It was recommended for all adults until a 48-year-old woman died of blood clots in April four days after her first jab. AstraZeneca was then said to be a safe option for adults aged over 50 until the 52-year-old died.

Some epidemiologists argue the government should speed up the rollout by reducing the gap between AstraZeneca jabs from 12 to eight weeks. But some Australians are now refusing to take a second shot because of the evolving perception of the blood clotting risk.

The New South Wales state government is highlighting vaccines' apparent successes in the current Sydney cluster.

Twenty-four people who attended a birthday party on June 19 became infected with the delta variant. None had been vaccinated. But six fully vaccinated health workers and an aged care worker who had received the first of two doses attended the house party and were not infected.

"The early and strong indications from that party ... are, if you're vaccinated, you are much more likely to not be infected with COVID-19," Health Minister Brad Hazzard said on Monday.

State Agriculture Minister Adam Marshall said he was the only one among four government colleagues who dined together at a Sydney pizza restaurant on June 21 to become infected. An infected person had been at the restaurant earlier.

Marshall revealed he was the only one among the four who had not had a dose of vaccine because, at age 36, he was not eligible.

Sydney in the east and Darwin in the north were locked down on Monday. Perth in the west made masks compulsory for three days and warned a lockdown could follow after a resident tested positive after visiting Sydney more than a week ago.

Brisbane and Canberra have or will soon make wearing masks compulsory.

Most of the new cases stem from a Sydney limousine driver who tested positive on June 16 to the delta variant, which is thought to be more contagious. He was not vaccinated, reportedly did not wear a mask and is suspected to have been infected while transporting a foreign air crew from Sydney Airport.

New South Wales state on Monday reported 18 new cases in the latest 24-hour period. The tally was fewer than 30 cases recorded on Sunday and 29 on Saturday.

Authorities warned that a two-week Sydney lockdown that began on Friday would not reduce infection rates for another five days.

Meanwhile, Indonesia needs to urgently increase medical care, testing and vaccinations as the number of new infections in the country has rapidly increased and left it "on the edge of a COVID-19 catastrophe," the Red Cross said Tuesday.

The group said its coronavirus hospital in Bogor, outside of Jakarta, was "overflowing" and emergency tents had been set up to be able to house more patients. It was a similar scene at other hospitals near the capital, including in at the Bekasi city hospital that had 90% of its beds filled.

"We are seeing record number of infections, but every statistic is a person who is suffering, grieving or struggling to support the people they love," Sudirman Said, secretary general of Indonesian Red Cross, said in a statement. "Our medical teams are providing lifesaving care, with hospitals full to the brim and oxygen supplies critically low."

Variant

The surge in Indonesia, the world's fourth most populous nation, is being blamed in part on the delta variant of the virus, which was first spotted in India and is thought to be more contagious. Indonesia reported more than 20,600 new cases on Monday and more than 400 deaths.

Indonesia has seen more than 2.1 million cases since the pandemic began and more than 57,500 deaths, both the most in Southeast Asia.

Less than 5% of adults in the nation of 270 million people have been fully vaccinated. The Red Cross called for global action so countries like Indonesia can get the vaccines they need.

President Joko Widodo announced Monday that his government will administer COVID-19 vaccines for children as young as 12 after the country's Food and Drug Monitoring Agency green-lighted emergency use of the Sinovac vaccine for children.

Widodo said in a video statement that he was grateful that the agency has issued an emergency use of authorization for the Sinovac vaccine so that "vaccination for children that age can start immediately."

He has asked authorities to boost the country's vaccination rollout to two million shots a day by August from the current level of about 1 million a day, as a second wave of infections engulfs Southeast Asia country.

Monday's announcement came a day after health authorities announced the country's largest one-day jump in new coronavirus infections, the second day in a row, as the Health Ministry reported 21,342 new cases and 409 deaths over the past 24 hours.

The latest tally on Monday showed the country's total confirmed cases since the pandemic began at more than 2.1 million, the most in Southeast Asia, including confirmed fatalities to more than 57,100.

Authorities have so far only fully vaccinated 13.1 million of Indonesia's 270 million people and partially vaccinated another 14.2 million.



Kelly



The Wax Lake Outlet, right, and Wax Lake Delta, part of the Atchafalaya Basin, are seen from 8,500 feet in this aerial photo in St. Mary Parish, La., Tuesday, May 25, 2021. (AP)



This image made available by NASA shows the planet Venus made with data produced by the Magellan spacecraft and Pioneer Venus Orbiter from 1990 to 1994. (AP)

Discovery

Lego unveils 'brick': Danish toymaker Lego has presented its first building bricks made out of recycled drinks bottles — an experimental project that if successful could eventually go into production.

In a statement, the group said the prototype uses plastic from discarded bottles from the United States. On average, a one-liter bottle provides enough raw material for ten Lego bricks with two rows of four studs, said the company which is based in Billund, western Denmark.

"We know kids care about the environment and want us to make our products more sustainable," said **Tim Brooks**, the Lego group's vice president of environmental responsibility. "Even though it will be a while before they will be able to play with bricks made from recycled plastic, we want to let kids know we're working on it."

The company said its discarded bottle suppliers use processes approved by the US Food & Drug Administration and the European Food Safety Authority.

The bottles are made of PET plastic, or polyethylene terephthalate, which doesn't degrade in quality when recycled.

The prototype followed more than three years of research during which hundreds of variations of PET materials and other plastic formulations were tested, Lego said. It can fit with Lego elements made over the past 60 years. (AP)

Vaccine creators win prize: Seven researchers whose work contributed to designing COVID-19 vaccines have won Spain's prestigious Princess of Asturias award for scientific research.

The award panel announced it had chosen Hungary's Katalin Karikó, Americans Drew Weissman and Philip Felgner, Germany's Ugur Sahin and Ozlem Tureci, Canadian Derrick Rossi and Sarah Gilbert of the United Kingdom as this year's prizewinners.

The panel said the seven were "leading figures in one of the most outstanding feats in the history of science."

"With their long careers in pure research, they led the way to innovative applications such as obtaining, in an extraordinarily short space of time, effective vaccines to fight against the COVID-19 pandemic," the citation said.

"Their work constitutes a prime example of the importance of pure research for the protection of public health the world over," it added.

The annual 50,000-euro (\$60,000) award is one of eight Asturias prizes handed out each year by a foundation named for Crown Princess Leonor. Other categories include art, sport and social sciences.

The awards are among the most prestigious in the Spanish-speaking world. An awards ceremony typically takes place in October in the northern Spanish city of Oviedo. (AP)

Cicadas threat to fruit trees: The periodical cicadas that emerge every 17 years are due to show up again in Tennessee, and University of Tennessee Extension officials say they could threaten young fruit trees.

Trees are at risk if there is a large cicada population nearby, the university Institute of Agriculture said.

"Even a single female cicada may cause a lot of injury," **David Lockwood**, a University of Tennessee Extension specialist who works with fruit and nut tree growers, said in a news release.

Some insecticides can be used to prevent damage, but blocking cicadas is more effective, extension entomologist Frank Hale said.

"Covering the canopy of young plants with netting having a mesh size of a quarter inch or less and tying it around the trunk under the lowest limbs will provide a physical

Science

Uses airborne tech to monitor dwindling deltas

NASA looks at US delta system

MIKE ISLAND, La., June 29. (AP): Erosion, sinking land and sea rise from climate change have killed the Louisiana woods where a 41-year-old Native American chief played as a child. Not far away in the Mississippi River delta system, middle-school students can stand on islands that emerged the year they were born.

NASA is using high-tech airborne systems along with boats and mud-slogging work on islands for a \$15 million, five-year study of these adjacent areas of Louisiana. One is hitched to a river and growing; the other is disconnected and dying.

Scientists from NASA and a half-dozen universities from Boston to California aim to create computer models that can be used with satellite data to let countries around the world learn which parts of their dwindling deltas can be shored up and which are past hope.

"If you have to choose between saving an area and losing another instead of losing everything, you want to know where to put your resources to work to save the livelihood of all the people who live there," said lead scientist Marc Simard of NASA's Jet Propulsion Laboratory.

While oceans rise because of climate change, the world's river deltas — home to seafood nurseries and more than 300 million people — are sinking and shrinking.

To figure out where to shore up dying deltas, NASA is studying water flowing in and out of Louisiana's Atchafalaya and Terrebonne basins, sediment carried by it, and plants that can slow the flow, trap sediment and pull carbon from the air.

Louisiana holds 40% of the nation's wetlands, but they're disappearing fast — about 2,000 square miles (5,180 square kilometers) of the state have been lost since the 1930s. That's about 80% of the nation's wetland losses, according to the US Geological Survey.

Using two kinds of radar and a spectrometer that measures more colors than the human eye can distinguish, high-altitude NASA airplanes have been collecting information such as water height, slope, sediment, and the types and density of plants. Some measurements are as precise as a couple of centimeters (less than an inch).

On boats and islands, scientists and students from across the country take samples and measure everything from currents to diameters of trees. Their findings will be used to calibrate the airborne instruments.

"I've been working here 15 years, and one of the toughest parts about working in a delta is you can only touch one little piece of it at any one time and understand one little piece of it at one time," said Robert Twilley, a professor of oceanography and coastal sciences at Louisiana State University. "Now we have the capability of working with NASA to understand the entire delta."

The Mississippi River drains 41% of the continental United States, collecting 150 million tons (130 million metric tons) of sediment per year. But, largely because of flood-prevention levees, most sediment shoots into the Gulf of Mexico rather than settling in wetlands.

"Deltas are the babies of the geo-

logical timescale. They are very young and fragile, in a delicate balance of sinking and growing," NASA states on the Delta-X project website.

Threats

In geological time, young means thousands of years. On that scale, Louisiana's Wax Lake Delta is taking its first breaths. It dates to 1942, when the Army Corps of Engineers dug an outlet from the lake to reduce flood threats to Morgan City, about 20 miles (32 kilometers) away. Sediment from the Atchafalaya River filled the lake, then began creating islands in the Gulf.

The new islands are thick with black willows and, in spring, thigh-high butterweed topped with small yellow flowers.

Older wetlands in areas surveyed by Delta-X aircraft are more diverse, their soil rich with humus from generations of plants. Along nearby Hog Bayou, blue buntings and scarlet tanagers dart through magnolia branches and skinks nest atop bald cypresses and alligators float in the water below.

In addition to working at LSU, Twilley has spent about nine years as executive director of Louisiana Sea

finding and totally unexpected." Further studies will be needed to ascertain whether microbial life might exist deep in the clouds of Jupiter, according to Hallsworth and NASA astrobiologist Chris McKay, a co-author on the research paper published Monday in the journal Nature Astronomy.

As for Venus, three new spacecraft will be headed there later this decade and early next — two by NASA and one by the European Space Agency. Hallsworth and McKay don't expect their results to change regarding uninhabitable water activity at our solar system's hottest planet.

"It's unfortunate because I'm very interested in searching for life on other worlds and I would love to think that Venus is habitable," McKay said.

The scientists behind the September study possibly hinting at life in the Vesuvian clouds based their findings on the presence of the toxic gas phosphine. On Earth, it's associated with life. The researchers argued that Venus' phosphine levels are too high to be geologic in origin.

"We are not trying to push Venus as a definitely habitable world. So far all conventional interpretations say Venus is uninhabitable!" said Massachusetts Institute of Technology astrophysicist Sara Seager, part of the September team.

Regarding the latest study, "we are tremendously enthusiastic about leaving no stone unturned, in case there is life on Venus," she added in an email.

Grant College Program, which uses the Wax Lake Delta as a classroom for middle- and high-school students.

"We take kids and make them stand on land that was formed the year they were born," Twilley said.

In contrast, the adjacent Terrebonne Basin is shrinking so rapidly that the government is paying to move the Isle de Jean Charles band of Biloxi-Chitimacha-Choctaw Indians from a vanishing island to higher ground.

That band isn't the only Native American group losing ground.

"The wooded areas we used to run through as children — they're dead," said Chief Shirell Parfait-Dardar of the Grand Caillou/Dulac Band of Biloxi-Chitimacha Indians, based less than 50 miles (80 kilometers) from the Wax Lake Delta.

"Ghost forests" are common in degrading deltas where salt water intrudes as land sinks and erodes, LSU's Twilley said.

Louisiana is considering two projects that would divert Atchafalaya River sediment to build land in the Terrebonne Basin, but a decision is more than a year away, according to the state Coastal Restoration and Preservation Authority.

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Brooks



Lockwood

barrier to cicada egg laying," he said.

Lockwood recommends using a frame to suspend the netting so it doesn't damage small branches. (AP)

Court bans glue trapping: France's top administrative court on Monday definitively banned the use of glue trapping to hunt birds, a technique that was denounced by animal protection groups as barbaric and endangering some species.

The Council of State ruled that glue trap hunting of thrushes and blackbirds "cannot be authorized" because it is contrary to European law.

In addition, the court stated that being a "traditional" hunting method doesn't alone justify an exception.

The technique, used in southeastern France, consists of brushing branches with glue to trap birds, which are later used to attract other birds for shotgun hunters. (AP)