

## Brazil food sector accounts for 74% of emissions

SAO PAULO—Food production in Brazil, the world's biggest beef and soybean exporter, accounted for 74% of the country's greenhouse gas emissions in 2021, according to a study released by environmental group Climate Observatory.

Most emissions do not come directly from food production, but deforestation to convert native vegetation into farms and pastures is the main source of carbon released from Brazil into the atmosphere, the group found.

"This report should be read by agribusiness representatives and

the government as a wake-up call," said Marcio Astrini, executive secretary of the Climate Observatory.

"It demonstrates, beyond any doubt, that agribusiness will determine whether Brazil is a climate hero or villain."

Of the 1.8 billion tons of greenhouse gases emitted from Brazil in 2021 to make food, nearly 78% was associated with beef production, including emissions linked with deforestation for livestock farming and pollution from beef packing plants, the study found. — **Reuters**

# 'Climate-smart' rice irrigation project planned for Nueva Ecija

THE National Irrigation Administration (NIA) said it is planning to roll out a climate-smart irrigation project in Nueva Ecija, a major rice-producing province in Central Luzon.

Projects can be made climate-smart "by increasing water productivity in national irrigation systems while reducing carbon emissions in irrigated rice cultivation," the NIA said in a statement.

It added that the "climate smart" project is aimed at promoting broad adoption of alternative wetting and drying technologies in irrigated areas.

The projects will offer financial incentives and capacity-building activities to partner farmers.

The NIA said the initiative will be carried out via a memorandum of understanding (MoU) with Ostrom Climate Solutions, Inc.

It added that the Climate-Smart Rice Project in Upper Pampanga River Integrated Irrigation Systems will be active in the area until 2028.

The project's goal is to contribute to the achievement of rice security and resiliency, it said.

The company will also manage all project fund releases in accordance with government accounting and auditing rules.

"Ostrom Climate shall provide funds for the implementation of

the project, thus incurring no cost to NIA," it added.

"With the signing of the MoU between NIA and Ostrom Climate, NIA looks forward to the realization of its vision of making the Philippines a climate-smart and climate change-resilient nation," it said.

Ostrom Climate is a Vancouver-based company providing carbon management solutions. — **Adrian H. Halili**

## How can sustainable agriculture make the fashion industry greener?

IZMIR, Turkey — In between rows of sprouting cotton crops, the dried-out stems of wheat and sugar beet carpet a stretch of farmland near Turkey's Aegean coast, helping to lock in soil nutrients and moisture — even in the scorching heat.

In nearby fields, where cotton is being grown without the protective blanket, the plants wilt and wither under the sun.

"Healthier soil means healthier cotton," said Basak Erdem, the farm manager of cotton fields owned and run by cotton manufacturer SOKTAS, which is based in Soke municipality, Aydin province.

Four years since SOKTAS first converted one hectare (2.47 acres) of land for regenerative farming — using nature-based methods to restore the land and improve its carbon storage capacity — the soil absorbs more than 18 tons of carbon per hectare a year.

That is equivalent to the annual greenhouse gas emissions of about 15 gasoline-powered cars, according to a calculator from the US Environmental Protection Agency.

"Every year, we see the results improve," Erdem told the Thom-

son Reuters Foundation during a tour of the company's fields.

SOKTAS was first introduced to regenerative agriculture in 2018 by the Stella McCartney label, which buys from the company, and now has 90 hectares (222 acres) of regenerative land.

Notorious for its intense use of natural resources and high waste output, the fashion industry has stepped up efforts in recent years to reduce its environmental impact and carbon footprint, with the UN's Fashion Industry Charter for Climate Action setting an industry-wide target to decarbonize by 2050.

While efforts have focused on reducing waste, brands and designers are increasingly endorsing projects in regenerative agriculture to help reduce the emissions produced in the manufacture of classic textiles, such as cotton and wool.

A pilot regenerative cotton project in Turkey, set up by international conservation group WWF, found that up to 15 times more carbon was stored in the soil compared to carbon sequestration in general.

"The soil becomes more spongy and lively," said Gokce

Okulu, cotton manager at Textile Exchange, a nonprofit working with the fashion and textile industries to help reduce the environmental impact of materials.

Carbon-absorbing organic matter is killed in conventional farming by over-plowing the earth, she added.

Regenerative farming uses little to no tilling of the soil to help maintain its biological make-up, in addition to growing a cover crop to shield the ground, said Ms. Okulu.

Thanks to the cover crop of wheat, beans and sugar beet at SOKTAS fields, the soil's organic matter content has doubled in four years, and each year the cotton needs less fertilizer and water, said Erdem.

According to the Confederation of British Industry, demand for cotton produced sustainably, which accounted for nearly 20% of the global cotton supply in 2020, is increasing.

The largest sustainable cotton initiatives are Better Cotton, Fairtrade, and Organic, but Jules Lennon, fashion lead at the Ellen MacArthur Foundation, said interest in regenerative cotton is growing, with lead-

ing denim producers Bossa and DNM among brands initiating partnerships.

"We've seen an absolute hub of activity that we've never seen before," Lennon said. "But first, we really need to prioritize keeping existing products in use," said Lennon, explaining that to transition to a circular economy, the industry needs to reduce the need for virgin materials by prioritizing recycling and reuse.

"Whatever (needs) remain, we want to come from regenerative sources," said Lennon.

The European Commission wants all planned regulations requiring fashion companies to produce clothes in a more sustainable way to be in place by 2028.

There are currently 16 pieces of legislation in the works, which could set minimum standards of durability and recyclability for any product entering the EU and require fashion companies to collect textile waste.

"Given the significance of the EU as a market, this could mean a big push to change overall sourcing practices," said Anita Chester, head of fashion at the Laudes Foundation, a philanthropic organization that helps fund the

Thomson Reuters Foundation's coverage of the green transition.

Little action has been taken to legislate on regenerative farming as it is still in the early stages of adoption, but some existing policies, such as the EU's proposed Soil Health Law would help to support the transition, added Ms. Chester.

Standards and certifications are starting to emerge, such as from the Regenerative Organic Alliance or regenagri, but brands and designers must invest in farmers to help them transition to regenerative agriculture, said Ms. Chester.

"Nothing can be regenerative if it's not just. You have to build community resilience by rewarding the farmers for their stewardship of nature and the services they provide in helping us combat climate change," said Ms. Chester. Zeynep Kayhan, a board member at SOKTAS, said it is hard to convince some brands to switch to regenerative cotton because it is more expensive.

In addition to the extra costs of soil tests, certification and investing in no-till machinery, regenerative farms initially lose profit on lower yields — before the

soil has improved — and swapping a secondary farmable crop in the winter for a cover crop that is not harvested, said Kayhan.

"It's more expensive to do the transition, but in time because you need less inputs, there will come a point when it will level off," said Kayhan.

Improving soil health also helps to stave off the impacts of climate change that are hitting the cotton sector.

Research by WTW insurers shows that half of all cotton-growing regions will be at increased threat from climate risks, such as water stress and extreme weather, by 2040.

"Water retention becomes even more important going forward because you need less water if you know the soil can keep its water and nutrients," said Kayhan.

In the spring, heavy rains damaged cotton seeds at SOKTAS, but the healthier soil in the regenerative plots helped the farmers to replant the seeds quickly, said Erdem.

"If all farmers did regenerative farming, then the climate could change," said Erdem. — **Thomson Reuters Foundation**

## Total electrification by 2028 to require funding of P71.97B

THE Department of Energy (DoE) said its various programs aimed at achieving total electrification by 2028 would require funding of P71.97 billion.

In its 2023-2032 National Total Electrification Roadmap (NTER), the DoE said programs such as the stand-alone home system (SAHS) would need P35.818 billion.

SAHS taps renewable energy (RE) coupled with batteries in hard-to-reach areas considered unviable for distribution line connection or microgrid systems.

Distribution line extension will require P35.23 billion, microgrid systems P347.82 million, and household electrification via regular connection P243.98 million.

Of the funding, 96.15% will be allocated to the National Electrification Administration (NEA) to support its Sitio Electrification Program, Barangay Line Enhancement Program, and Photovoltaic Mainstreaming projects.

"Electrification primarily entails providing electricity access to remote and rural areas, often located far from existing urban infrastructure. Notably, a large portion of households without electricity can be found in these remote rural areas, contributing to the country's poverty challenges," the DoE said.

It said funding sources include its Total Electrification Program as authorized by Energy Regulations (ER) No. 1-94, as well as NEA programs and the Missionary Electrification Plan of the National Power Corp. (NPC).

ER 1-94 authorizes payments to communities hosting energy sources and energy generating facilities.

As of June, the DoE said household electrification was 91.1% with 25.3 million house-

holds served, against the estimated potential households of 27.727 million implied in the 2020 Census of Population and Housing. For the rest of 2023, the estimated unserved households total 2.454 million.

By 2028, households are expected to number 29.475 million.

The DoE said that it has identified 285 unserved areas and 122 underserved areas in off-grid locations will be prioritized for tender to private sector investments through a competitive selection process (CSP).

According to Republic Act No. 11646 or the Microgrid Systems Act, the DoE is required to conduct a CSP for micro grid system providers (MGSP) to serve off-grid areas. The initial auction is expected to be conducted within the fourth quarter while the awarding is targeted by the first quarter of 2024.

The bidding will cover 98 unserved and underserved areas clustered into 49 lots. Some 15,645 households are expected to benefit from the initial auction.

"If there are no participants or no awarded MGSP in the CSP for a particular DoE-declared unserved or underserved area, the NPC shall continue to perform its missionary electrification mandate in the underserved area, considering its AHP (Accelerated Hybridization Project)," the DoE said.

AHP, which utilizes RE sources and technology, allows the private sector to enter off-grid areas and put up RE generation plants or facilities to supplement, augment, or replace the existing capacities of the Small Power Utilities Group's diesel power plants. — **Sheldeen Joy Talavera**

## Power spot prices in Luzon, Visayas rise

ELECTRICITY spot market prices increased in Luzon and the Visayas in early October, the Independent Electricity Market Operator of the Philippines (IEMOP) said, while prices in Mindanao fell.

The IEMOP said average price at the Wholesale Electricity Spot Market (WESM) in Luzon rose to P7.58 per kilowatt hour (kWh) in the first two weeks of October, from P4.87 kWh in September.

As of Oct. 15, average supply fell 8.69% to 12,150 megawatts (MW), while demand increased 2.78% to 9,638 MW.

In the Visayas, the average electricity spot market price rose to P8.49 per kWh in early October from P6.36 per kWh previously.

Supply was 2,309 MW, up 2.03%, while demand climbed 2.06% to 1,884 MW.

Meanwhile, average spot market prices in Mindanao declined to P4.96 per kWh during the period, from P5.71 per kWh in September.

IEMOP said the supply of electricity in Mindanao rose 9.20% to 3,133 MW. Demand rose 3.61% to 1,893 MW. — **Sheldeen Joy Talavera**

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