

MONEY TALKS IN THE RACE TO SUSTAINABLE DEVELOPMENT

As the world overhauls its systems en route to sustainability, financial institutions are **A VITAL LINK BETWEEN CAPITAL AND CRUCIAL PROJECTS** working towards a better future.

Whether baked, grilled, or raw, salmon is a favourite source of protein around the world. But wild populations are overfished, salmon farming often pollutes the oceans and the long-haul, refrigerated transport generates greenhouse gas emissions.

Most salmon for sushi and sashimi in Japan, for instance, is flown up to 17,000 kilometres from Norwegian or Chilean farms. With sustainability a growing priority, the Toyama seaside town of Nyuzen, is now welcoming new facilities for land-based salmon farming that will cultivate the fish locally. The initiative is a US\$74 million venture funded by a new type of bond.

"Companies these days not only seek profit, but also a purpose and strategy to help address social or environmental problems," says Yoshiro Hamamoto, president & CEO of Mizuho Securities, a financial institution based in Tokyo,

Japan, that has helped manage the financing of the project.

To decarbonize industries, while protecting biodiversity and the environment, vast sums of capital are needed. The United Nations estimated that achieving the 17 Sustainable Development Goals (SDGs) that it set out in a 2015 summit requires at least US\$5-7 trillion annually.

MONEY WITH MISSION

To raise this money, borrowers are increasingly turning to green, social, and sustainability (GSS) bonds — a financial instrument for borrowing money directly from various investors globally. Unlike general purpose bonds, which don't specify how the money will be used, GSS bonds come with a mission, says Hamamoto.

"For GSS bonds, we ask the issuer to use this bond for environmental, social and governance (ESG) purposes," Hamamoto says.

Globally, GSS bond issuances have soared from US\$114 billion in 2016 to US\$948 billion last year. By Mizuho Securities' estimate, Japanese GSS bond issuances should continue growing at about 60% per year, and will finance a wide variety of projects including the salmon project that seafood giant, Maruha Nichiro, is building in the town of Nyuzen; Taisei Corporation's CO₂-absorbing concrete initiative; and the Kitakyushu City government's efforts to conserve endangered horseshoe crabs.

The use of capital from GSS bonds is aligned with voluntary guidelines formulated in the past decade by the International Capital Market Association, based in Zurich. GSS bond proceeds are intended to go towards decarbonization or biodiversity protection, or projects with social aims such as addressing poverty or hunger. External auditors or third-party

organizations usually verify whether the use of funds comply with these guidelines.

Mizuho Securities was one of the first corporations in Japan to set up a sustainable finance desk to support the structuring of GSS bonds, Hamamoto says. Bonds enjoy a few advantages compared to regular loans.

A BIG POOL

Loans can only be obtained from financial institutions, explains Hamamoto. In comparison, countries, municipalities, companies, or even universities with good credit standing can issue bonds for institutional investors to buy.

"This means they can expand the base of investors globally," explains Hamamoto. In turn, that means borrowers can access far more money through the issuance of bonds than only approaching banks for loans — by a Bloomberg estimate, the global market for

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▲ A land-based fish farm in Nyuzen, Japan, could provide sustainable sources of Atlantic salmon (pictured) for foods including sushi and sashimi.

loans stands at US\$87.7 trillion, while the bond market is worth US\$133.2 trillion.

In Japan, some universities can issue bonds with term lengths up to 40 years, says Yasunobu Katsuki, an analyst specializing in SDGs at Mizuho Securities. The long maturity period allows universities to improve the quality of education and research by upgrading research facilities ahead of schedule, he says. The University of Tokyo, for instance, is using funds to finance the international Hyper-Kamiokande project, an ambitious neutrino detector being built under Mount Nijugoyama in Gifu prefecture, in central Japan.

Globally, more than 30 universities have issued GSS bonds, says Hamamoto, using the proceeds to support disadvantaged students, or build climate-friendly campus infrastructure. GSS bonds also have many takers, in particular green bonds, which are directed towards decarbonization.

For example, Pensioenfonds SNS Reaal, a Dutch pension fund, announced in August that it will put 100% of its €300

million bond portfolio into green bonds. Blue bonds, which protect biodiversity and promote ocean conservation, are also becoming popular, Katsuki says. Maruha Nichiro's salmon project, which started in 2022, is Japan's first blue bond offering.

Financial institutions are aligning themselves closely with sustainability, particularly for achieving climate objectives. During the 26th UN Climate Change Conference of the Parties, held in November 2021 in Glasgow, UK, the Glasgow Financial Alliance for Net Zero was formally launched, with hundreds of member financial institutions including Mizuho.

With a combined US\$130 trillion in assets, members must set targets to finance projects for reducing greenhouse gas emissions to net-zero by 2050. For Mizuho, the target is to invest 100 trillion Japanese yen (US\$677 billion) in sustainability-related projects by 2030, Hamamoto says.

SCIENCE MEETS FINANCE

Mizuho continues to research problems and solutions relating to sustainability, says

Hamamoto, whether in regard to food systems or vital industries that are hard to decarbonize. To identify promising partners, representatives of Mizuho regularly meet with scientists at universities. The company also holds regular networking sessions with start-up CEOs every quarter.

Hamamoto recalls meeting Mitsuru Izumo, the founder of Japanese biotech start-up Euglena Co., at one of these sessions. Hamamoto learned about Izumo's mission to use a species of microalgae called *Euglena gracilis*, which is rich in protein, to help address malnutrition in countries such as Bangladesh, as well as decarbonization. He asked to visit the factory, and after a two-hour tour at Euglena's facility in the suburbs of Tokyo, he decided immediately, it was something Mizuho needed to support.

Euglena Co. has a large-scale microalgae culturing facility on the sub-tropical island of Ishigaki in Okinawa prefecture, and also refines sustainable aviation fuel at a demonstration plant in Kanagawa prefecture. Blended with used cooking oil,

Euglena's sustainable aviation fuel powered the plane carrying Japanese Prime Minister Fumio Kishida in November 2022 to the G20 summit of world leaders in Bali, Indonesia.

As the challenge to slow climate change grows more urgent, and researchers warn we will struggle to meet SDG goals by the agreed date of 2030¹, there is little time to lose on financing and getting sustainable projects off the ground.

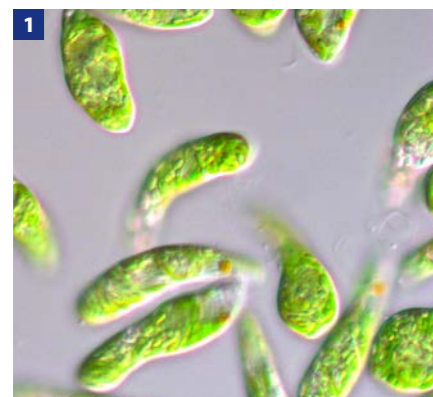
With limited capital in the world, timing is critical. "There are a thousand challenges, so we need to identify which problems are coming faster and then prioritize them," says Hamamoto. "Then we can make a roadmap for the future." ■

REFERENCE

1. Malekpour, S. et al. *Nature* **621**, 250-254 (2023).

MIZUHO

www.mizuhogroup.com/securities



COUPON	NAME	YIELD
2.10 %	3 Month	0.18 %
3.30 %	6 Month	0.42 %
4.40 %	1 Year	0.58 %
5.50 %	2 Year	0.80 %
6.60 %	5 Year	1.15 %
7.70 %	10 Year	1.48 %



1. Euglena Co.; 2. Torsten Asmus/Stock/Getty

- ▲ 1. Protein-rich microalgae *Euglena gracilis* could address malnutrition.
2. Green, social and sustainability (GSS) bonds have hit world markets.
3. President and CEO of Mizuho Securities, Yoshiro Hamamoto.