



Hands-on events such as rice planting and harvesting (pictured) provide opportunities for Kokudaka Project participants to not only earn points, but also directly interact with farmers and get a real sense of how difficult and rewarding rice farming is.



VIRTUAL COMMUNITIES, REAL IMPACT: SUPPORTING JAPAN'S RICE FARMING WITH WEB3

A Web3 project has been launched in a small municipality in Fukushima Prefecture to support rice farmers confronting such challenges as a graying population and labor shortages. Utilizing the various benefits that blockchain technology uniquely offers, the project has the potential to sustainably develop regional agriculture and local economies.

Sushi, ramen, teriyaki—there are countless Japanese foods beloved worldwide. But for Japanese people, the quintessential soul food, rooted deep in everyday life, is rice. In Japan, rice has been widely grown since times of old, forming the backbone of its rich food culture. Even today, Japan produces almost all of the rice that is consumed domestically, with many agricultural regions across the country maintaining its cultivation as a core industry. Lately, however, these communities have been grappling with major

challenges such as an aging, declining population and delayed adoption of digital technologies.

Nishi-Aizu Town in Fukushima Prefecture is one such community. Known for the quality of its rice, the small town has a population of around 5,400, and with over 48% of residents aged 65 or older, it faces severe labor shortages. More than 80% of the surrounding area is mountainous woodland, with small-scale farmland isolated and scattered in between, making large-scale expansion or efficiency improvements common to

agricultural flatlands difficult. The situation has spurred an entirely new approach: why not leverage



Surrounded by majestic mountains and abundant water, Fukushima Prefecture's Nishi-Aizu Town preserves traditional landscapes of rice paddies and fields that make the most of the region's natural features.

blockchain technology to resolve these issues? This idea resulted in a unique Web3 initiative known as the Kokudaka Project.

Launched by the town in 2023, the project takes a gamified approach. Through a dedicated app, anyone can join a virtual community supporting the area's rice production. Members earn points in accordance with their contributions, which range from purchasing rice and participating in planting and harvest events to volunteering for irrigation maintenance and sharing information on social media. Members start at the "farmer" rank, but progress in status as they accumulate points, culminating in the top rank of "feudal lord." Earned points can be redeemed for actual rice at harvest, or, in the future, could become possible to exchange for community currency.

The system, designed to not only support rice production but also establish a new local economic zone, is underpinned by blockchain technology. "Normally conventional community currency not only requires expensive anti-counterfeiting measures, but also causes an excessive burden on locals in managing them. However, with blockchain technology, which makes data manipulation incredibly difficult and eliminates the need for a central administrator, even small communities with limited funds can effectively manage it," said FUJII Yasushi, CDO (chief digital officer) of Nishi-Aizu.

The town hopes in future to establish and connect similar small

economic zones in other regions, enabling the direct exchange of harvested crops and other products. "We envision this system becoming the norm, preserving each local area's traditional agriculture and lifestyle while naturally connecting other regions to complement each other," explained NAGAHASHI Yukihiro, manager of the Kokudaka Project.

To make that a reality, the motivation of supporters—the system's driving force—is key. What makes the Kokudaka Project unique in this sense is its system of shared risk, where rice is purchased *before* harvest: in years of poor harvest, purchasers receive less rice, and conversely receive more in years of bumper harvest. Although the approach may not appeal to everyone, some 800 individuals across Japan now participate in the project. A possible reason for its popularity is that it provides a space where people can share their enthusiasm to protect regional rice production



The Kokudaka Project features playful retro-style illustrations evoking the Edo period. The term *kokudaka* refers to a historical unit of measurement for rice harvest yields; it was also, accordingly, an indicator of economic power and social status.

and appreciate a tangible sense of personal contribution.

"In our society today where many processes, including finance, are opaque 'black boxes,' initiatives that enhance a sense of self-affirmation and self-efficacy are increasingly sought after," Fujii reflected. The points earned through such personal experiences—sharing risks with farmers, aiming for bountiful harvests while learning about the harsh realities and rewards of rice farming through various support activities—might well enrich lives in a way that money cannot buy. ●



Participants in a harvest festival event in 2023 celebrated with rice balls made from newly harvested rice. Nishi-Aizu's rice is known for its quality, boasting an average taste score (a numerical measure of rice tastiness) of 85, with 70 or above considered excellent.