



UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION



The Fourth Technology Day

Themed

'Women, Rice, and Clean'

Organized by

UNIDO ITPO Tokyo

Exhibition 15:00-17:00

Networking 17:00-18:00

25 September 2024

UNU Annex Hall

The 4th Technology Day, themed 'Women, Rice, and Clean,'

will introduce outstanding Japanese technologies registered with the Sustainable Technology Promotion Platform (STePP) that focus on women's empowerment, enhancing productivity in the rice-centered food supply chain, and waste management.

In '**Women's Empowerment**,' we will showcase economical, reusable absorbent underwear designed to ease the burden of menstruation. This technology is part of UNIDO's vocational training program in Ethiopia. Technologies in the food supply chain sector are also expected to contribute to women's economic participation and income improvement.

For '**Enhancing Productivity in the Rice-Centered Food Supply Chain**,' we will present technologies that add value to processes like threshing, hulling, and rice polishing. Highlights include machinery that efficiently removes stones from rice and milling machines that produce high-value grain flours, enabling the production of rice flour bread as a substitute for imported wheat. These technologies can also be applied to grains other than rice.

We will also introduce transportation technologies that prevent product deterioration and waste, such as simple refrigerated vehicles for rural areas and food preservation bags effective against pests and oxidation. Additionally, low-cost soil hardeners for rural road maintenance can improve logistics efficiency.

In '**Waste Management**,' a field where Japan excels, we will present technologies for recycling old cars and plastics, managing sewer systems with pumps and gauges, and using purification tanks effective in remote areas. These technologies offer solutions tailored to your region's challenges.

UNIDO's vocational training program (2023-2024), funded by Japan's Ministry of Economy, Trade, and Industry, focuses on the transfer of the aforementioned technologies, including absorbent underwear (Ethiopia), car recycling (Uganda), pumps (South Africa and Botswana), and soil hardeners (Ghana), to various regions.

This event also encourages cross-sectoral innovation through networking, with the latter part dedicated to free interaction among attendees and exhibitors. We hope you enjoy this opportunity.

Fumio ADACHI
Head of UNIDO ITPO Tokyo



WOMEN'S EMPOWERMENT

Female Absorbent Underwear

Be-A Japan

Nanako TAKECHI: nanako.takechi@mncny.co.jp



In developing countries, cultural and economic factors often hinder women's access to menstrual products, leading to school absenteeism and diminished opportunities. This absorbent underwear is designed to empower women by providing a reusable solution that absorbs menstrual blood, allowing them to manage their periods effectively. Its innovative 7-layer structure includes quick-dry, antibacterial, and waterproof materials, ensuring comfort and preventing leaks. By addressing the challenges menstruating women face, the company aims to improve social awareness regarding menstruation and strongly promote women's empowerment.



AGRIBUSINESS

Enhancing Productivity in the Rice-Centered Food Supply Chain

COLD STORAGE BOX Portable

Coldstorage Japan Inc.

Daigo GOTO: goto@cold-storage.jp



This cold storage system is designed to support the development of cold chains in rural areas of developing countries. It operates on a power supply range of 100V to 260V and can also be powered by solar panels and batteries, making it ideal for off-grid locations. The trailer design allows for easy mobility, enabling deployment to areas where cold chain infrastructure is limited. With a temperature range from -25°C to 10°C, it can preserve a variety of perishable goods, reducing food loss and improving food hygiene. Optional features include HACCP certification and remote monitoring, enhancing both food safety and operational efficiency.

Multi-Layered Packaging Film

J-Chemical Corporation

Hidemichi TAKANASHI: h-takanashi@j-chemical.jp



iStockimage

In developing countries, limited resources, infrastructure, and storage lead to significant post-harvest losses, threatening food security. "Proguard" addresses these challenges with its multifunctional plastic film designed to extend the shelf life of food products and drinking water. Comprising three laminated layers with antimicrobial agents and antioxidants, it offers protection against moisture, insects, and UV light, preserving freshness and quality. This solution not only enhances local food security but also supports export and transportation, creating new business opportunities in agriculture, livestock, and fisheries while ensuring easy reuse and extended preservation.

Rice Husking & Milling Unit

KANRYU INDUSTRY CO., LTD.

Yuichi KOBAYASHI: kobayashi-y@kanryu.com



This compact rice husking and milling unit is designed to enhance income in rural areas of developing countries. It effectively removes foreign substances like soil, straw, and stones, improving the quality of locally produced rice. The unit includes a pre-cleaner, rice husking and milling machine, destoners, and a moisture meter, all of which contribute to producing high-quality polished rice. The durable, easy-to-operate design reduces maintenance costs and extends the lifespan of the machinery. By increasing the rice's added value, this technology empowers small-scale farmers to boost their income through better-quality products.

Rice Flour Making Machine

Nishimura Machine Works Co., Ltd.

Motoki NISHIMURA: nmoto@econmw.co.jp



This rice flour production technology uses a semi-wet and airflow method to preserve the rice's natural qualities, significantly enhancing the value of the rice flour. With a 60% market share in Japan, it minimizes starch damage, controls moisture, and allows for adjustable particle sizes, making the flour ideal for diverse food applications. As the demand for gluten-free alternatives rises, especially in regions where wheat is not grown, this technology empowers local rice producers by transforming their rice into high-value flour. This not only substitutes for wheat flour but also boosts local economies by elevating the marketability of rice products.

Soil Hardening Agent

SPEC COMPANY LIMITED

Shiyo KAMIBAYASHI: kamibayashi@spec-env.jp



STEIN is a soil hardening agent that significantly contributes to economic development in developing countries by enabling the construction of durable, low-cost infrastructure. By mixing STEIN with local soil, roads and irrigation systems can be built quickly and affordably, even in regions with challenging weather conditions. This environmentally friendly material, composed of 27 inorganic substances, reduces the need for costly materials like asphalt and concrete. STEIN's durability, requiring minimal maintenance and lasting up to 45 years, improves connectivity and water management, boosting local economies and enhancing the quality of life in underdeveloped areas.



WASTE MANAGEMENT

Suction Pump

EBARA CORPORATION

Setsuko SUNOUCHI: sunouchi.setsuko@ebara.com



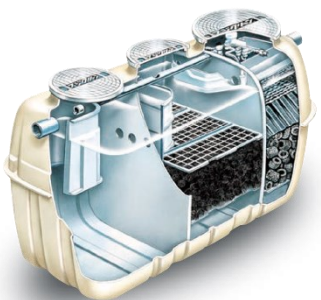
The model GS suction pump is a vital technology for improving drainage and water management in developing countries, addressing critical water distribution challenges. By efficiently transporting liquids for construction, agriculture, and industry, this versatile pump enhances access to water, fostering sustainable development. With world-class efficiency and energy-saving design, it reduces operational costs and energy consumption. The pump's simple maintenance features ensure reliability and ease of use, making it suitable for various environments. By improving drainage systems and ensuring reliable water access, the GS pump plays a crucial role in enhancing community health, economic growth, and overall quality of life in underserved regions.

Factory-made Onsite Wastewater

FujiClean Co., Ltd.

Treatment System

Kantaro MAEDA: kantaro_maeda@fujiclean.co.jp



The FujiClean wastewater treatment system offers an efficient and cost-effective solution for developing wastewater infrastructure in underserved areas. Utilizing FRP tanks and air blowers, this biofilm-based technology effectively removes organics and nitrogen from domestic wastewater, with capacities ranging from 1.0 m³/day to 40 m³/day. Its easy maintenance and small footprint allow for rapid deployment, significantly reducing initial costs compared to conventional systems. Certified in multiple countries, the FujiClean system provides treated water clean enough for irrigation. With over 600,000 units installed worldwide, it contributes to sustainable development by enhancing water quality and promoting environmental health in developing communities.

Auto Recycling System

KAIHO INDUSTRY CO., LTD.

Taishi SUZUKI: suzuki@kaiho.co.jp



This eco-friendly auto recycling system transforms the management of end-of-life vehicles (ELVs) into a profitable industry, promoting sustainable waste processing. By incorporating recycling equipment, a computerized management system called KRA, and training on recycling technologies, the system enhances operational efficiency. With 1.23 billion cars projected to become waste globally, effective processing is essential. The KRA system facilitates profitability forecasting and productivity evaluation, while insights from 85 countries boost sales volume. By empowering developing countries with localized training, this system not only reduces environmental harm but also fosters economic growth through sustainable waste management practices in the ELV recycling sector.

Plastic to Oil Recycling and Solid Waste Management

SHINKO TECNOS CO., LTD.

Mamoru KIMURA: info@shinko-mfg.co.jp



Two innovative technologies for waste management contribute to sustainable development in developing countries. The Hydrothermal Treatment process utilizes high-temperature, high-pressure steam to transform various waste materials into germ-free outputs like solid fuel, fertilizers, or livestock feed, using only water. This versatile system operates quickly and cost-effectively, making waste a valuable resource without causing pollution. Additionally, the Plastic to Oil Machine converts waste plastics and other materials into liquid fuel, combustible gas, and carbonized products, ideal for power generation. Both technologies emphasize simple operation, safety, and cost savings, promoting resource recycling and energy efficiency in communities.

Non-Contacting Radar Level Gauge

TOKYO KEIKI INC.

Shuntaro SAKAI: s-sakai@tokyo-keiki.co.jp



The Non-Contacting Radar Level Gauge is crucial for the effective operation of wastewater treatment systems, particularly in developing countries. It enables accurate monitoring of liquid levels in rivers and tanks, ensuring optimal performance and maintenance-free operation. With a rapid tracking capability and a measurement range of up to 30 meters, this gauge is designed for precision. Additionally, the Hybrid Level Gauge can detect water accumulation beneath maintenance holes, transmitting data for integrated monitoring systems. This technology ensures timely alerts and management of wastewater levels, enhancing the efficiency and reliability of sewage treatment processes in urban areas.



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