

JCCI International seminar 2025



Food Reborn

Towards a future with no waste

Innovating to Transform Waste into Resources for a Sustainable Tomorrow




**Headquarters
OKINAWA
OGIMI village**


**Indonesia
Factory**

FOOD REBORN Company Profile

Company Name	FOOD REBORN CO., Ltd.
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Date Founded	September 20, 2017
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Capital	340 million yen
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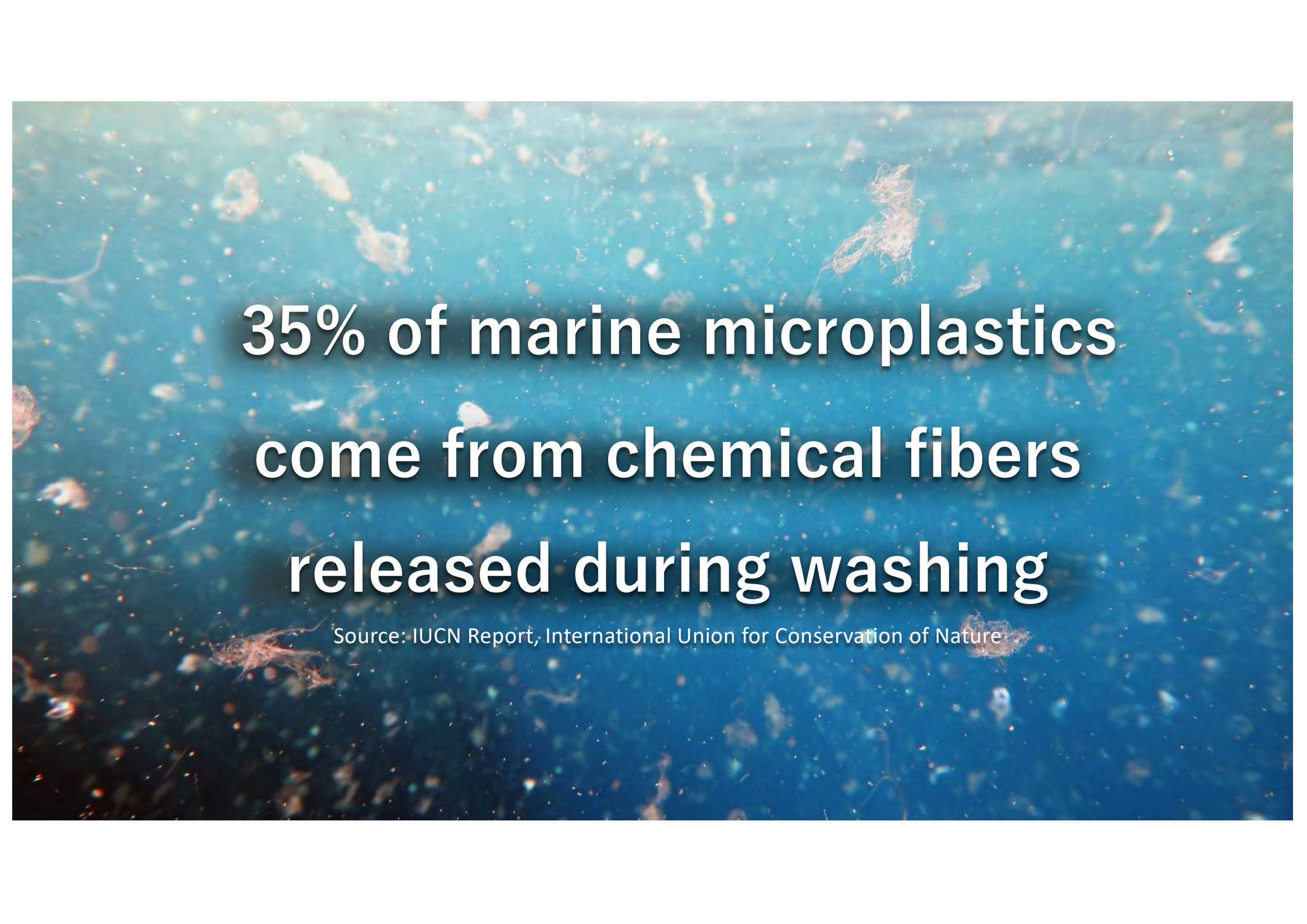
Head office & Factory	1302-1,Taminato,Ogimi-village, Kunigami-gun, Okinawa 905-1304, Japan
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Naha ofiice	2-7-11,Akamine,Naha-city,Okinawa 901-0154 Japan
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Taiwan subsidiary	FOOD REBORN TAIWAN CO.,Ltd.
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A photograph of a massive pile of discarded clothing and plastic waste at a landfill. A yellow excavator is visible on the left, and a truck is on the right. The sky is overcast.

92 million tons of
discarded clothing
per year

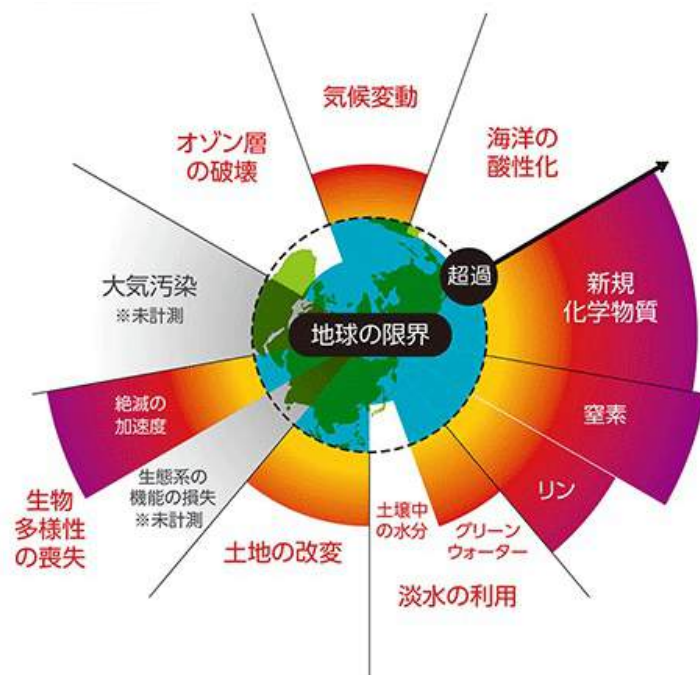
An underwater photograph showing a dense field of microplastics in the water. The particles are small, translucent, and fibrous, appearing as a cloud of debris against a blue background. The text is overlaid on this image.

**35% of marine microplastics
come from chemical fibers
released during washing**

Source: IUCN Report, International Union for Conservation of Nature

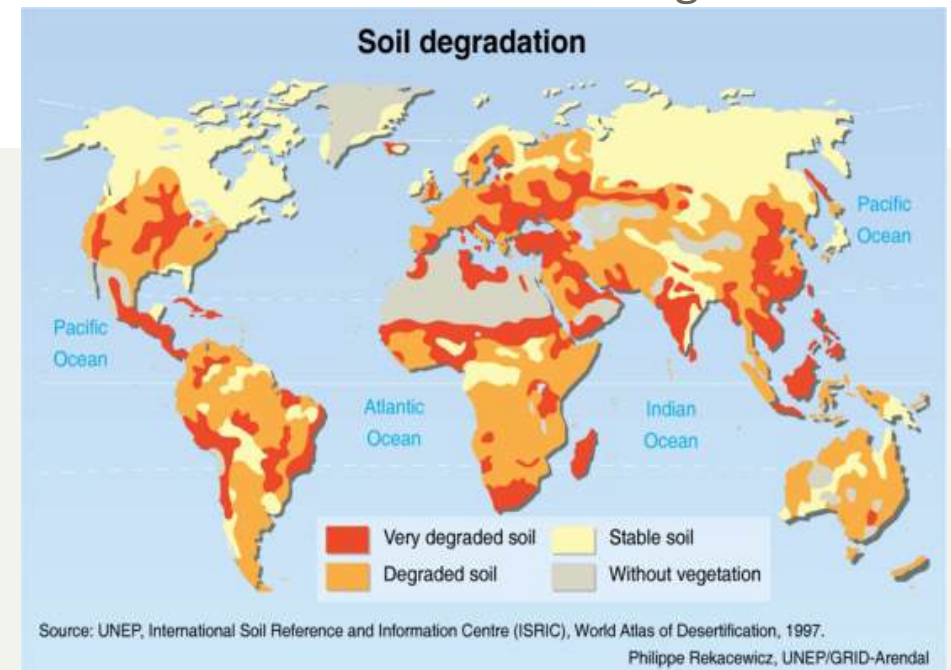
Earth's Limits: The Planetary Boundary

Human activities are negatively impacting the Earth



資料：Stockholm Resilience Centre (2022) より環境省作成

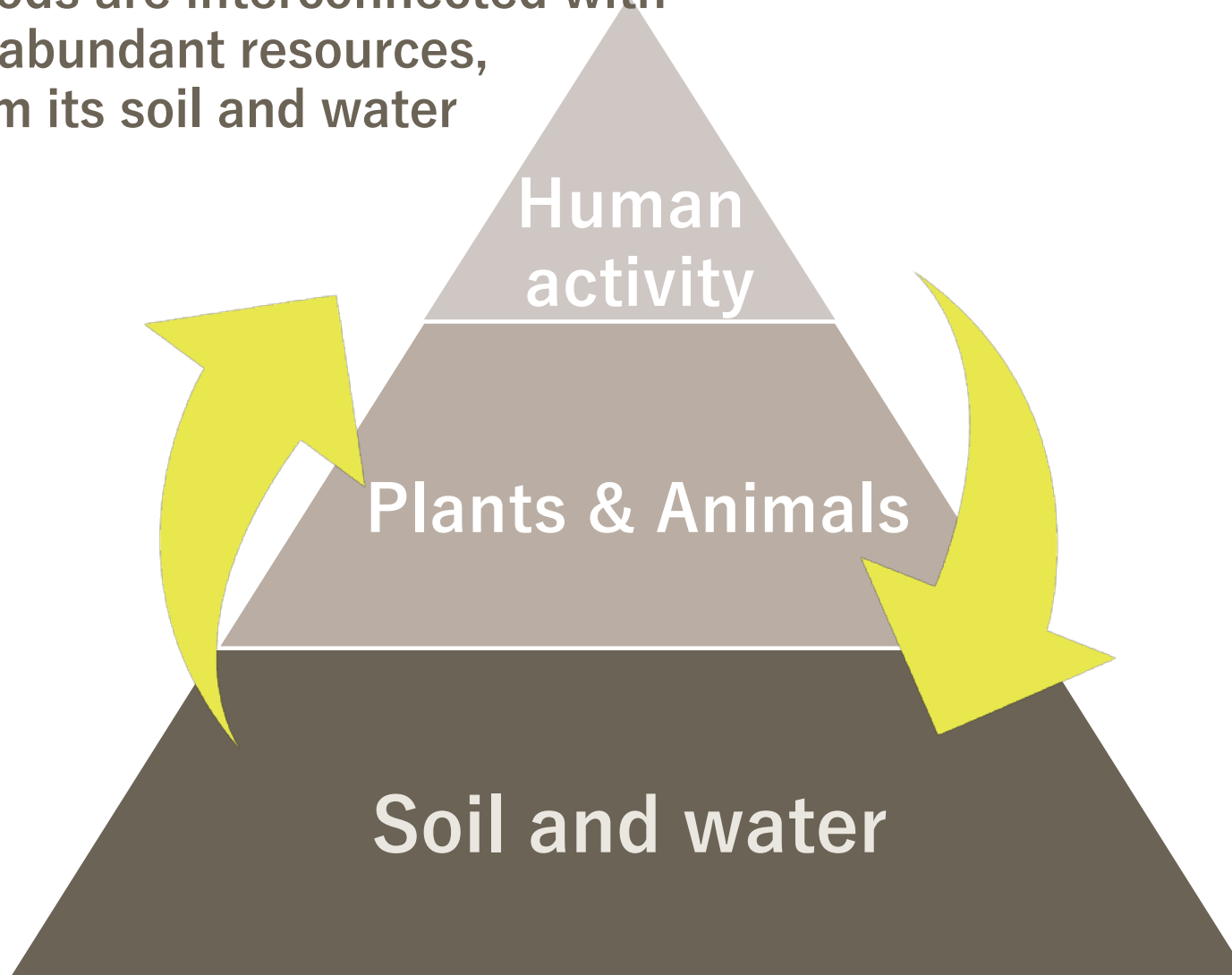
The world population of 8 billion people today, While 95% of food production depends on soil, 38% of the world's soil is degraded.



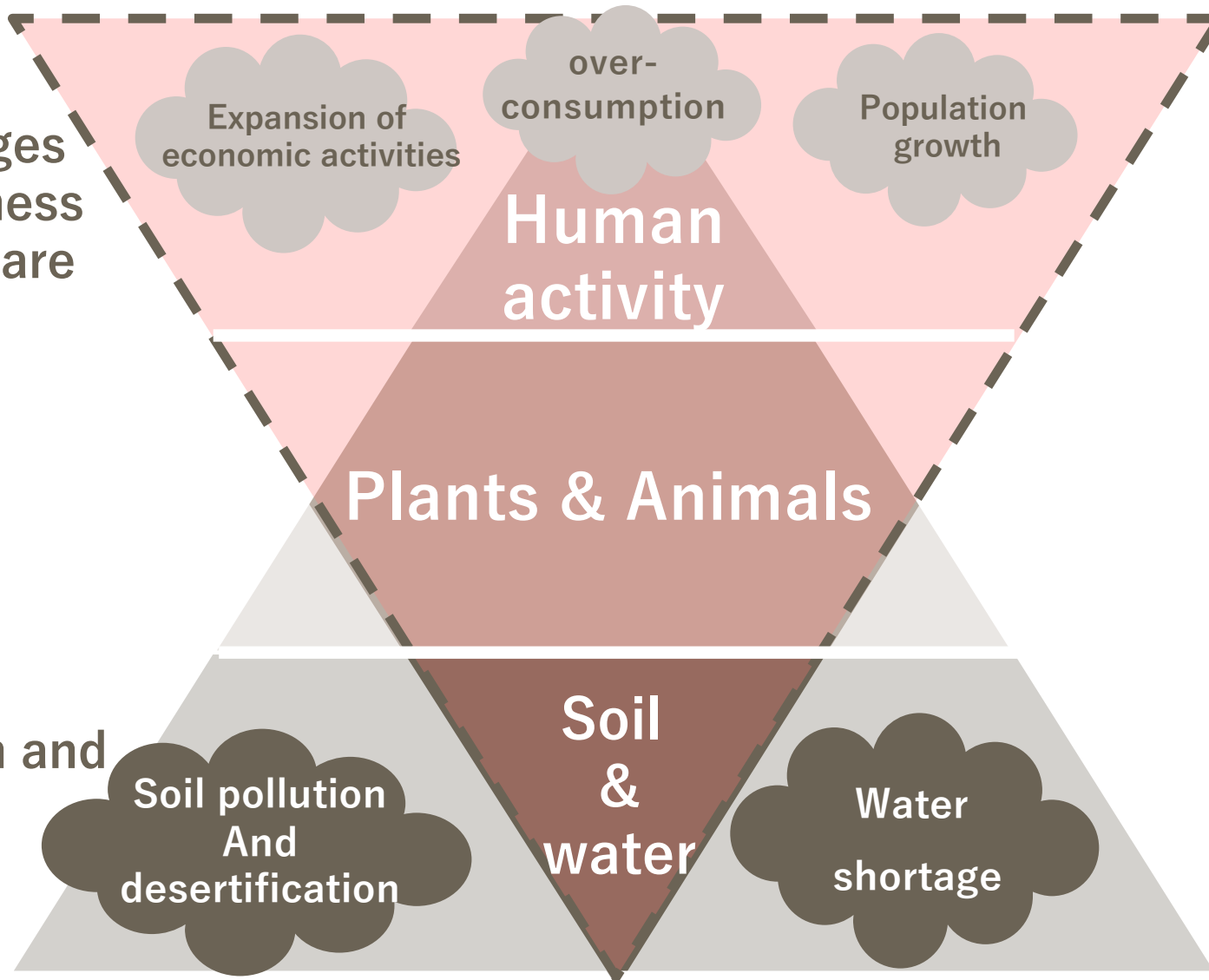
Source: United Nations Environment Programme (UNEP)

Factors include deforestation, overcultivation, slash-and-burn, excessive grazing, various waste landfills, and hazardous substance leaks from industrial activities.

Our livelihoods are interconnected with the Earth's abundant resources, starting from its soil and water



Radical changes
in consciousness
and behavior are
needed



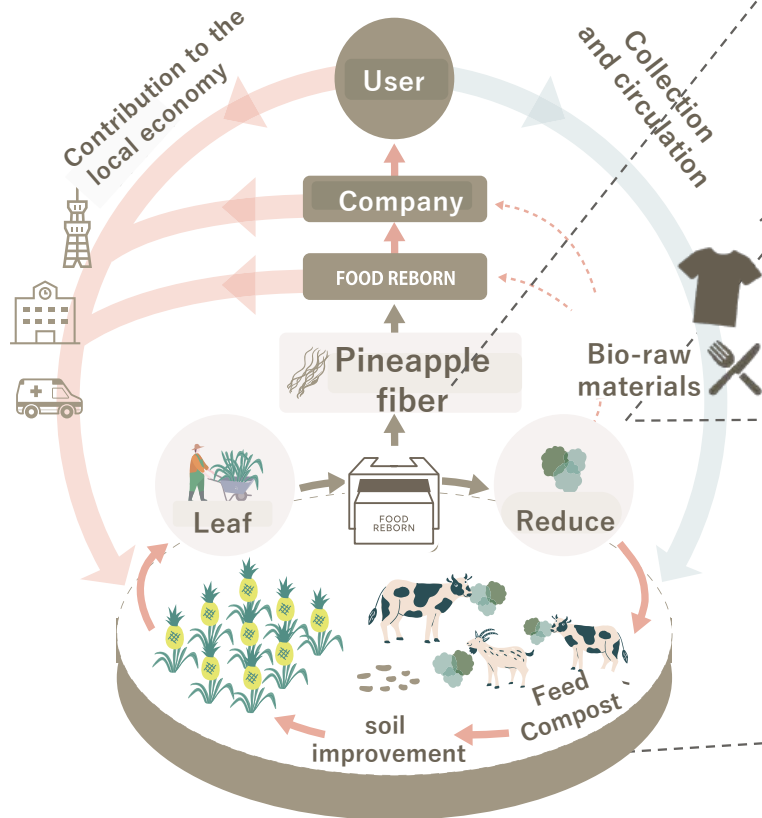
Regeneration and
recovery
are essential



Pineapple Plants

The leaves of pineapple plants,
2~3 times the volume of the fruit,
remain unutilized.

Overall Project Diagram



Fiber Extraction Technology

Unutilized resources, such as pineapple leaves and banana stems, are processed using high-pressure water jetting technology to extract fine fibers.

Microbial Saccharification Technology

Cellulose and residues obtained as by-products during fiber extraction are used as raw materials (waste fibers). This technology utilizes local resources by cultivating and saccharifying microorganisms (A9 bacteria).

Enzyme Extraction Technology

Enzyme components from pineapple stems, collected alongside leaf harvests, are extracted in significant quantities. Pharmaceutical bromelain, recognized for its anti-inflammatory and digestive benefits, has growing demand.

Tannin Dye Technology

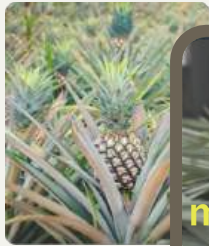
Waste tea leaves and grape skins, rich in polyphenols, are repurposed using Japanese tannin dye manufacturing techniques. By utilizing raw materials such as squeezed grape lees and persimmon tannin, the dyeing process produces tannin-based dyes. This technology ensures that the tannin dye can be returned to the soil, promoting a sustainable cycle.

Technology to Fully Utilize Fiber and Residue without Waste

Vein Fiber Extraction Technology Using Wat



13 patents filed and granted
(Including international patents)



60
million tons
of leaves



11
billion tons
of stems

Fiber



FASHION



AUTOMOTIVE



PAPER

Residue



ANIMAL
FEED



BIO
ETHANOL



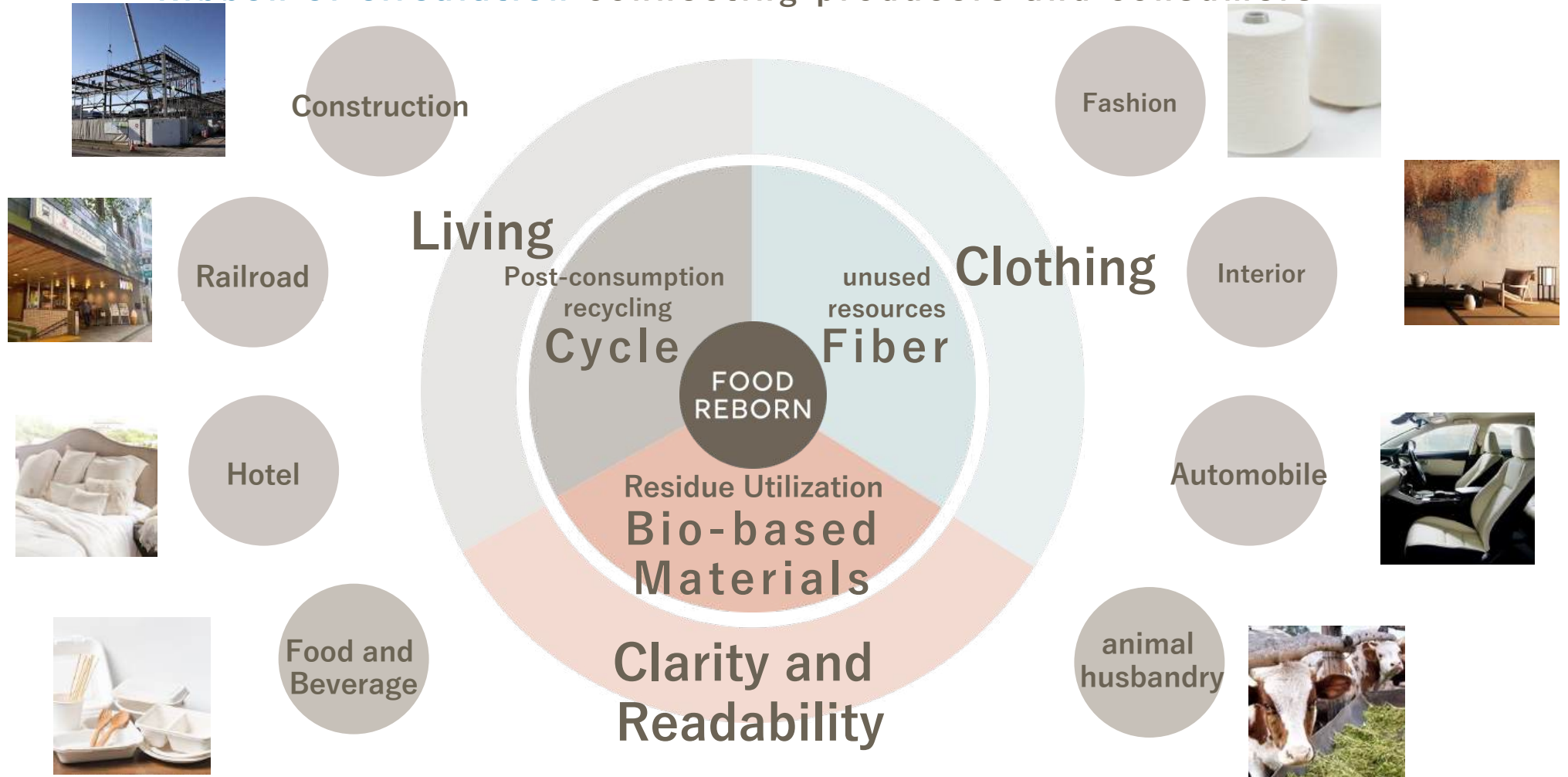
BIO
PLASTICS

Utilizing inedible agricultural parts to create the most sustainable materials,
while increasing farmers' income in Asia.

Local **climate** (local resources, cultural traditions)

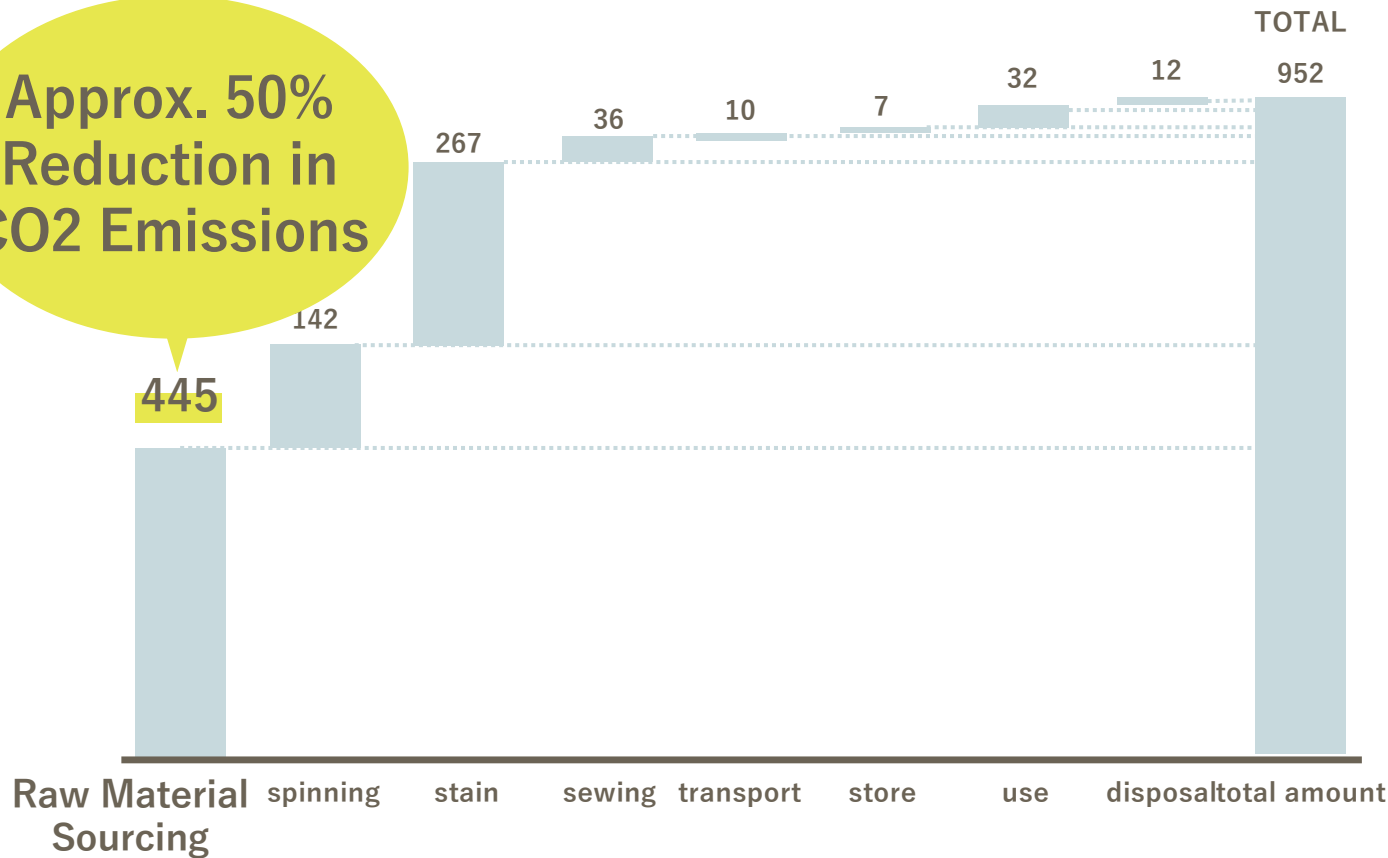
Creating new value and **rebirth** = **REBORN**

Ribbon of circulation connecting producers and consumers

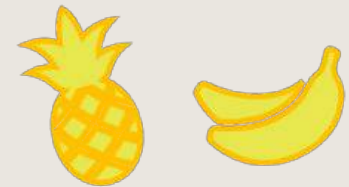


Benefits of Fiber from Unused Resources

Approx. 50%
Reduction in
CO2 Emissions



Fruit by-products



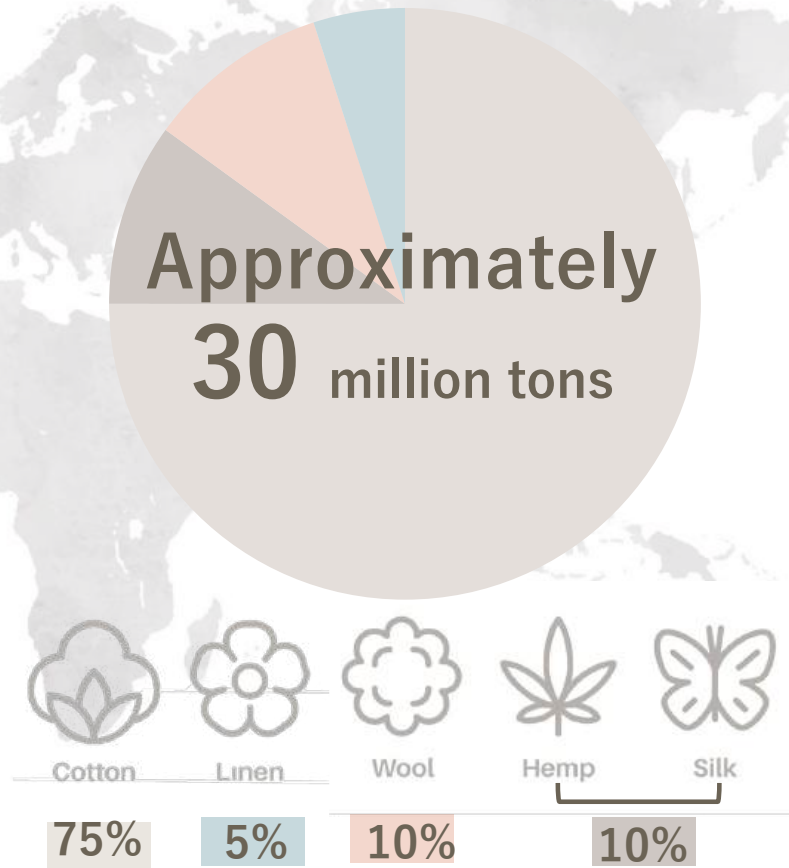
**No Additional
Farmland Required
Avoids Farmland
Competition**

CO2 emissions over the life cycle of clothing in Japan (100 million tons)

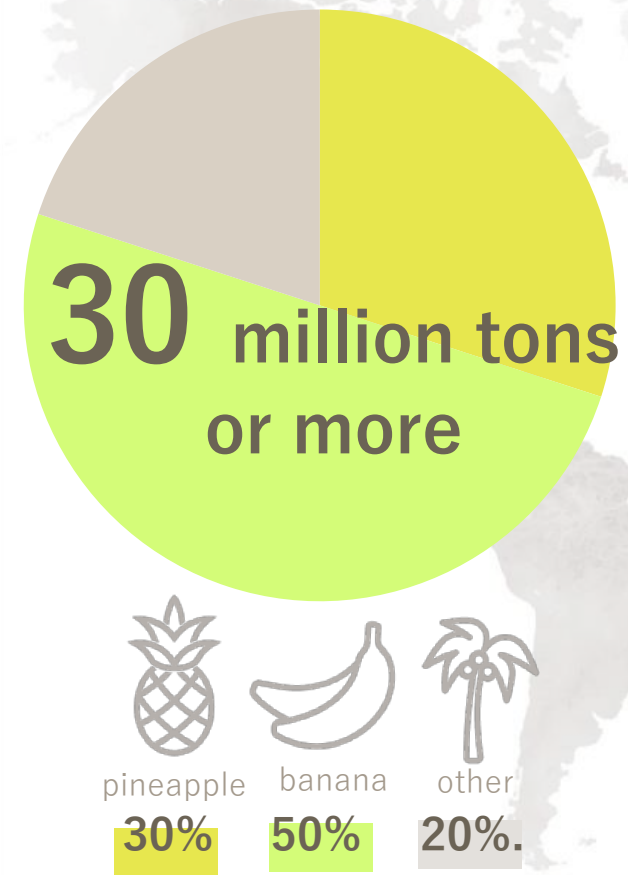
Reference: From the report of the Study Group on the Future of Fashion, Ministry of Economy, Trade and Industry

Potential of Unused Resources

[Total Global Natural fibers]



[Amount of fiber derived from unutilized resources]



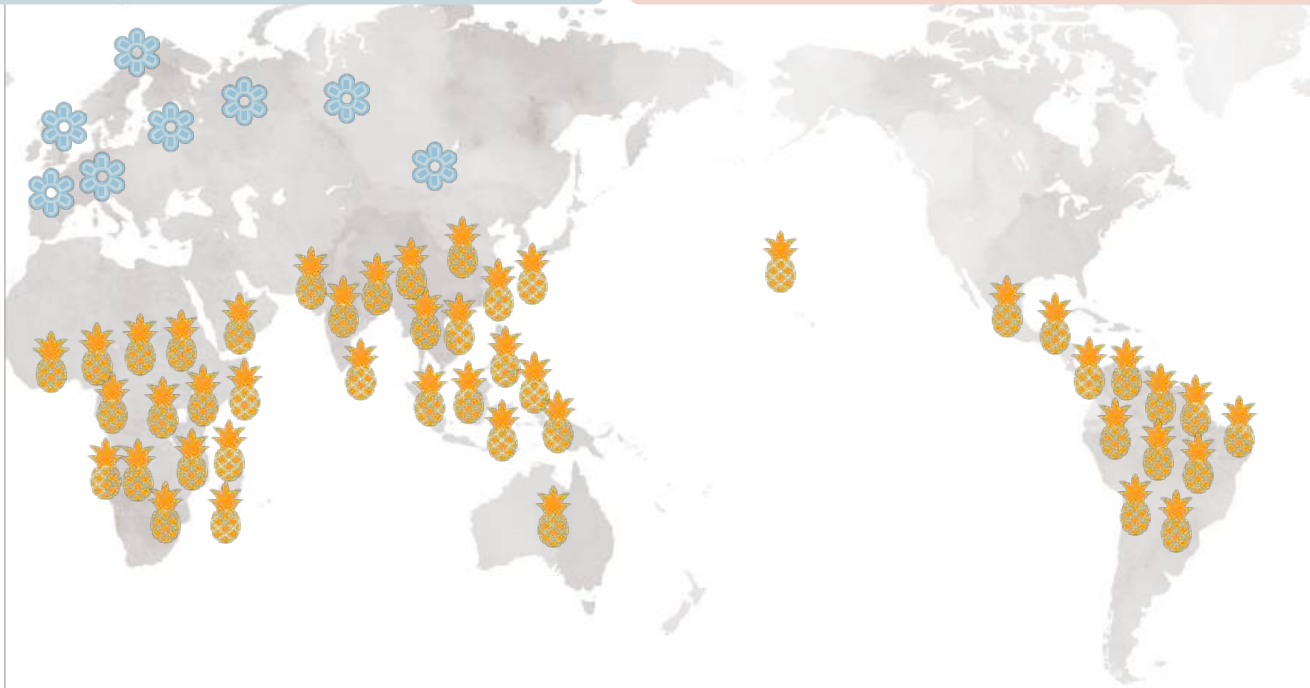
Underutilized Resource to Address Linen Challenges: Pineapple Fiber

Challenges of Linen (Flax) Fiber

- Relies on production in Europe and parts of China
- Expanding production competes with farmland use
- Subject to weather dependency and unstable production under climate change

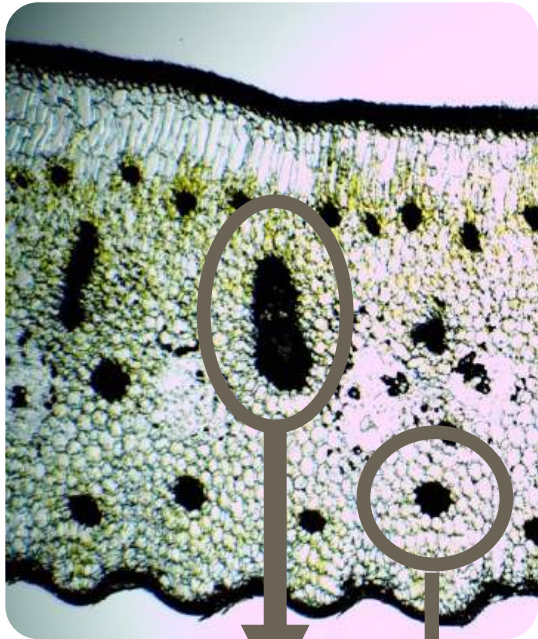
Pineapple Fiber: A Sustainable Solution

- Diverse production areas in Asia, Africa, and South America
- Sustainable, avoiding farmland competition
- Stable supply throughout the year



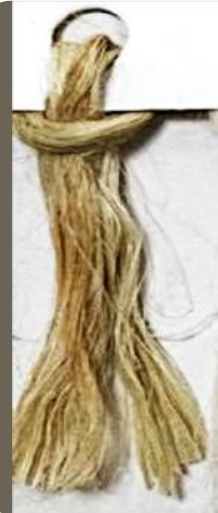
Innovative points of quality improvement

Cross section of a leaf



Thick fiber

Fine fiber



Existing technology

High impurity content
thick and tough fiber

low mixing ratio
Denim and
Mainly thick fabrics



New technology

Low impurity content
Both thick and
fine fibers can be
extracted

High mixing ratio
Suitable for lightweight
T shirts, sheets,
and towels



Shirts, T-shirts, jackets, denim, scarves

Fabrics such as towels, linens, and curtains





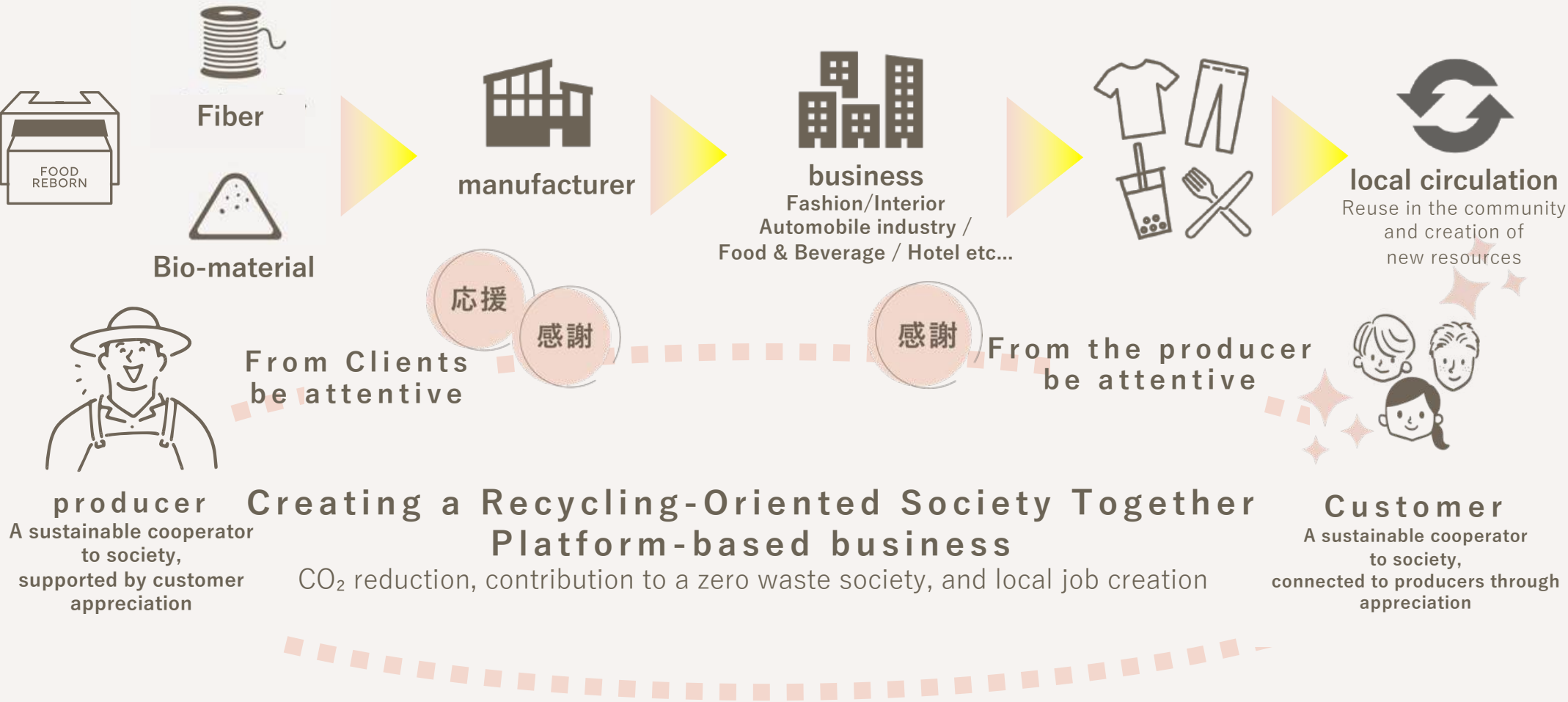
Replacement of existing
natural fibers in interior materials

Adoption as body materials



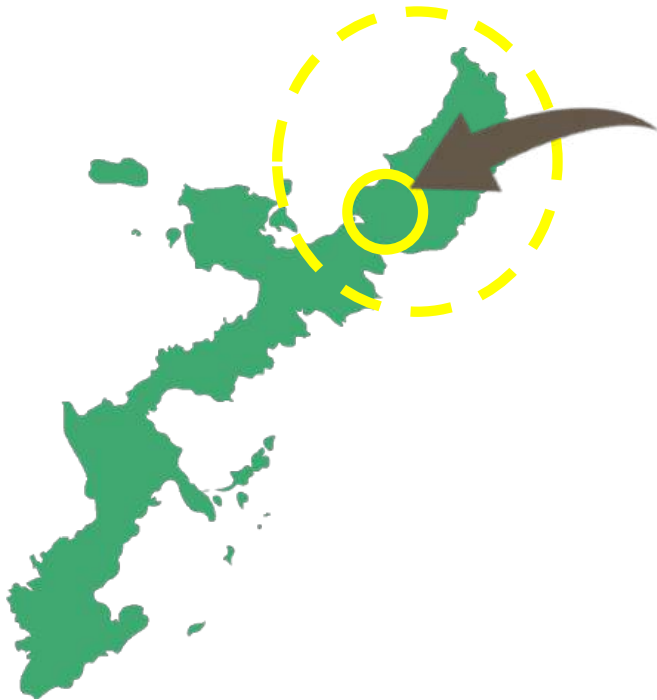
To everyday resin products

Circulation platform-based business model



2024 Business development in Okinawa, Japan's pineapple producing region

World Natural Heritage Area



Creating a base in northern Okinawa with themes of manufacturing industry, tourism, and education

(Private subsidies for promotion of specific projects for Okinawa promotion Total project cost: 1.98 billion yen)



2024.3 District A
Headquarters plant completed.

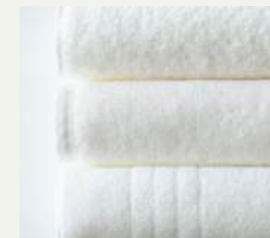


2026- Construction
of District B to be completed

Everything from materials to products are MADE IN OKINAWA



provisional li
cense



(hand) towel



Bioplastic Products

A place where designers, students, apparel companies,
and creators gather to form new businesses.

Current Operating Status Following the Plant Opening Ceremony in May 2024



Guest of Honor: Deputy Director-General of the Minister's Secretariat, Cabinet Office; Governor of Okinawa Prefecture (representative); Mayor of Ogimi Village (representative); and others.



Plant Tour Following the Opening Ceremony



Pineapple Fiber Processing



Osaka Prefectural Government
Ibaraki High School



JICA Okinawa
Environmental KID Expert



Ritsumeikan Keisho
High School



Internship at Chung Yuan
Christian University, Taiwan



JATA
(Japan Association of
Travel Agents)
Okinawa Branch



JTB Agreement Ryokan
Hotel Federation
Okinawa Branch Association
Dear Sustainable Committee

Textile Production and Sewing Training, SDGs Hands-on Learning, and Educational Travel Programs



Start of Operations in Indonesia Status of Kediri, April 2024



*Temporary Storage for
Pineapple Leaves and Stalks:
Leaves and stems are separated here.*



*Leaves are placed on a
conveyor belt and con-
tinuously fed into the fi-
ber extractor.*



*After Extraction:
Waterjet Process*



To Spinners: Ready for Delivery.



July 2024: Mangkunegaran Royal Palace at the “Satu Sura” New Year Festival

The batik industry is a key industry in the region where the royal palace is situated.

By adopting pineapple fiber as a future raw material, The company aims to develop fabrics for royal costumes.



Towards a future with no waste

Businesses Balancing Economy, Environment, and Society: Impact Per Production Area

Local Economic and Environmental Impact

income increase

1.5 times higher income for
526 farmers,
totaling
65.75 million yen



job creation



*Compared to the current average annual income of 360,000 yen
250,000 yen increase in per capita income per year

water resources



Water usage
reduced
by **1,250** tons

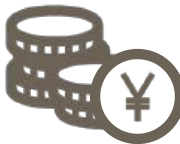


greenhouse gas

Greenhouse gas emissions
reduced
by **2,124** tons

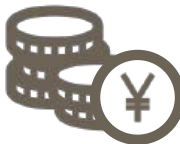
Business Sales and Operating Income

Textile Business Sales



\$ 4.3 million annually

Operating income



\$ 1.9 million annually



Vision for the Future



2030

GOAL

Achieving **5%** of the
Global natural fiber market
and
3% of plastics market

2028
IPO

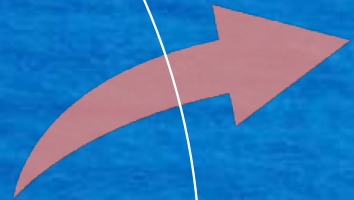
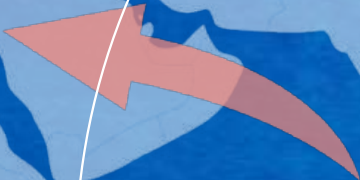
2025~
Accelerating
Business Expansion

~2024

Building a Strong Foundation



A Sustainable Future Together in the ASEAN Region



SUSTAINABLE
DEVELOPMENT GOALS







Contact Information

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