

REUSE OF WASTEWATER

PRIMARY IMPLEMENTOR



6+

Building industry projects



80+

Building energy audit



250+

Construction design

TEAM LEADER



KHANGAISAIKHAN.N

Founder and director
Consulting engineer,
Building energy auditor,
Specialized in Business
administration

PROJECT MANAGER



KHANGAITSETSEG.N

Specialized in Project
management

FOREIGN RELATIONS MANAGER



ENKHTUGS.M

Specialized in International
relations & Business
administration

TECHNICAL EXPERT



MUNKHBAYAR.B

Consulting engineer
Building energy auditor

SENIOR SUPERVISING ENGINEER



TSATSRAL.TS

Consulting engineer (WSS)
Water Resources Management and
Industrial Wastewater Treatment
Specialist

SENIOR CONSTRUCTION ENGINEER



ENKHBAYAR.TS

Professional engineer (WSS)
Specialized in Wastewater reuse



RESEARCH AND PROJECT IN THE CONSTRUCTION SECTOR

1.  **unicef**
for every child

 Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra
Swiss Agency for Development
and Cooperation SDC

 германы
хамтын ажиллагаа
DEUTSCHE ZUSAMMENARBEIT

Implemented by:
 giz Deutsche Gesellschaft
für Internationale
Zusammenarbeit (GIZ) GmbH

INDOOR AIR QUALITY IN KINDERGARDENS: EXPERIMENTS
AND RESEARCH TO ENHANCE AIR QUALITY

2.  БАРИЛГА ХОТ
БАЙГУУЛАЛТЫН
ЯАМ

 gef

 UN
DP

 Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra
Swiss Agency for Development
and Cooperation SDC

 германы
хамтын ажиллагаа
DEUTSCHE ZUSAMMENARBEIT

Implemented by:
 giz Deutsche Gesellschaft
für Internationale
Zusammenarbeit (GIZ) GmbH

RESEARCH TO ASSESS THE THERMAL PERFORMANCE OF
BUILDING INSULATION

3.  Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra
Swiss Agency for Development
and Cooperation SDC

 германы
хамтын ажиллагаа
DEUTSCHE ZUSAMMENARBEIT

Implemented by:
 giz Deutsche Gesellschaft
für Internationale
Zusammenarbeit (GIZ) GmbH

A STUDY TO ASSESS ACTUAL ENERGY CONSUMPTION AND IDENTIFY
ENERGY-SAVING SOLUTIONS IN STATE-OWNED GENERAL EDUCATION
SCHOOLS AND PRESCHOOL BUILDINGS IN ULAANBAATAR CITY

4.

 МОНГОЛ УЛСЫН
ЗАСГИЙН ГАЗАР

БАРИЛГА ХОТ
БАЙГУУЛАЛТЫН
ЯАМ

 UN
DP

IMPACT OF BUILDING MATERIALS ON INDOOR
AIR QUALITY

5.

 USAID
UNITED STATES AGENCY
FOR INTERNATIONAL DEVELOPMENT

USAID
FROM THE AMERICAN PEOPLE

DEVELOPMENT OF CALCULATION METHODOLOGY
FOR BUILDING ENERGY EFFICIENCY IN MONGOLIA
USING CUSTOMIZED SOFTWARE TOOLKITS BASED
ON INTERNATIONAL BUILDING STANDARDS

6.

REUSE OF WASTEWATER



TOP CHALLENGES



1 in 5 children
faces a daily struggle to
access clean water

Mongolia, by 2030,

43%

of the total water
supply is projected to
become unavailable.

Source: Britannica World Encyclopedia

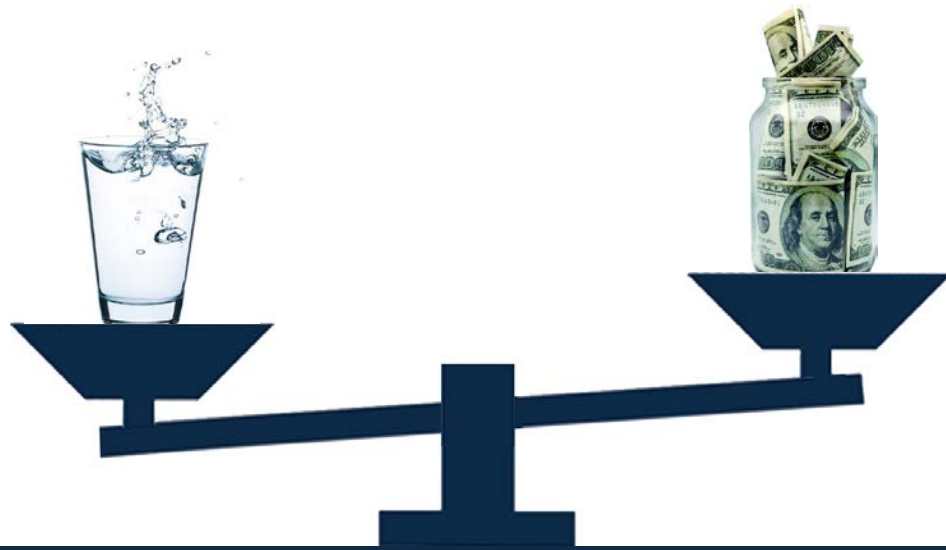


Global Water Information

- Water covers 71% of the Earth's surface.
- yet only 2.5% of it is freshwater.
- Of that freshwater, just **1%** is accessible for human use.

Source: UNICEF research

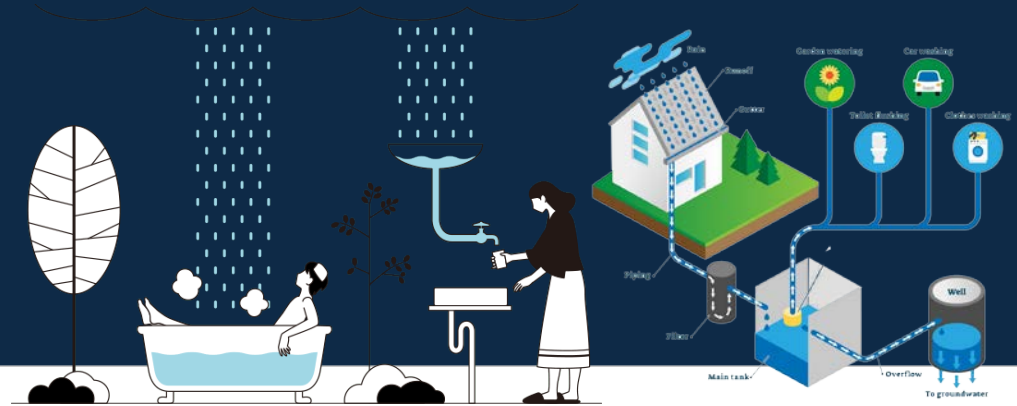




IN MONGOLIA

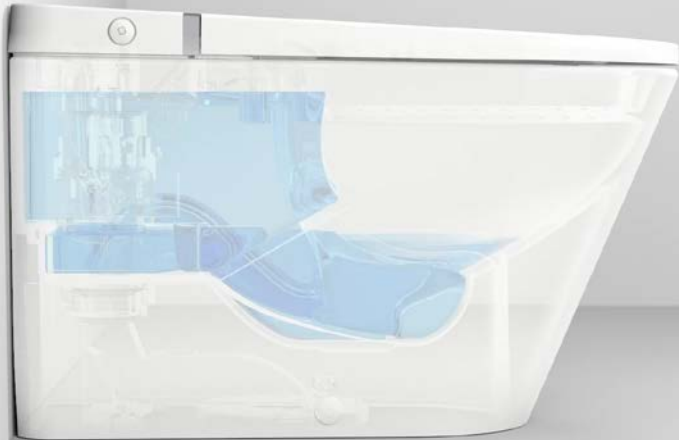


IN JAPAN



PAIN POINT

An individual uses an average of **34.4 liters of water** per day solely for flushing the toilet.



LEGAL ENVIRONMENT OF WATER REUSE IN MONGOLIA

Type of building	Type of water reused		Usefulness				Source
	Treated greywater	Treated wastewater	Toilet seat	Trees, lawn, ground	Carwash	Coal washing, concrete production, thermal power station, waste recycling, road dust control, and firefighting	
House	✓	✓	✓	✓	✓		MNS 6734:2018 MNS 8525:2015
Apartment	✓	✓	✓	✓	✓		
School	✗	✗	✗				
Kindergarten							
Hospital							
Office, commercial, service	✓	✓	✓	✓	✓		
Hotel	✓	✓	✓	✓	✓		
Mining industrial building	✓	✓	✓			✓	
Other industrial buildings	✓	✓	✓			✓	

Possibility of Using Treated Wastewater for Household Purposes

House: 1078+



Single, Twin, Town house 1500 families
4 312 people
54 141m³ of water

Apartment: 4177+



261 828 families
1 047 312 people
13 150 049m³ of water



Number of households using smart toilets in Ulaanbaatar



The legal framework is relatively secured.



Public demand is growing.



However, the market lacks sufficient supply of wastewater treatment system.



15% Reduction in
Household Clean
Water Consumption
in Mongolia

Annual savings
Water: **13 million tons**
CO2: **470,000 tons**



TECHNOLOGY PARTNER

- Connected with 19 Japanese organizations
- Meet with 5 Japanese organizations

Business trip



ADVICE & INFORMATION

- Business Plan
- Methods and Experiences of Cooperation with Japanese Companies
- Law and Legality

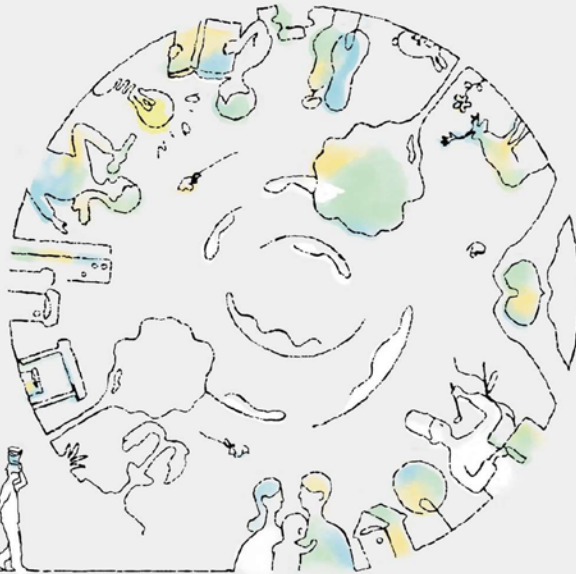
Mentoring program

Mongolia Open Innovation and Co-Creation for SDGs 2024

CO-IMPLEMENTOR



Innovation for Water Sustainability



TECHNOLOGICAL PARTNER-FUSO



SHIMIJIMA CHIHIRO

Project Manager
Business Development Division
International Marketing
Department
FUSO Corporation

MONITOR AND CONTROL SYSTEM PARTNER



BEGZSUREN.T

Head of "CreatiVision start-up"
under National University of
Mongolia
Associate professor



FIRST OFFICIAL MEETING
FUSO CORPORATION'S
OFFICE, TOKYO, JAPAN |
2024.08.08

EXPERIMENT IN COOL ZONE
NEW YORK CITY, USA, FUSO &
ORENCO | 2024.11.14



SIGNING OF MoU
FUSO CORPORATION'S OFFICE,
TOKYO, JAPAN | 2024.12.10

DISTRIBUTORSHIP AGREEMENT
TAO LLC, ULAANBAATAR, MONGOLIA | Q3, 2025



FUSO VIETNAM Corporation
Established in Dec. 2023

FUSO America Corporation
Established in Feb. 2024





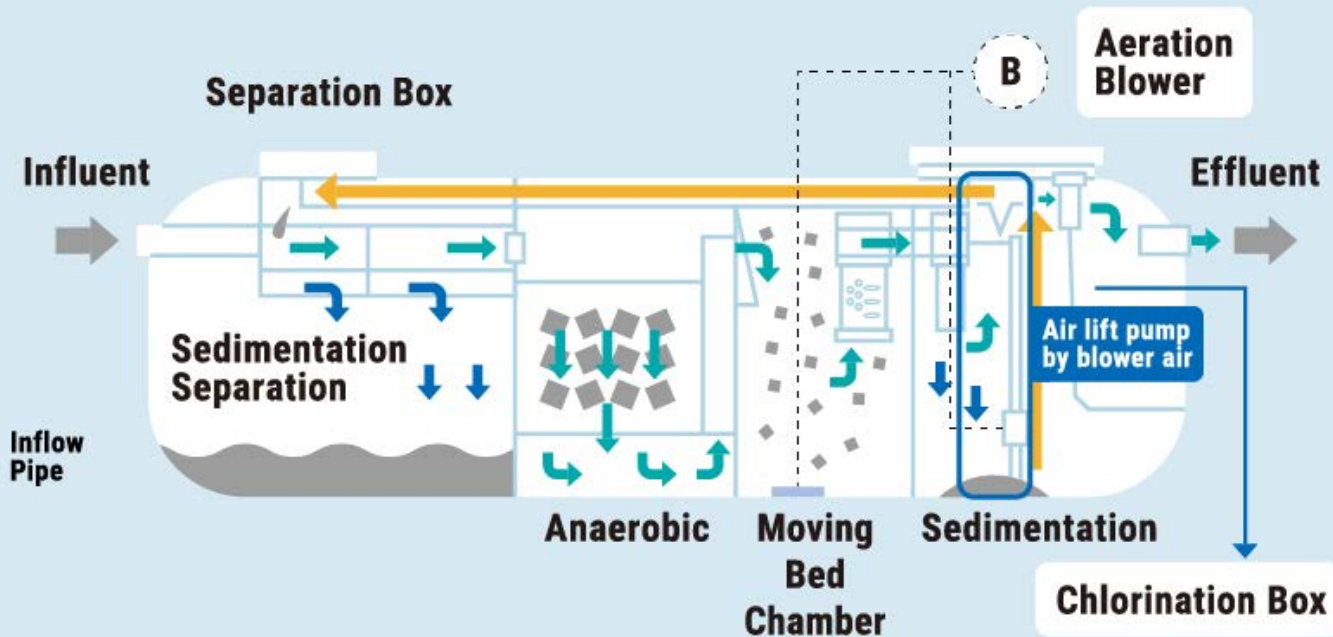
WHAT WE OFFER

INDICATOR	DESCRIPTION AND CAPACITY
Type of treated water	Grey water + Black water
Water treatment technology	Bacteria; Filter membrane
Daily capacity of treatment	2 tons – 954 tons
Maintenance	Sludge suction in the 8th-12th year
	Inspection and removal of sludge at least once a year
	Inspection of washing part once a year
Operational life	20-30 years
Price	189 million mnt –

EXPERIMENTAL SYSTEM

The price of the system offered under the project includes the following costs:

- *Base cost of the Johkasou wastewater treatment system and transportation cost
- *Cost of connecting parts and accessories
- *Installation costs
- *Cost of control and management system



Source: FUSO



Capacity: 2000 l/day



Number of families: 10 families with 5 people



Cleaning frequency of the system: 8th -12th year



Operational lifetime: 20+ years

PROJECT WE ARE AIMING TO INSTALL GREYWATER TREATMENT SYSTEM



ULAANBAATAR GREEN AFFORDABLE HOUSING PROJECT



GREYWATER PIPE

Current Status:

- Construction is in process.
- The concrete tank for greywater treatment system has been installed.
- Procurement process has not yet started

Our Project Status:

- Equipment specifications and requirements for greywater and treated water have been determined.

ROADMAP

8月

2024

Find a
technological
partner

12月

2024

Select and
finalize the
system

1月

2025

Raise fund
for
experiment-
research
investment

3月

2025

Order the
system

5月

2025

Start
experiment in
a building

11月

2025

Supply to the
market, and
sustain the
operation

**BUDGET
SUPPORT
NEEDED FOR
EXPERIMENTAL
RESEARCH
WORK.**

TECHNOLOGY:
Proven, risk-free
Japanese technology
with international
credibility.

DEMAND:
100% supported the use of
grey water and 78%
supported the use for
toilet flush

**TO SUPPORT SUSTAINABLE
DEVELOPMENT GOALS, WE INVITE YOU TO
IMPLEMENT WASTEWATER PURIFICATION
AND REUSE TECHNOLOGY IN YOUR
HOMES, INSTITUTIONS, AND INDUSTRIES.**



Save Water ... Save **LIFE**

THANK YOU FOR YOUR ATTENTION

TUMEN AMGALAN ORDON LLC



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