

Climate Innovation Solution

# CLIMATE-RESILIENT SANITATION FOR EXTREME COLD REGIONS

Tested in Real Winter Conditions

Presented By: **KINDLE HOPE**



# The Problem



## 144.992 Pit Latrines

- Freezes in winter
- Pollutes groundwater
- Unsafe for families

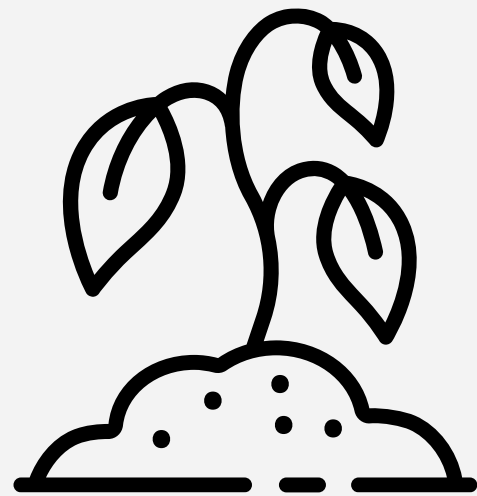


# Why This Matters

## Soil

**88%**

Soil contamination

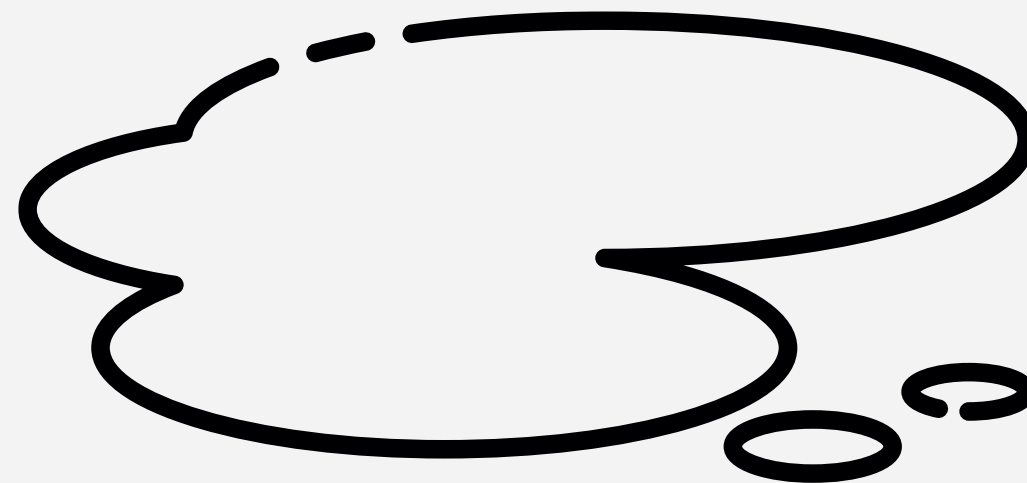


1.2M tons of waste  
enter the soil each year

## Water

**65%**

of soil contains E. coli

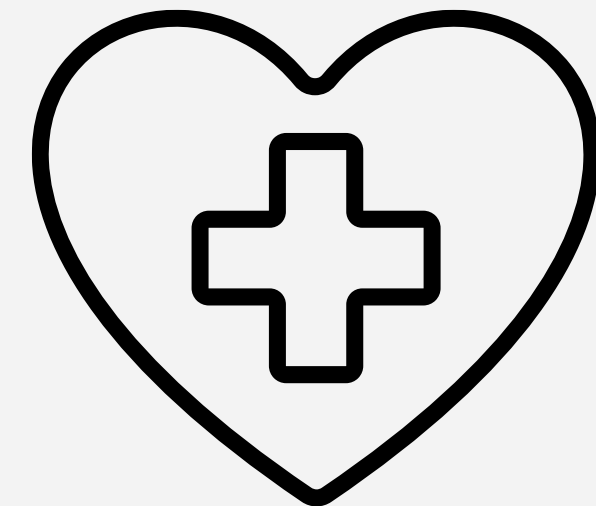


E. coli contaminates  
soil and water

## Health

**3–5x**

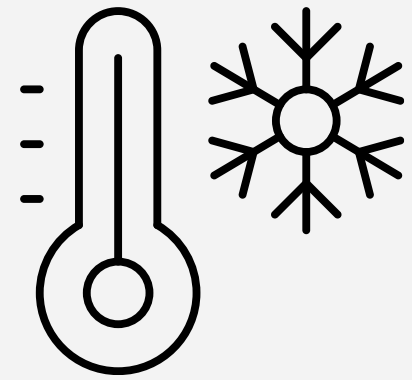
higher disease risk



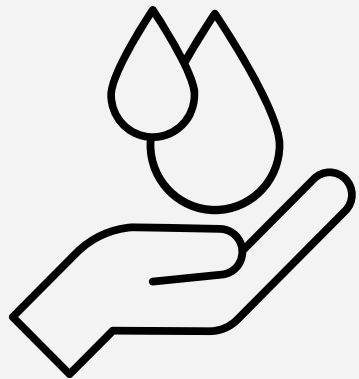
Diarrhea, hepatitis A,  
and dysentery



# Our Solution



Works at  $-40^{\circ}\text{C}$



Uses 0.5L of water



Produces 1,460L fertilizer/year

Built for extreme cold climates



# Designed for Real Conditions

## No Infrastructure Needed



No pit  
No septic system

## Clean & Hygienic



No odor  
No flies or insects

## Easy to Use & Maintain



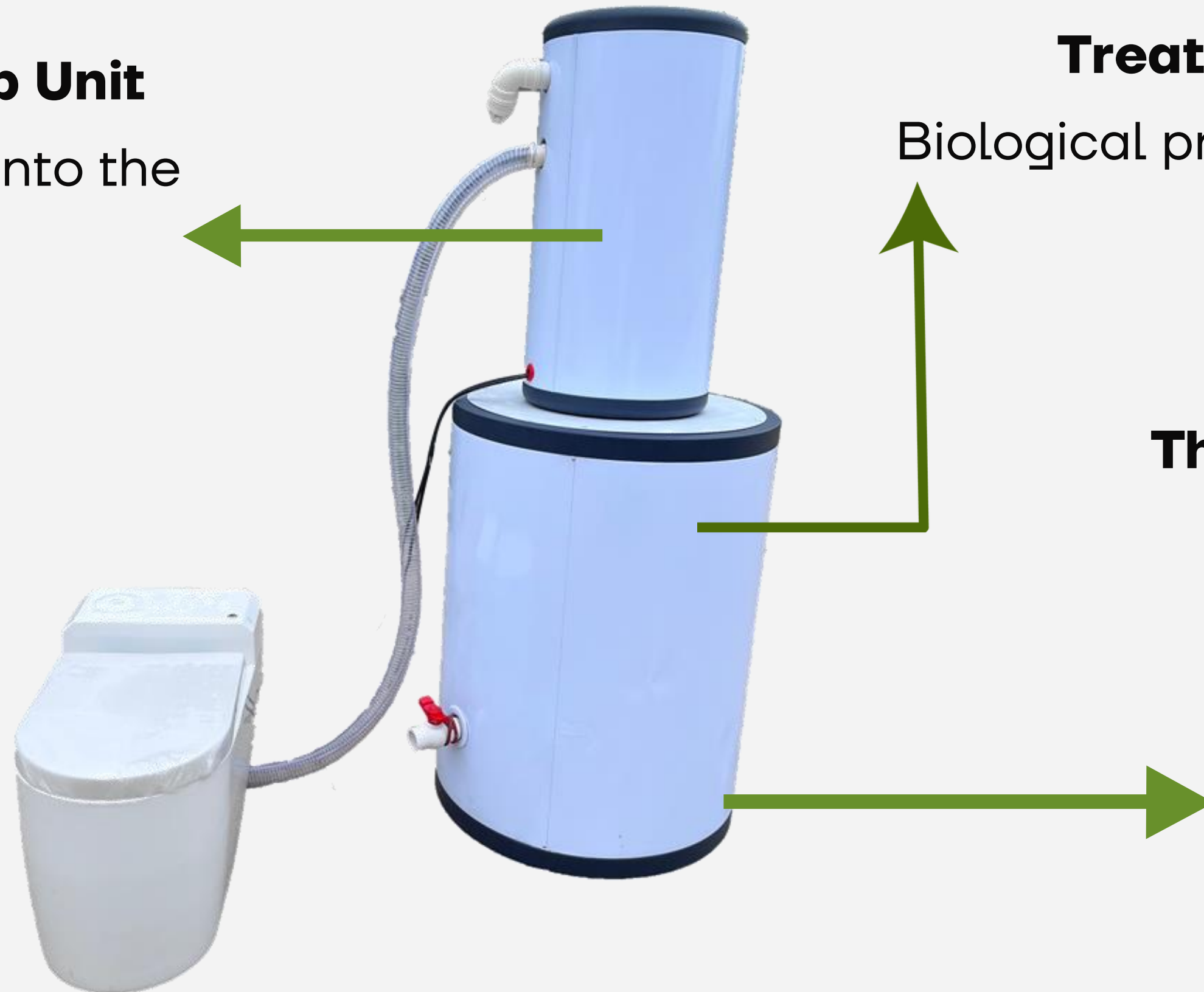
Portable & easy to install  
Low maintenance  
For all ages

# Inside the System



## Suction Pump Unit

Moves waste into the system



## 500L Insulated Treatment Tank

Biological processing & storage

## Thermal Protection System

Foam insulation + heating cable  
Prevents freezing

# How It Works

01 

**Waste enters the system**

Works like a normal indoor toilet



02 

**Beneficial bacteria break down waste**

In a warm, controlled environment



03 

**Transforms into liquid fertilizer**

A safe and reusable resource



# Real People. Real Impact.

**Used daily in real homes at -40°C in Mongolia's ger districts  
Including elderly and vulnerable households**



# Designed for Real Life

Safe for children at night

Simple enough for anyone to use

Accessible for the elderly and  
people with disabilities



No more walking outside in  $-40^{\circ}\text{C}$

# From Mongolia to Central Asia

Tested in real conditions.

Proven — but not perfect.

We are here to learn, exchange, and improve together.

Because this challenge is shared across Central  
Asia.


# Thank You Very Much!

## Let's build this together

### Contact Us

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