



MICS2024

# Mini plant factory establishment in schools for sustainable agriculture and nutrition enrichment

## Final Report

February 7, 2025. Ulaanbaatar, Mongolia



# Social Issue and Solution

## Social Issue

### Short life expectancy

Ranking	Country	Ave. Life
1	Japan	84.3
2	Switzerland	83.4
3	South Korea	83.3
...		
131	Mauritania	68.4
<b>132</b>	<b>Mongolia</b>	<b>68.1</b>
133	Republic of Fiji	68

### Lack of Vegetables

- **One-third of the required intake**
- Dairy and meat-based diet

## Solution

### Challenges of Vegetable intake

1. Severe Climate

2. Meat Dominant Meals

3. Traditional Food Habits



Solution 1.  
Producing



Innovative Agriculture for climate.



Solution 2.  
Eating



Balanced diets for health.



Solution 3.  
Disseminating



Behavior change from children to adults.

## GOAL

- ✓ Establishing Vege-eating culture
- ✓ Improving the health and life quality
- ✓ Increased life expectancy
- ✓ Industrial development

# Solutions For Creating Habits of Eating Veg

## #1 Producing



Plant Factory at School

▼  
Sustainable  
Production



## #2 Eating



School Meals & “Shokuiku\*”

▼  
Behavioral  
Change from  
Children



## #3 Disseminating

Make Kids Enjoy Eating

▼  
Veg Move  
from kids  
to others !!



Pilot school : Focus on “Production” & “Eating” parts .

\*Nutrition Education

### Pilot Project in Khanbogd

- Placing Mini Plant Factory (Vegetable-racks) in Khanbogd 2nd school
- Khanbogd 2nd School, near the Oyu Tolgoi mine, has 882 students
- Khanbogd is a key mining hub in Mongolia, with a growing population  
The school plays a vital role in educating local children in this rapidly developing region
- Introduced to the school through “MICS 2024 in Khanbogd”





# Pilot Project in Khanbogd

## Project Team



## Advisor



## Technology



"NSP-system"



## Pilot school



Khanbogd 2nd School



Number of students 883

## Funded by

Regional Development  
Fund in Mongolia

Crowdfunding  
Through Japanese  
cloud funding company

CAPEX+OPEX (1st year)  
Approx. 6 million yen



# Medium -term Timeline

2025  
POC &  
Shokuiku\*  
at Khanbogd  
2nd school

2026  
Expanding  
mini-plant  
to Ulaanbaatar  
& other areas

2027  
Starting  
greenhouse  
&  
Disseminating  
with App

2030  
Nationwide  
school coverage  
50%+  
&  
Global expansion  
Ex. China, Central Asia,  
Middle East

Establishing  
Vegetarian culture  
&  
Enhancing health  
and life quality



\*Nutrition Education



# Project Members



## Waseda Business School



Prof.  
KATSUHIRO  
Sato



Marketing  
MASATAKA  
Shimada



Marketing  
ERIKA  
Sato



Marketing  
YUKIKO  
Sonokawa



Finance  
YUTAKA  
Abe



Law  
AKINORI  
Mima



Biz - Develop  
RYO  
Yamada



Logistics  
SUMI  
Kimura



Agri - Biz  
SHIGERU  
Nakashima



Medical  
SHIGEYOSHI  
Kijima



Creator  
ATSUSHI  
Wada



## Mongolian University of Science and Technology



Prof.  
CHOIJIL  
Baasandash



Nutrition  
TSOLMON  
Soninkishig



## Khanbogd 2nd School



Teacher  
O.Baljinnyam

## Supporters

### Embassy of the Mongolian



### Yanmar Group



### Crowd funding

*Through  
Japanese  
cloudfunding  
company*