

Mongolian **Forest** Restoration Project

2022.05.05 Park, Byungbae

CONTENTS

01

Mongolia Forest Restoration Project
Overview

02

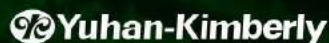
Mongolia Forest Restoration Project
Phase 1

03

Mongolia Forest Restoration Project
Phase 2

04

Mongolia Forest Restoration Project
Phase 3



01

Mongolia Forest Restoration Project Overview



Mongolia Overview



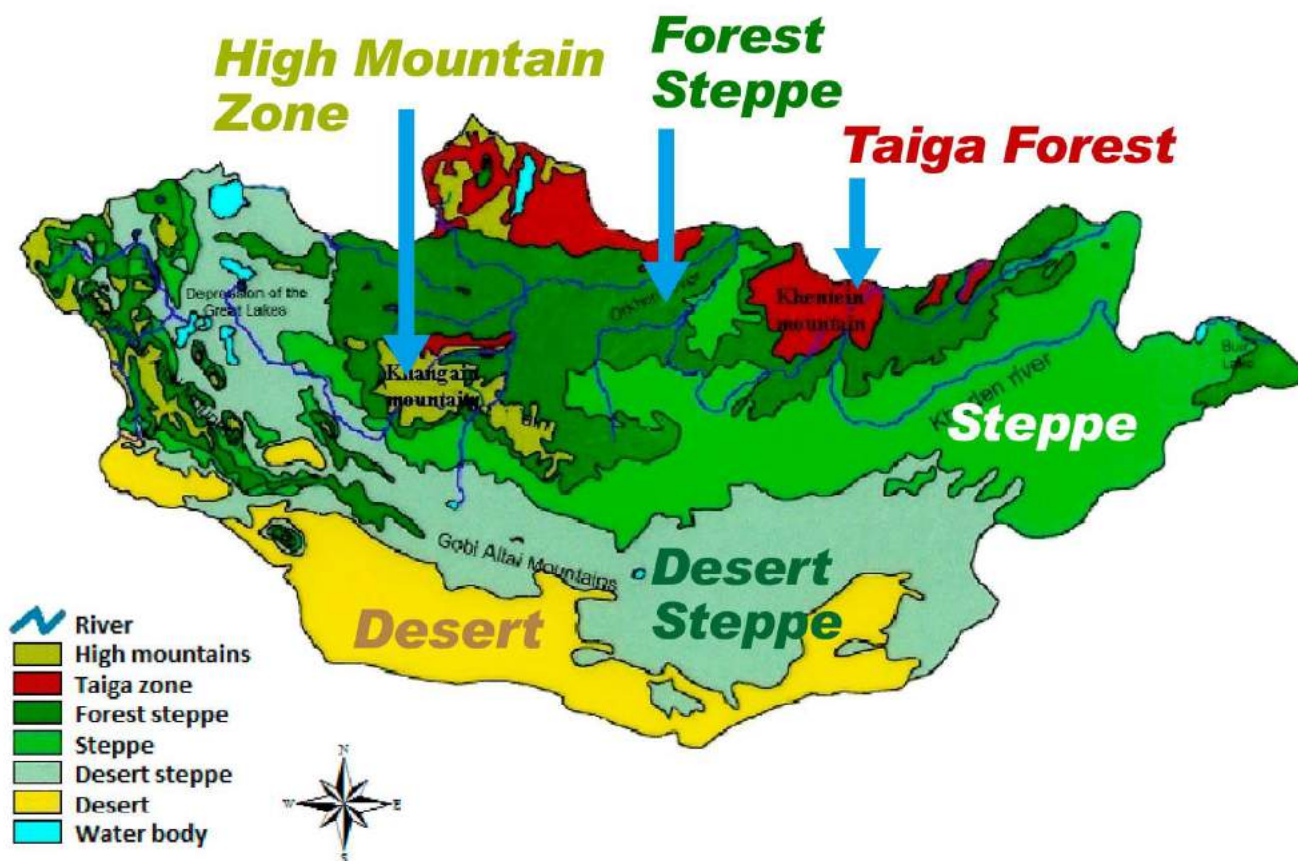
- **Land Area** : 156.7 million ha (7.4times of Korean Peninsula, 19th largest land in the world)
- **Length** : 2,392 Km (in the east-west direction) 1,259 Km (in the south-north direction)
- **Climate** : Dry cold climate (annual average -2.9°C, January -22.5°C, July 16°C),
January~February -20°C(-40°C at winter night), summer 33~38°C
Annual precipitation 200mm
- **Population** : About 3.27 million (about 1.45 million people live in the capital, 2017)
- **Capital** : Ulaanbaatar (meaning: red hero)
- **Administrative division** : Capital, 21 Aimag, 330 Som, 1,568 Bag
- **Major cities** : Ulaanbaatar (1.45 million), Darkhan (9.1 million), Erdenet (8.6 million),
Choibalsan (7.3 million) etc.
- **Topography** : Highland country
(average 1,580m above sea level, 40% of the country is desert, 10% forest area)



01

Mongolia Forest Restoration Project Overview

Mongolian forest distribution



The eastern steppe is in the western part of the **Altai**, a large mountain range called **Hanga**

The **Gobi Desert** is in the south, and the forest area (**Taiga**) is in the south of Siberia to the north

Mongolian desertification

- **Climate change** : From 1940 to present 1.56 degrees Celsius, 12 droughts
Gobi Desert 1981-1990 4 severe droughts
The number of sandstorms in steppe areas increased 3-4 times (based on the 1960s)
- **Deforestation** : In the last 10 years, natural forest decreased by 526,000 ha,
Natural forest decreased by 8% → 6.7%
Decrease of 125,000 ha of saxaul forest
Forest fire damage (last 5 years) 2.21 million ha, forest disease and pest damage area 60,000 ha
- **Desertification** : Desertification : 1990s extreme area 4% → 16.6%
- **Desertification spread** : Desertification spread
 - Destruction of surface vegetation, drying of wetland ecosystems, increase of sandy areas
 - Natural factors 13%, artificial factors 87%
- **Cause of desertification** : Cause of desertification
 - Overgrazing : 70% of grassland are damaged (for 40 years)
pasture loss 6.9 million ha (for 30 years)
 - Wildfire damage : 417 wildfire 2.4 million ha damage in 1996
14 million ha damage from 1971 to 1997

02

Mongolia Forest Restoration Project Phase 1



Phase

1

Planting tree business (2003~2014)

2

3

Mongolia Selenge Province
Tujiin nars
Restoration of wildfire damage

Scotch Pine (*Pinus sylvestris*)
Reforestation 10.13 million trees
Total 3250ha



Restoration of Tujiin nars Pine Forest

- **Background :** In Selengue, 480,000 ha (annual average of 48,000 ha) have been damaged by wildfires since 1998, and illegal logging (18,000 ha) and large damage caused by pests (135,000 ha)

Tujiin nars in the Selenge region, an area of national interest, is historically and ecologically important. An area in urgent need of forest restoration (located 350 km north of UB)

In Tujiin nars forest, a relatively rare tree in Mongolia Scotch pine is the main tree species, except for Selengue

32,600 ha from wildfires, 10,000 ha from illegal logging and pests, urgently need of forest restoration area is 25,700 ha

- **Business Period and Hosting**

2003-2014 (Phase 1 restoration project)



2015-present (Phase 2 forest tending project)

Research forest creation (2021-present)

Yuhan Kimberly, Northeast Asian Forest Forum,
Selenge Province-Mongolian Ministry of Natural Environment, Mongolia Forest Forum

02

Mongolia Forest Restoration Project Phase 1



Restoration of Tujiin nars Pine Forest



2003



Pictures of forest fire damage,

pictures of former **Mongolian President** Bagabandi planting trees (2003)

Restoration of Tujiin nars Pine Forest

Business results (1st reforestation)

2003

2 year old Scotch pine 100ha(3000 trees/ha) planting
President's tree planting event, seminar(Mongolian government building)

2004

2 year old Scotch pine 150ha(3000 trees/ha) planting
Workshops and training (place and date : Korea, September 17-27, 2004)
Mongolia 4 people, Selenge Province reforestation Officer/Ministry of Environment Representative

2005

2 year old Scotch pine 250ha(3000 trees/ha) planting
Education training(place and date : Korea, September 9-16, 2005)
Mongolia 4 people, Selenge Province reforestation Officer/Ministry of Environment Representative
Translation of Mongolian yellow sand, desertification, and reforestation project materials

2006

2 year old Scotch pine 250ha(3000 trees/ha)

2007

2 year old Scotch pine 250ha(3000 trees/ha)

2008

2 year old Scotch pine 350ha(3000 trees/ha)

Restoration of Tujiin nars Pine Forest

Business results (2nd reforestation)

→ **2009**

2 year old Scotch pine 300ha(3000 trees/ha) planting
Altanbulag signed MOU for desertification prevention reforestation project
Main contents of the agreement
From 2009, 2000ha was reforested and developed into CDM project for 5 years
Altanbulak local government leased 2,000ha of land free of charge for 60 years

→ **2010**

2 year old Scotch pine 320ha(3000 trees/ha) planting

→ **2011**

2 year old Scotch pine 320ha(3000 trees/ha) planting
spring 70ha, autumn 250ha(Diesel supply and demand disruption)

→ **2012**

2 year old Scotch pine 320ha(3000 trees/ha), A tree planting event to commemorate the 10th anniversary of afforestation to prevent desertification


→ **2013**

2 year old Scotch pine 320ha(3000 trees/ha)

→ **2014**

2 year old Scotch pine 320ha(3000 trees/ha)

2003-2014 Restoration performance

Year	Species	Area(ha)	Number of trees	
2003	Scotch Pine (<i>Pinus sylvestris</i>) 	100	300,000	
2004		150	450,000	
2005		250	750,000	
2006		250	750,000	
2007		250	750,000	
2008		350	1,050,000	
2009		300	960,000	
2010		320	1,024,000	
2011		320	1,024,000	
2012		320	1,024,000	
2013		320	1,024,000	
2014		320	1,024,000	
			3,250	10,130,000

02

Mongolia Forest Restoration Project Phase 1



Phase 1 Pictures (A view of photo plantation from **young pine** saplings)



02

Mongolia Forest Restoration Project Phase 1



Phase 1 Picture (A view of photo plantation from young pine saplings)



03

Mongolia Forest Restoration Project Phase 2



1

Phase 2

Forest tending business (2015~)

3

Yuhan Kimberly forest's improvement
of the growing environment of planted
trees

Planting the first young tree in Mongolia,
Pruning training and implementation

2003 Restoration branch sequentially
planted 100ha of forest every year

03

Mongolia Forest Restoration Project Phase 2



Kor-Mon



Village forest festival (2015)

Ten years have passed since the first reforestation in 2003, and contention between reforestation trees occurred, and forest care work was urgent to induce normal growth

The 'Kor-Mon Village Forest Festival' was held to help local residents and relevant authorities who are unfamiliar with the concept of forest management, and achieved the following results



Tujiin nars Nature Conservation District Office 3,250ha Reforestation Certificate Award



Received a certificate of appreciation from the Mongolian Ministry of Natural Environment

03

Mongolia Forest Restoration Project Phase 2



Kor-Mon



Village forest festival (2015)



Establishment of the Korea-Mong Forest Restoration Nursery



Field demonstration of pine forest tending

Forest tending project (2015-in progress)

[2015-2021 Forest tending Project Site and Area]

Business implementation (years)	2015	2016	2017	2018	2019	2020	2021
Forest tending (reforestation year)	2003	2004	2004/2005	2005	2005	2006	2006
Area (ha)	100	100	50/50	100	100	100	100

- Since 2015, we have been the first in Mongolia to carry out the second-stage forestry project to create a healthy forest by cultivating trees such as young trees and pruning
- Starting with reforestation in 2003, we have carried out a 100ha forest management project every year, and now 600ha of the total reforestation has been completed

03

Mongolia Forest Restoration Project Phase 2



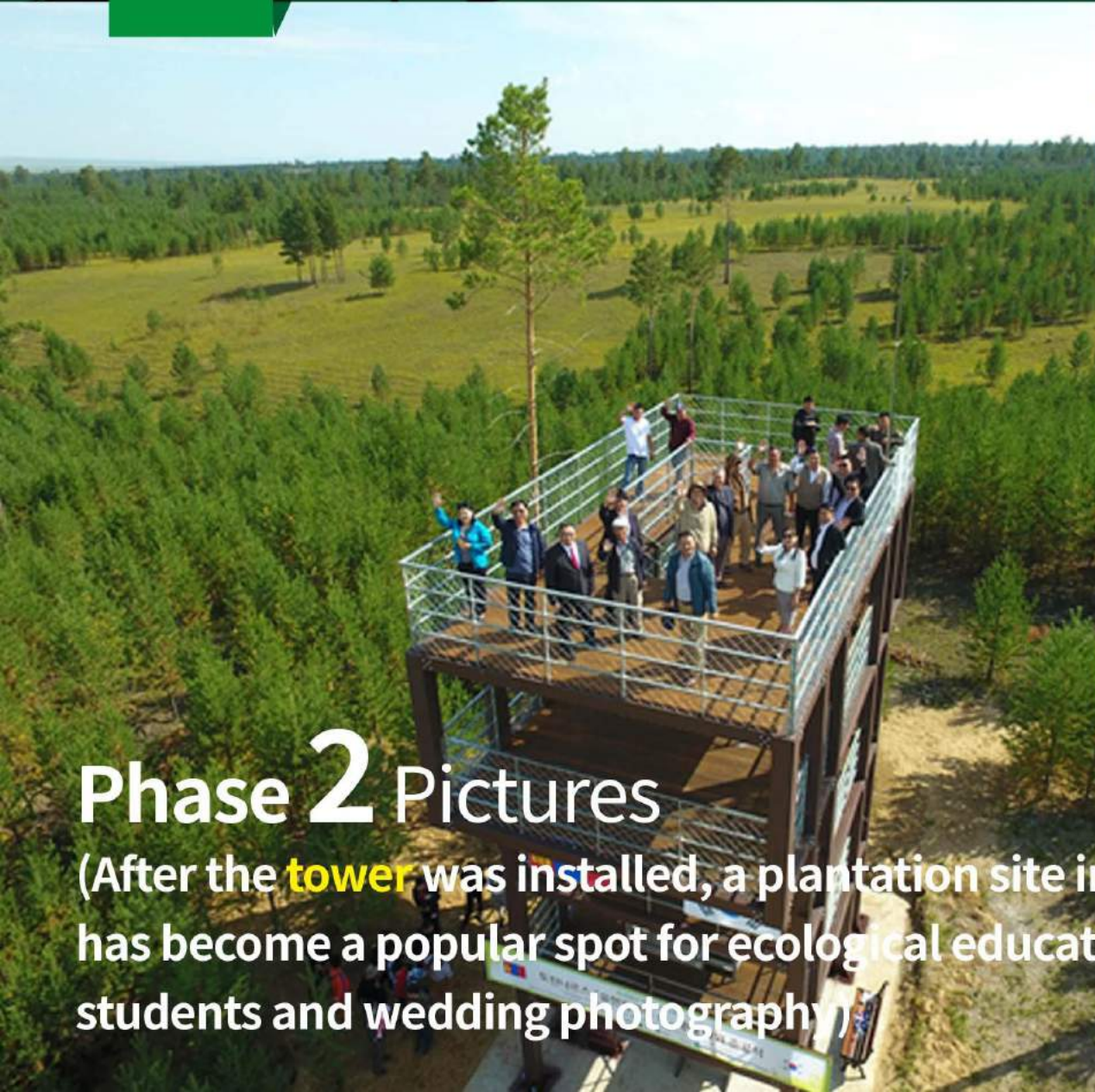
Phase 2 Pictures

(After forest planting, it becomes a forest where **wild flowers** grow)



03

Mongolia Forest Restoration Project Phase 2



Phase 2 Pictures

(After the **tower** was installed, a plantation site in 2003 that has become a popular spot for ecological education for local students and wedding photography)



04

Mongolia Forest Restoration Project Phase 3



1

2

Phase

3

Research Forest Creation Project (2021~)

Verification of the importance of forests through comparative study of the ecology of planted and non-forested land

Establishment of forest promotion strategy for prevention of desertification and mitigation of climate change

Creating a research environment and coexistence with local residents through the creation of ecological trails



Yuhan-Kimberly Forest leaps forward as an international research forest



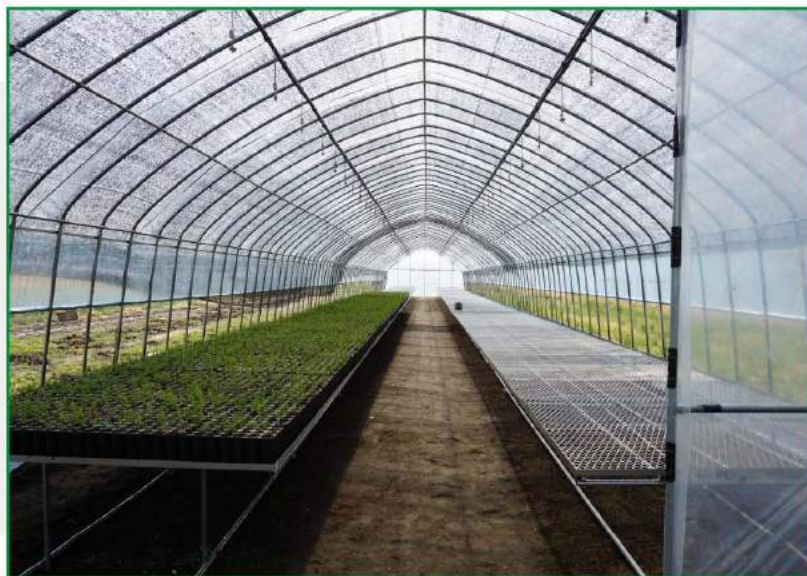
Forest tending project (2015-in progress)

[2022-2030 Forest tending Project Site and Area]

Business implementation (years)	2022	2023	2024	2025	2026	2027	2028	2029	2030
Forest tending (reforestation year)	2006 2007	2007	2007	2010	2010	2010	2011	2011	2011
Area (ha)	50/50	100	100	100	100	100	100	100	100

- It is expected that the jobs and trees removed from the forestry project will be provided to local residents and will help the local economy

Nursery business (2021-2026)



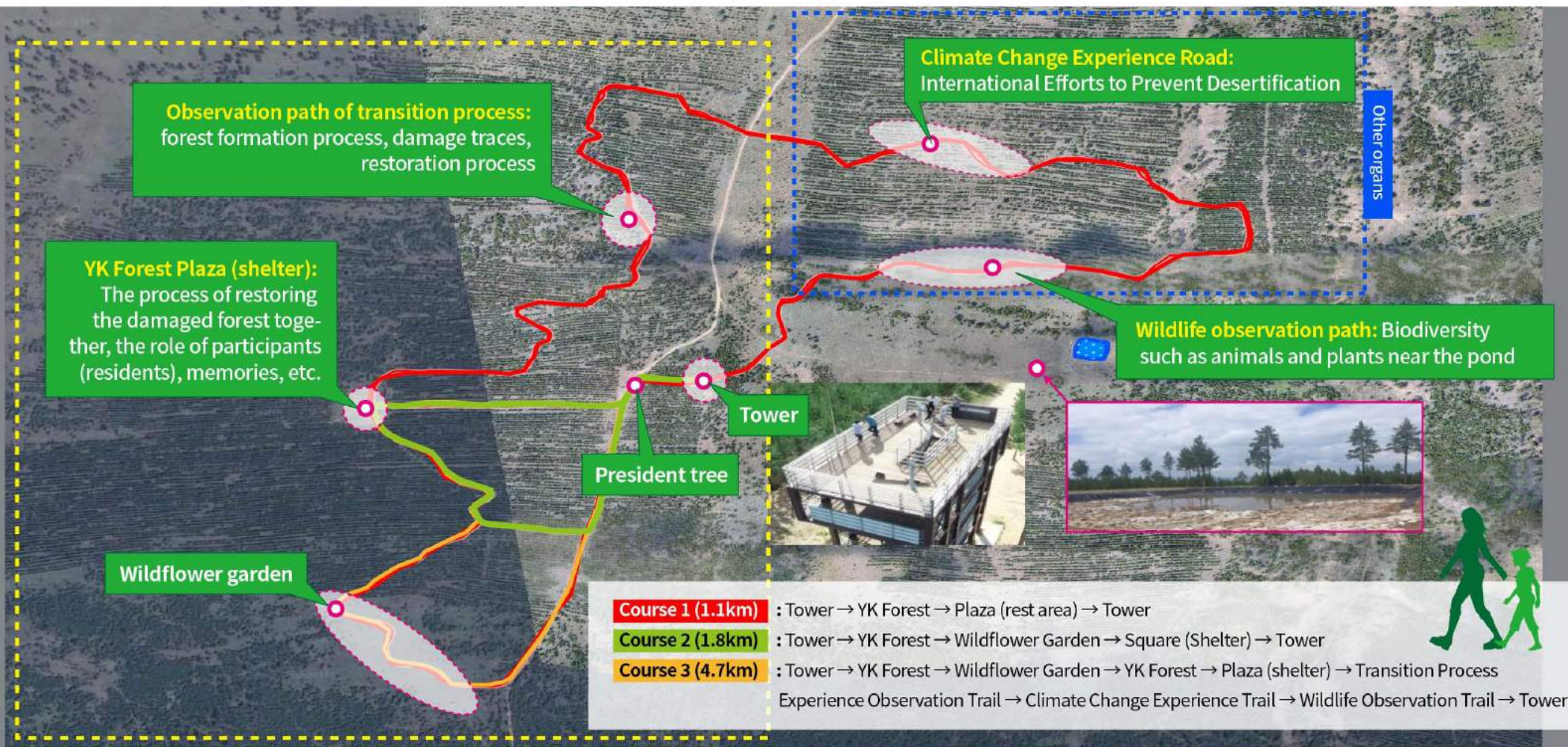
- We plan to use the temporarily suspended nursery by replacing plastic and repairing irrigation facilities in 2021
- Plan to conduct training on facility nursery techniques such as culture soil, fertilization, and irrigation for field staff and related persons from 2022
- Resume production of seedlings to use pine seedlings for planting plantations and seedlings from fruit trees to revitalize the local economy

Research project (2022~)

- 1 Establishment of standard paper for afforestation density research and forest thinning rate research
- 2 Growth monitoring (yearly survey)
- 3 A study on the relationship between growth rate and soil temperature and humidity (use of automatic meteorological observation equipment)
- 4 Creation and investigation of standard land for natural renewal, CDM reforestation
- 5 Investigation of fauna and society

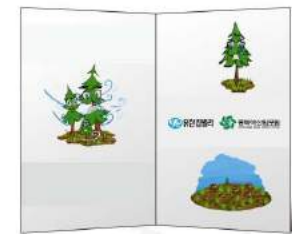


Infrastructure creation project (Ecological trail, reforestation in 2003)

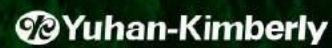


PR business

- 1** Thesis support project (2021-2023)
Promotion of thesis support project for 3 years (2021-2023)
hosted by Mongolian National University (Prof.Batkhuu)
- 2** Planning and production of promotional video
- 3** Publication of publicity brochures



Thank you



www.neaff.org