# Forestry and Forest Policies in Korea for the Future



# **Korea's Development History**

**Economic Growth with Successful National Greening** 

**Devastation and Poverty after Korean Civil War (1950-1953)** 



- GNI per capita (1953) = USD 67
- Growing stock per ha = 6 m³

#### THE PAST

- Planting for restoration: 2.1 million ha, 12 billion trees
- Bio-fuel forests: 643,000 ha
- Rehabilitation by erosion control: 120,000 ha





Planting trees on denuded slopes in 1971

1960

Korea Forest Service (1967) Fuelwood plantation, Erosion control 70-80

1st & 2nd Afforestation (1973 - 1987) Rehabilitation of slash & burn sites, Erosion control 1990

Afforestation for forest goods & services;
Policies for mountain village and forest recreation

2000

Policies for Sustainable Forest Management (SFM), Green Growth and Climate Change







<sup>&</sup>quot;Republic of Korea is the exemplary case of worldwide forestation" (Lester R. Brown, Author of Plan B)

<sup>&</sup>quot;Republic of Korea is the unique country which has succeeded national land afforestation after World War II (FAO, 1982)

## **History of Reforestation in Korea**



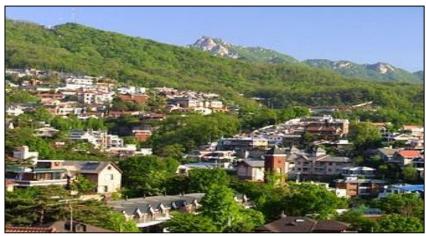












\*\* Seongbuk-dong area, Seoul, Republic of Korea in 1950s (left) and present (right)

# Challenges in Forest Management in 1960s









## Poor seed sources and seedling production

- Establishment of seed orchard and designation of seed stand
- Development of nursery cluster

#### Fuelwood needed nationwide

Fuelwood plantation (680,000 ha)

## **Slash-and-burn farming practice**

• Slash-and-burn control (86,073 ha)

### Poor law enforcement and governance

- Establishment of the Korea Forest Service
- Strong law enforcement through transferring forest sector tasks

## **Driving Forces on Successful Rehabilitation**

1

#### Governance

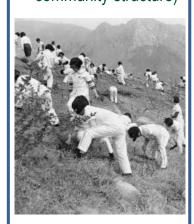
- Korea Forest Service
- Forest Protection Law



## People's Willingness

Sanlimgye

 (a kind of forest community structure)



# Leadership

• Reforestation as a national agenda



### Saemaul Spirit (1.0)

 CAN DO, Better Life, Cooperation, Selfhelp, etc.



#### Economic Growth

Substitution of firewood with fossil fuel (coal)



We planted 12 billion trees at degraded area from 1962!!!

## First and Second Five-Year "Economic Development Plans" until 1967

The Ministry of Agriculture and Forestry promoted three major forest policies:

- To plant five trees for every one tree
- Development of coal briquettes to substitute firewood
- Prevention of illegal timber harvesting
- ⇒ Most project failed due to the lack of law and financial support

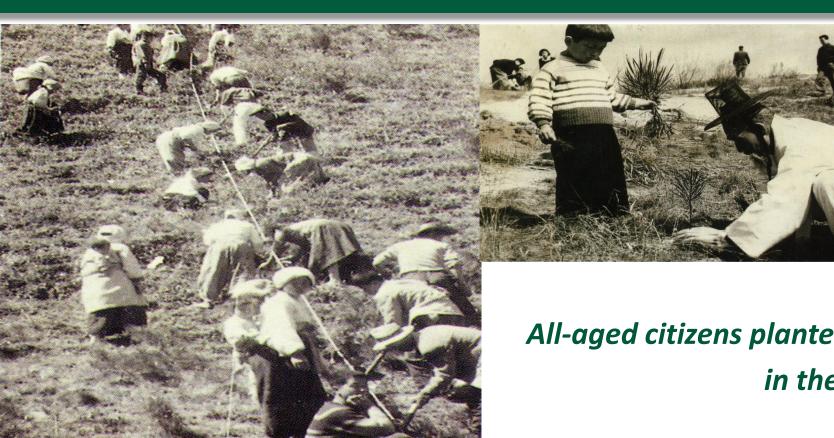


**Korea Forest Service established (1967)** 

# 2. People's Willingness

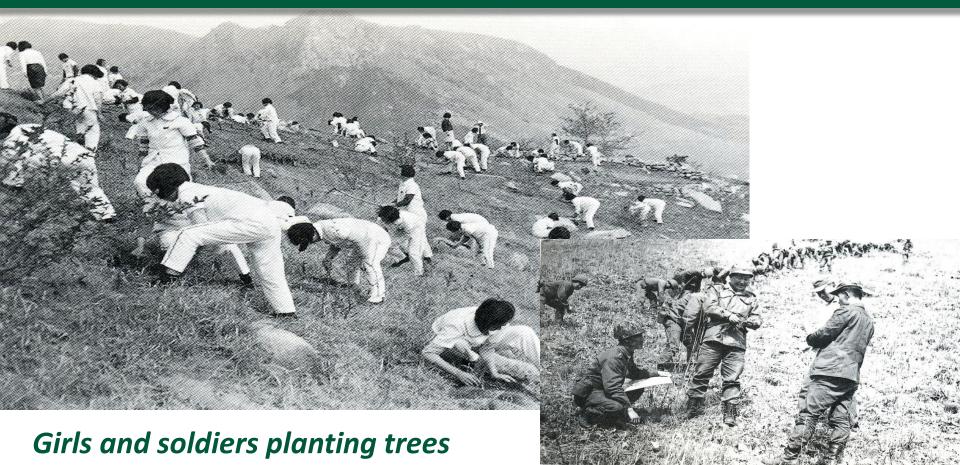


# 2. People's Willingness



All-aged citizens planted trees in the 1970s

# 2. People's Willingness



# 3. Strong Leadership







President PARK Chung Hee Joining
Tree Planting on National Arbor Day

# 3. Strong Leadership

## **Young-il Erosion Control Project**

- Reforested 4,538 ha during four years from 1973
- Total 3.6 million people joined the project

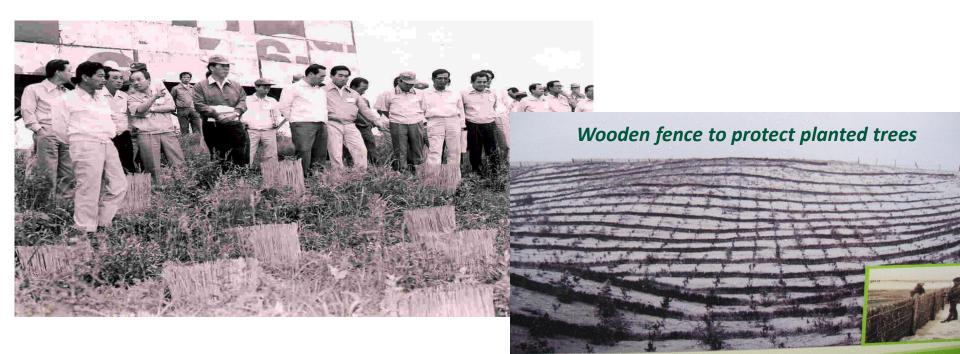




## 3. Strong Leadership

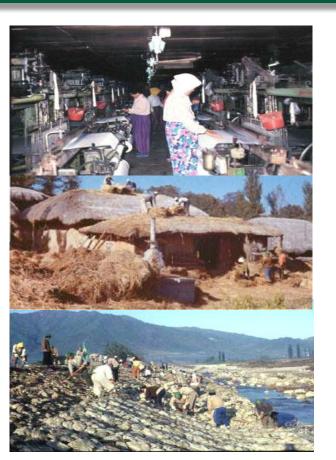
## Daegwal-lyeong Reforestation Project

Reforested 311 ha from 1976





# 4. Saemaul Spirit (1.0)



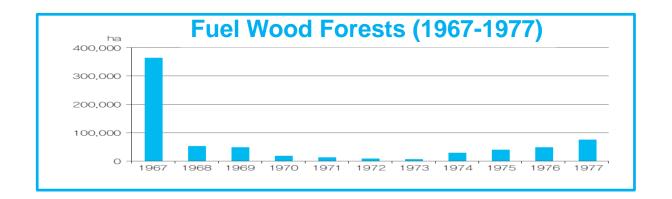
## Saemaul Undong (SU)

- Korean model of community development
- Initiated in 1971
- Three slogans
  - : diligence, self-help and cooperation
- Factors promoted by SU:
  - a. Educational factor
     (human resources capacity building developed)
  - b. Environmental factor (environment improved)
  - c. Social factor (income increase emphasized)
  - d. Creative power of human being (more dynamic society built)

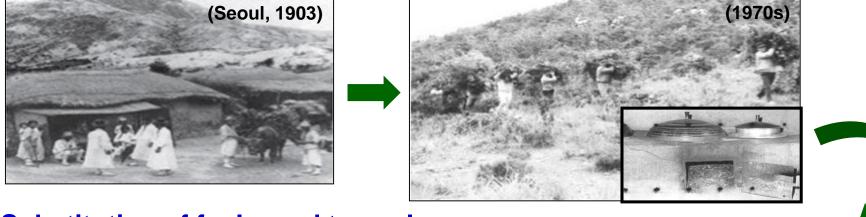
## 5. Economic Growth

#### **Establishment of Fuel Wood Forests**

- Estimation of the total area of fuel wood forests needed to solve fuel problems in rural community: **1.2 M ha** (2.4 M households x 0.5 ha per each household)
- Established 680,000 ha of fuel wood forest, with Quercus, Robinia pseudoacasia, Alnus spp., Lespedeza spp., etc.



## 5. Economic Growth



### Substitution of fuel wood to coal

- As the roads were paved, modernized fuels, such as coal, briquette, petroleum, and diesel were substituted for wood in rural community.
- It reduced the utilization pressure on forest for fuels and lead the success of reforestation.



1950-70s in Korea ► ► Hungry Spirit for Food and Learning

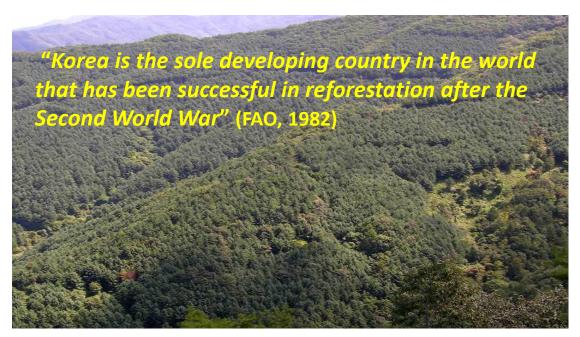
"We all were infected with NEED-virus"

Capacity Building of Human Resources,
 fundamental driving force for national greening and development

#### Minnesota Plan

- Part of reconstruction programs for Korea in 1950s
- Supported 226 faculty members of Seoul National University for learning advanced technologies at Univ of Minnesota for 7 years.

#### THE PRESENT



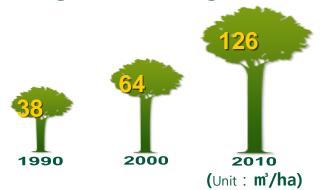
\*\*Korean pine plantation in Chuncheon, 2009

### **Age Class Distribution**

	Area(%)	Coniferous(%)
under 20 yrs	9.8	58
21 to 40 yrs	57.4	44
over 41 yrs	32.8	32

As of year 2010

## **Changes in Growing Stock**



## Benefits and Consequences of Reforestations

## Providing economic benefits to the locals and the publics

 Investing a budget of USD 2.0 billion (nurture, protection, utilization) creates an economic value of >USD 100 billion

**Investment** (budget in 2011)

KFS USD 1.4 billion
Local USD 0.6 billion

governments

Total USD 2.0 billion



#### Benefits

Forest products

Public benefits

Reduced medical costs
Landscaping & Carbon

4.7 billion
70.0 billion
2.4 billion
NA

Total (approx.) US\$ 100 billion

#### **Green Welfare: From Cradle to Grave.. Life with Forests**















Prenatal (birth)

Childhood (nursing)

Adolescence (education)

Adulthood (leisure, recreation)

Middle Age (healing)

Old Age

Death (tree burial)

**Birth**Prenatal care

Childhood
Kindergarten

Adolescence
Camping and
education

Adult/
Middle Age
Recreation

Old Age
Healing forest
Therapeutic forests











## **Forests in South**

Sustainable management of forests for better economic resources

## **Forests in North**

Reforestation of degraded forests with erosion control

- 1. Timber Production
- 2. Ecosystems services –

  Landscape based
  (clean water & air, recreation and healing, etc.)
- 3. Wildlife habitat
- 4. income generation
- 5. Urban forests

- 1. Timber Production
- 2. Short-term income generation
- 3. Fuel wood consumption