

Successful Reforestation in South Korea

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World evaluation on Korean forest



- ❖ UN FAO Report in 1982:

“Korea is the only developing country in the world that has succeeded in reforestation since the Second World War”

- ❖ Mr. Lester Brown, Director of Earth Policy Institute in his book, “Plan B 2.0” (2006)

“South Korea is in many ways a reforestation model for the rest of the world ”

Major topics in this lecture



- ❖ History of forest devastation in Korea
- ❖ Leadership of President and government
- ❖ Major policies of reforestation
- ❖ Implications

Forests during Joseon Dynasty (before 1910)



- ❖ Forest: owned by government and open to the public
- ❖ Fuel wood collection was allowed
- ❖ Forest near villages: already destroyed
- ❖ Government timber supply policy
 - Only pine forests were protected for government timber need

Bald mountains:



population of 20million and cold winter
(photo: Seoul suburb in 1903)



Japanese Occupation (1910-1945)



Virgin forests were exploited for domestic, Manchurian, and Japanese use



Barren mountains in 1930's:



After liberation from Japan in 1945 and during Korean War(1950-1953):
The most devastated forests in Korean history
(photo: 1950's)





President Syng Man Rhee (1948-1960)

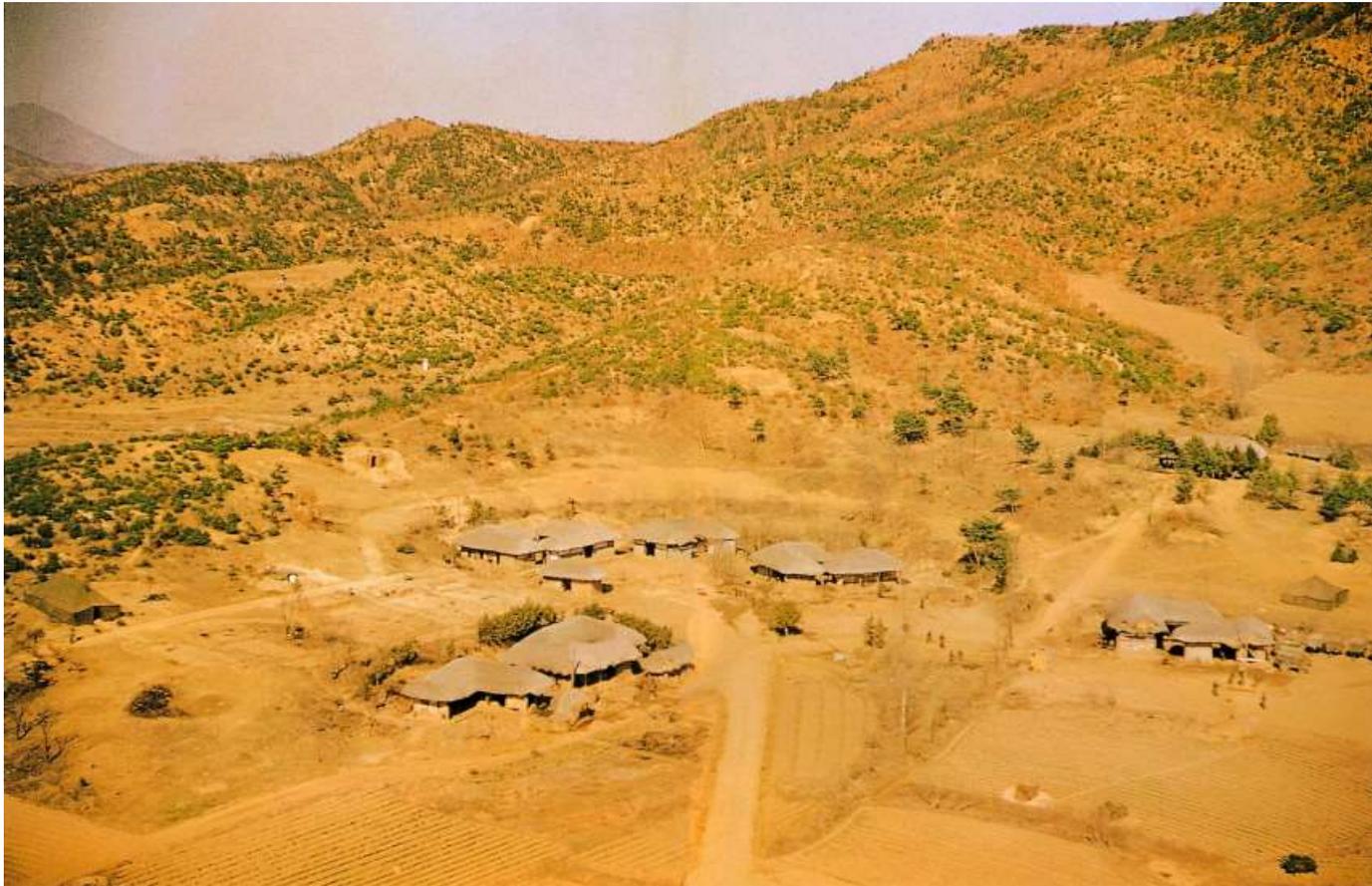




President Rhee: No success (lack of government will, system, and budget)

- ❖ 1946: Arbor Day Designation
(First Arbor Day: 1872 in Nebraska, USA)
- ❖ 1950: Korean War broke out.
- ❖ 1951: Temporary Forest Protection Act
- ❖ 1952: Three-Year Reforestation Plan
- ❖ 1953: Five-Year Erosion Control Plan
- ❖ 1954: Second Ten-Year Private Forest Reforestation Plan
- ❖ 1958: Ten-Year Upstream Soil Conservation Plan
- ❖ 1959: Five-Year Fuel Wood Forest Establishment Plan

Seoul suburb in early 1960s



In 1960 (north of Seoul)



May 16, 1961:

**Coup d'état by General Chung Hee Park
with keen interest in economy and forest**



Immediate eradication of five major social ills by military government



1. Smuggling
2. Narcotics
3. Illegal timber harvesting
(government's will for forest protection)
4. Gangster
5. Quasi-reporter

Dec. 27, 1961: Enactment of Forest Law



- ❖ First Forest Law since 1945
- ❖ Mother law of present Forest Law
- ❖ The fourth law by the military government
(Recognition of urgency of Forest Law)

January 15, 1962; Erosion Control Act



- ❖ Hiring 460 nursery men with high salary
- ❖ Dispatch to every city and county
- ❖ Their duty: Production of **black locust** seedlings
- ❖ Total of 500 million seedlings every year

Importance of **black locust** in reforestation in Korea



- ❖ *Robinia pseudoacacia*
(legume family with root nodules)
- ❖ First introduced from USA in 1898
- ❖ Benefits (advised by experts)
 1. Fix nitrogen: best choice for poor sites
 2. Improve soil fertility
 3. Fix moving soil at erosion control sites with massive root system

Benefits of black locust



4. Fuel wood production: most significant contribution to poor farmers and indirectly to reforestation
5. Green forage for goats and rabbits
6. Honey production: major income source for bee keepers in Korea
7. Perfume production: cosmetics and chewing gum
8. Durable wood production: wagon wheel, fence post, truck floor, benches, farm instruments

Erosion control sites:

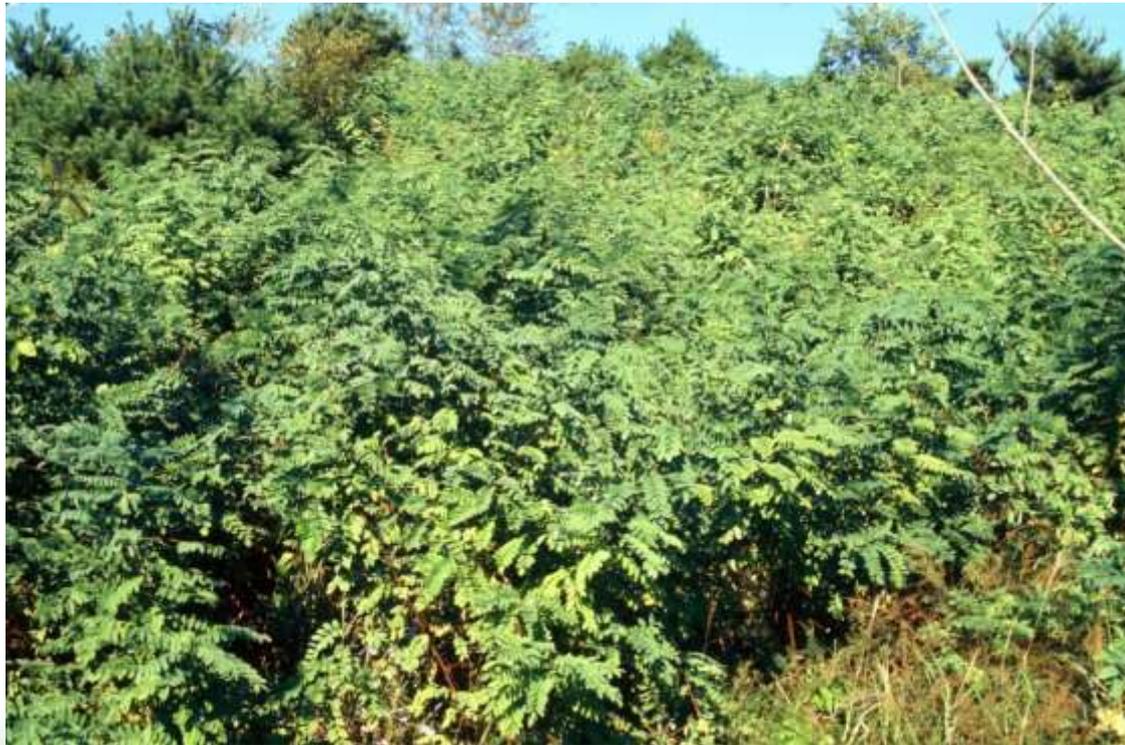


black locust planted for early soil stabilization
(photo: 4 years after planting)





**Most important project by
military government:
black locust fuel wood plantation**



Reason of using black locust for fuel wood: rapid early growth (fuel collection in three years)



Honey production from black locust: most important source of honey in Korea



Outdoor bench



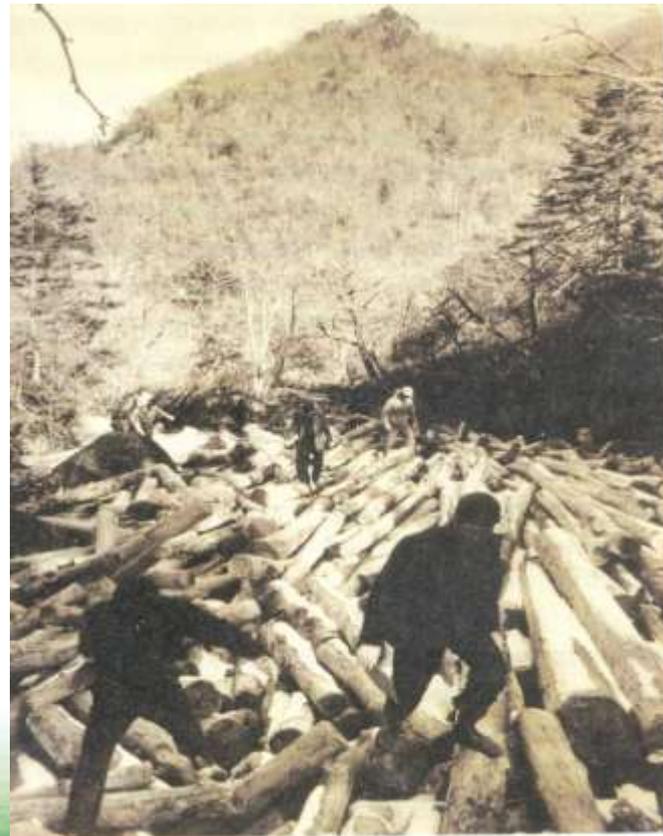
A high quality table made of black locust



Movement of Italian poplar planting in river bank



**1964: Incidence of large scale
illegal timber harvest
(President Park's strong will
for wiping out further incidences)
(Put 600 people into jail)**



1967: Establishment of Forest Service:



1967:



**Introduction of National Park System:
Significant contribution to conservation
of natural forests**





1971: Greenbelt: (photo: Metropolitan Seoul)



**1973: Movement of Forest Service
from Ministry of Agriculture
to Ministry of Home Affairs
(significant forest policy change)
to utilize well organized administrative
structure and Saemaul Movement
to mobilize police for forest protection**



治山治水

一九七七年四月五日

大統領 朴正熙



First 10-Year Reforestation Plan



- ❖ Period: 1973-1982
- ❖ Total planting area: 1,000,000 ha
- ❖ Number of trees: 2 billion
- ❖ Intensive Erosion control
- ❖ Complete Slash-and-burn farming regulation

Tree Inspection System



- ❖ Planted-tree inspection in 3 steps.
 - ❖ 1st step: in county (city) level by mayor
 - ❖ 2nd step: in provincial level by governor
 - ❖ 3rd step: in national level by Forest Service.
- The survival rate: over 90% in national average.

“Saemaul Movement “



- ❖ Started in 1970
- ❖ Three mottos:
Diligence, Self-reliance, Cooperation
- ❖ 1973: Started to play a pivotal role in reforestation

Spirit of “Cooperation” in Saemaul Movement



“Saemaul” nursery :

Secret of successful nursery practice (generating income to participants)



Participation of Saemaul Women's Club



Military Saemaul Movement for tree planting



Erosion Control Plan

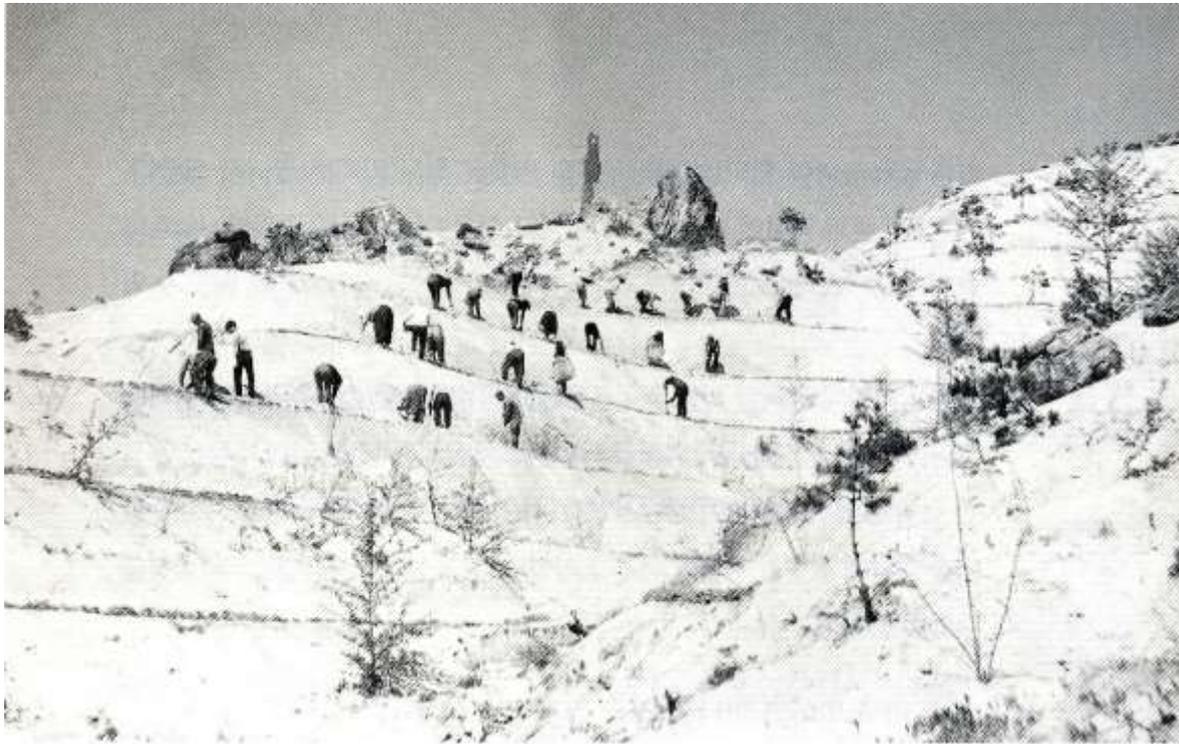
(photo: Youngil Region, Gyeongbuk Province)



President Park's frequent visit to Youngil erosion control site to encourage the workers



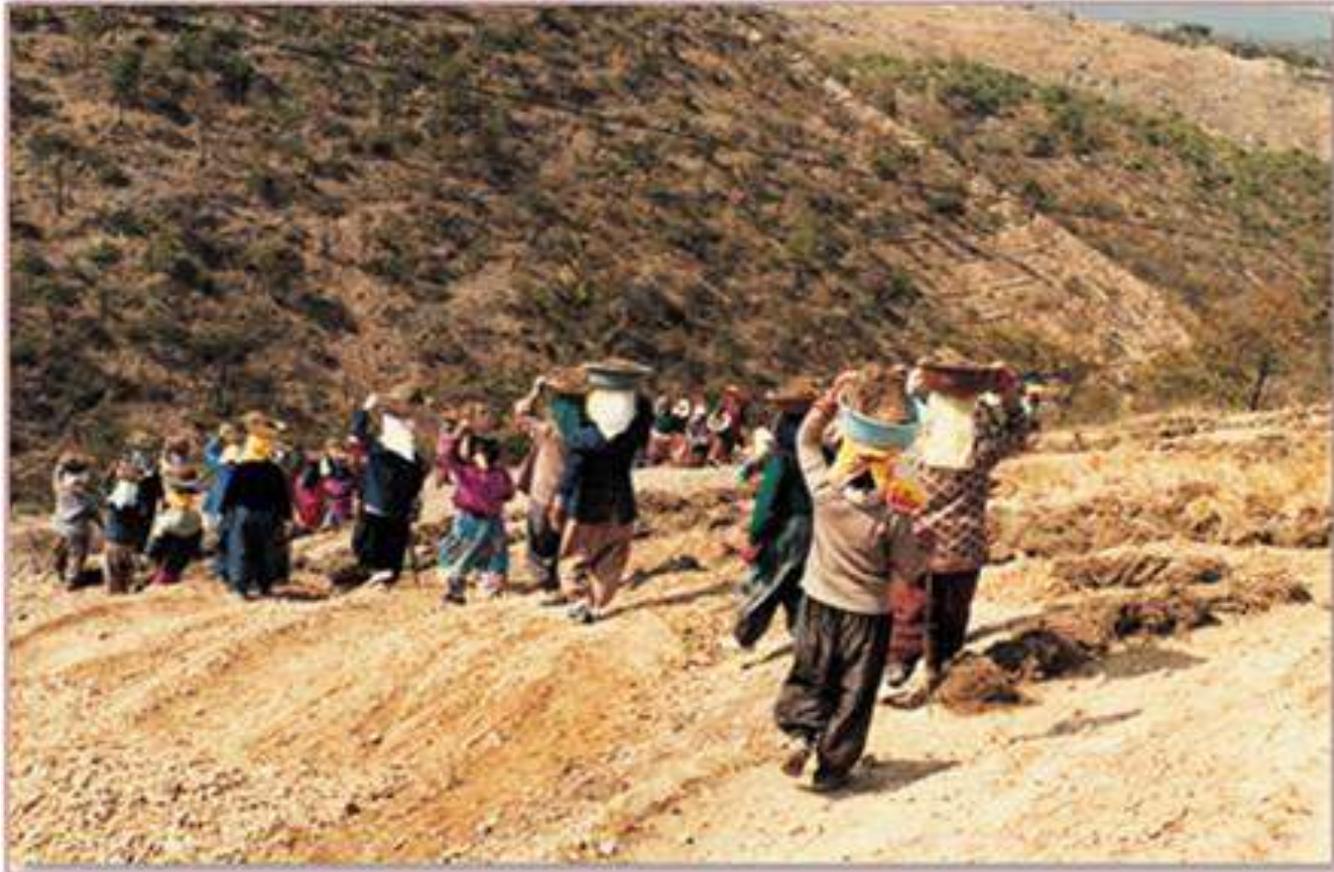
Erosion Control Plan: Terrace formation to stabilize the soil in slope and plant trees and grasses



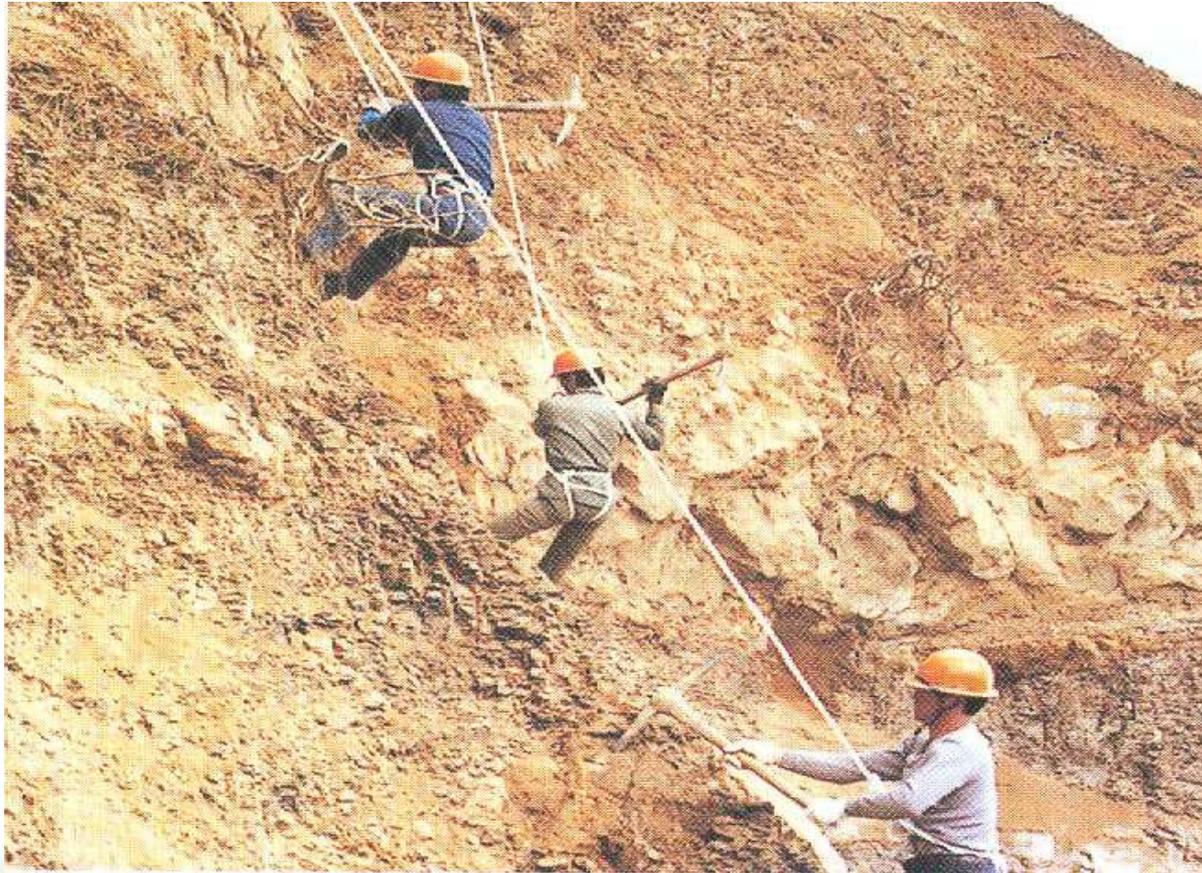
Erosion control site: No roads bringing in rocks, fertile soil and planting stocks by “A-frame”



Rocks and soil carried by village women on the head



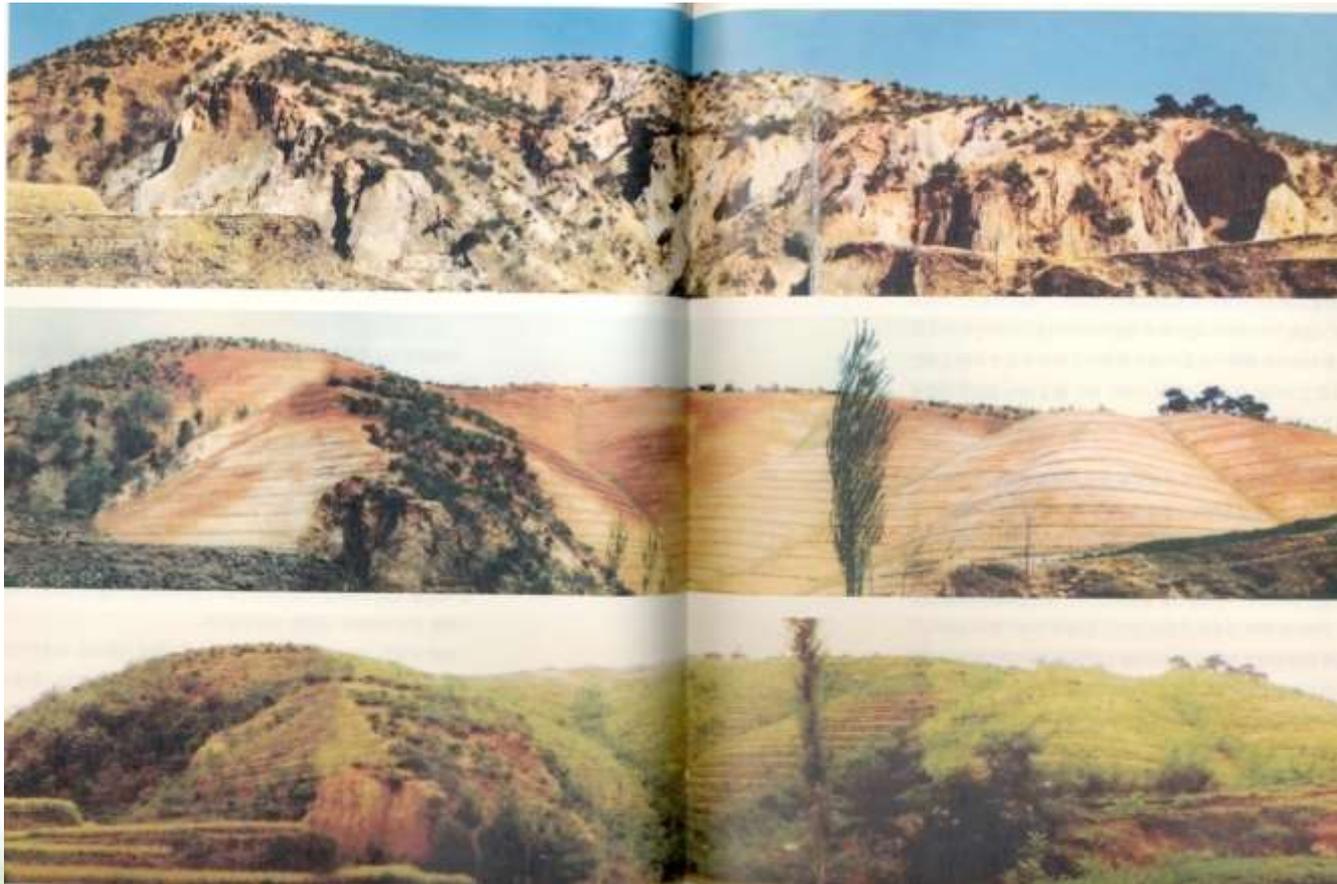
Workers hanging on safety ropes to stabilize the steep slope



Recovery of erosion control site in Oedong treated in 1967 (photo: four years later)



Gradual recovery of Youngil erosion control site (total area: 4,538ha)



Slash and Burn Farming Regulation:

Enactment of law in 1966

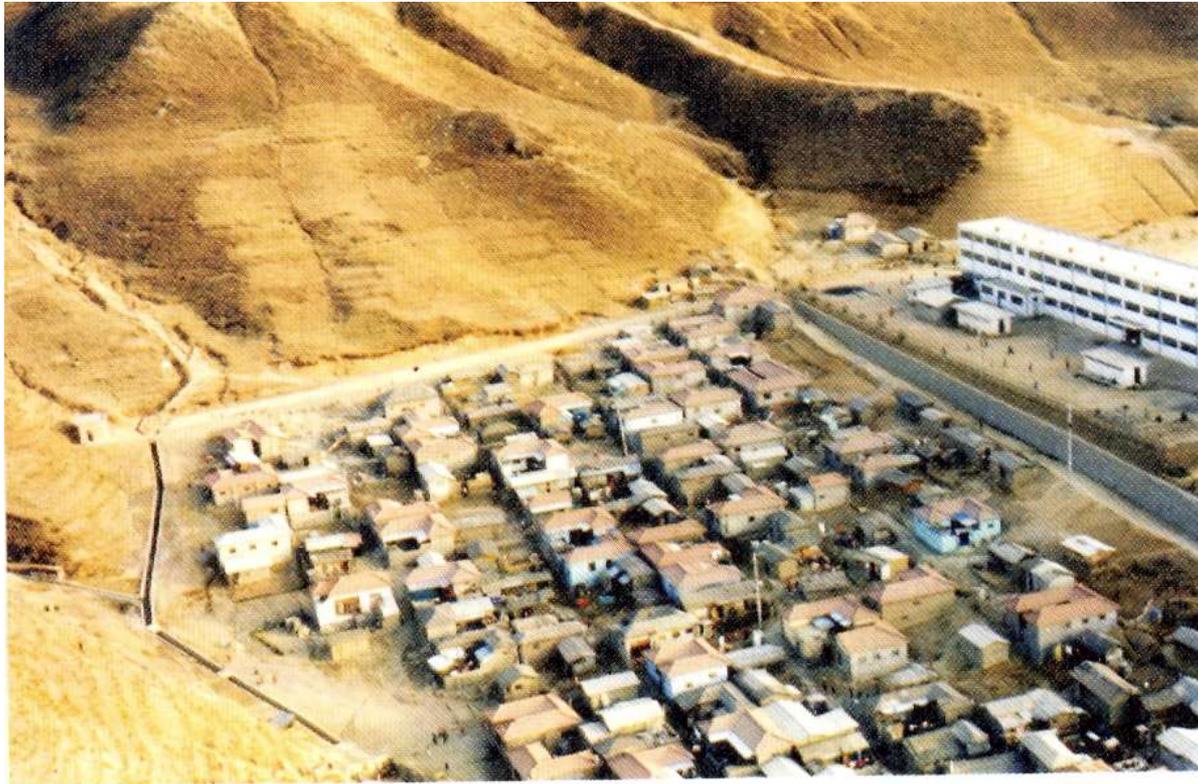


New settlement process:

1. government officials accompanied all the way to new houses in cities
2. visited the residence every 6 months for three years
3. reported the results to the government (President)



Establishment of new settlement villages with new jobs and settlement subsidy

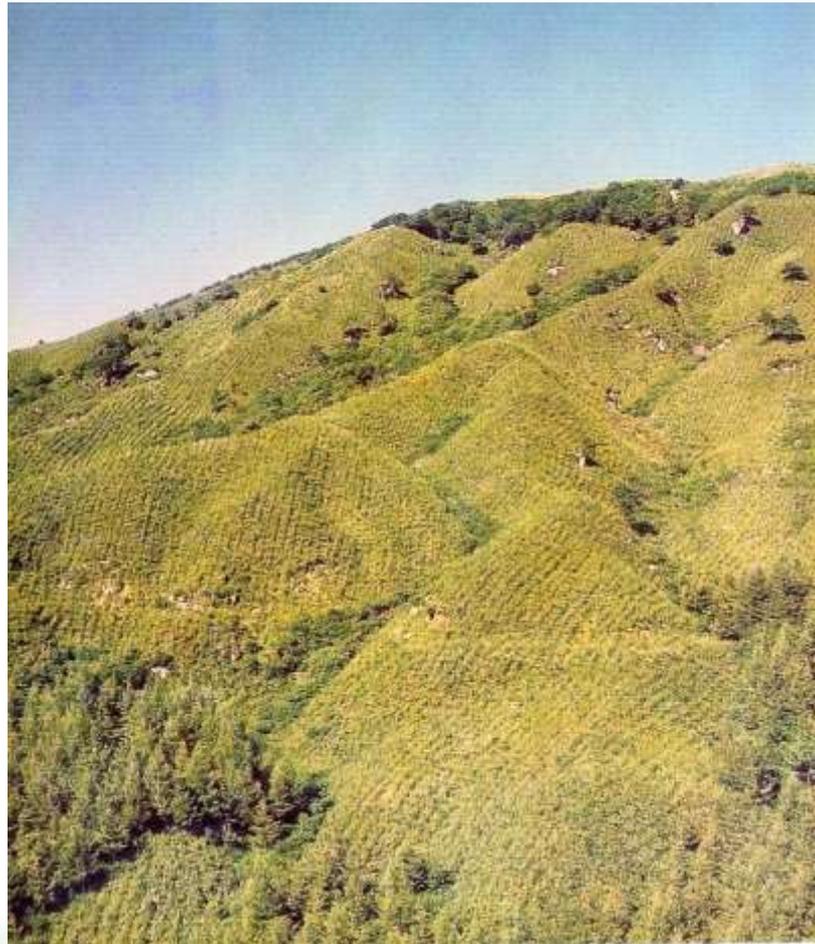


Second 10-year Forest Rehabilitation Plan



- ❖ Original period planned: 1979-1988
- ❖ Period finished: 1979-1987
- ❖ Total area planted: 0.96million ha
- ❖ Total number of trees planted: 1.9billion trees

Visual changes in 1980's after successful reforestation



Miracle in the 20th century in Korea



**A beautiful forest
40 years after planting
(photo: *Cryptomeria japonica*)**



Forests for recreation



Official announcement of completion of reforestation in 1992



Summary:



Ten major projects by President Park (1961-1979) for successful reforestation

1. Fuel wood plantation establishment
2. Erosion Control Plan
3. First 10-year Reforestation Plan
4. Slash and Burn Regulation
5. Chestnut plantation
6. Cultural heritage and surrounding forest protection
7. National park system (current 20 parks)
8. Greenbelt system around major cities
9. Landscape planting in cultural heritages
10. Nature Conservation Movement

Summary:



Major factors for successful reforestation

1. Strong leadership of President Park: High motivation and enthusiasm, continuous interest and support
2. Strong leadership of government (Ministry of Home Affairs and Forest Service): Efficient implementation of 10-Year-Reforestation Plan.
3. Forestry Officials: Willingness to serve for government with strong encouragement by President Park.
4. Village farmers: Participation with spirit of “Saemaul Movement”
5. Social Environment: Cheap and abundant labor, supplementary coal supply for fuel, minimum forest damages with decreasing population.

President Park dedicated to “Forest Hall of Fames” in 2001.



Conclusions



Past: successful reforestation in 1970's with strong will of Government

Present:

1. successful conservation of forest resources
2. Severe wood shortage due to little harvesting and decline of domestic wood industries
3. More emphasis on the indirect benefits of forests than on wood production.

Future: Uncertain



Thank You !

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