Korea Forest Service

Food and Agriculture Organization of the United Nations

AFoCO Asian Forest Cooperation Organization

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15th World Forestry Congress,
Side Event "International Drylands Greening Network" ,
Republic of Korea, May *5, 2022*

Session 2:
Presentation on International Cooperative Project on Drylands Greening

Afforestation of mountains to provide water supply

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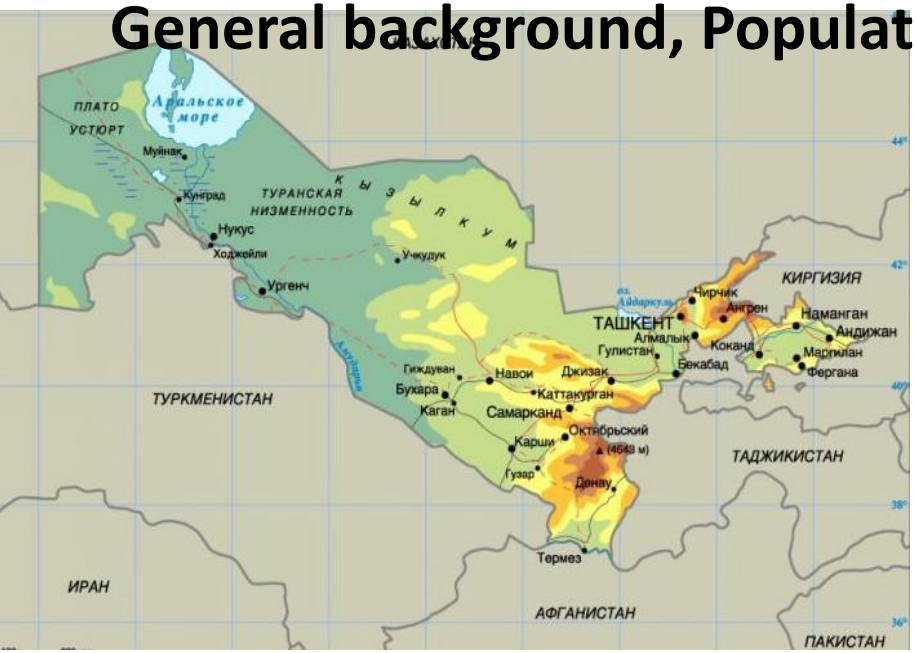
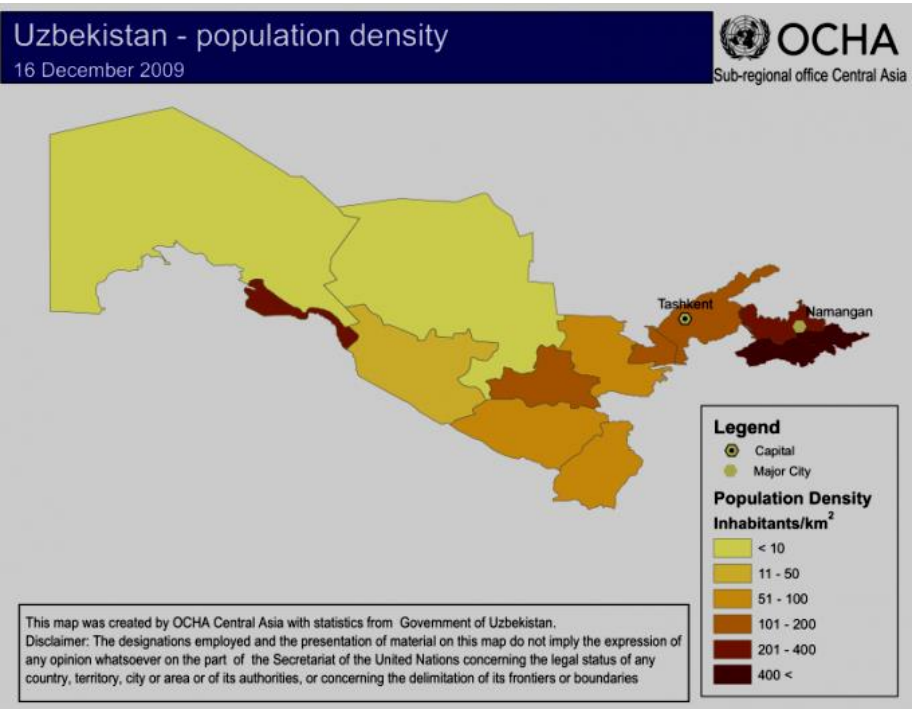
Research Institute of Forestry, Republic of Uzbekistan

General background, Population and distribution: Uzbekistan





Total area - 447,000 km^2

Population >35 mln.

Flat desert - 80% of the territory

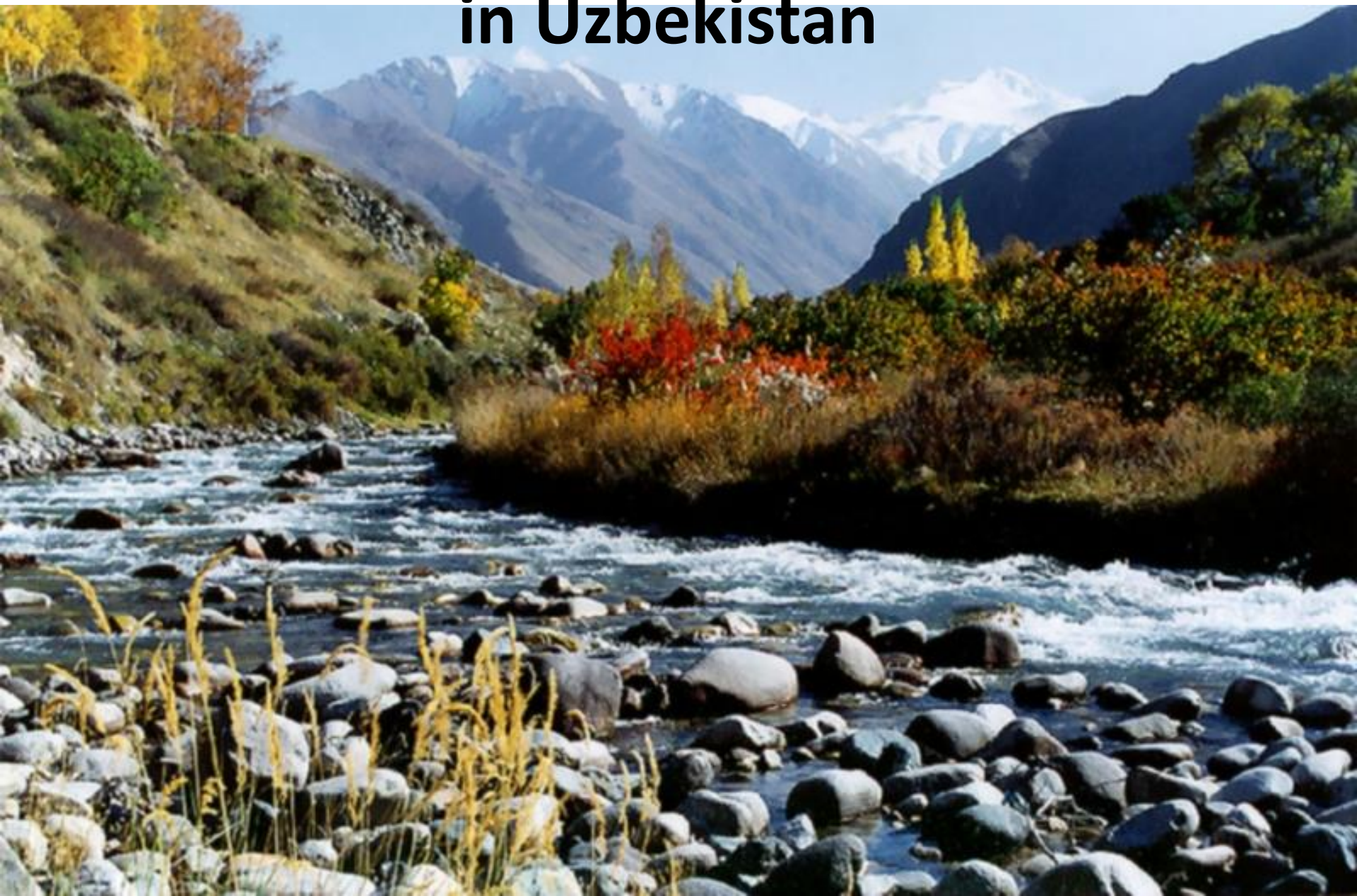
Mountain and foothills – 20%

Climate – Continental, arid
- Annual temperature 13 ^{o}C
-Summer temperature 27^{o}C, up to 40 °C
-Winter temperatures −2 °C, up to −30 °C

- average annual rainfall 100 – 200 mm (desert part).

-June - September none or a small precipitation falls
-GDP $69 235 billion/ $1 983 per capita
- GDP PP $264,7 billion

Mountains – is the only source of water in Uzbekistan



Snow and rain feeding of rivers on degraded mountain slopes

Areas of eroded soils in the mountainous regions of Uzbekistan

Площадь	The degree of soil erosion	
	Total, thousand ha	В %
Alpine zone		
The whole area	569	100
Eroded	454	80
Weak	116	20
Average	169	30
Strong	169	30
Mid-high mountains		
The whole area	1557	100
Eroded	1226	78
Weak	499	32
Average	284	18
Strong	442	28
Low mountains and foothills		
The whole area	4128	100
Eroded	4128	100
Weak	1438	35
Average	1000	24
Strong	1690	41
All mountain areas		
The whole area	6253	100
Eroded	5806	93
Weak	2053	33
Average	1452	23
Strong	2301	37

Water erosion of soil in the mountains is the cause of mudflows

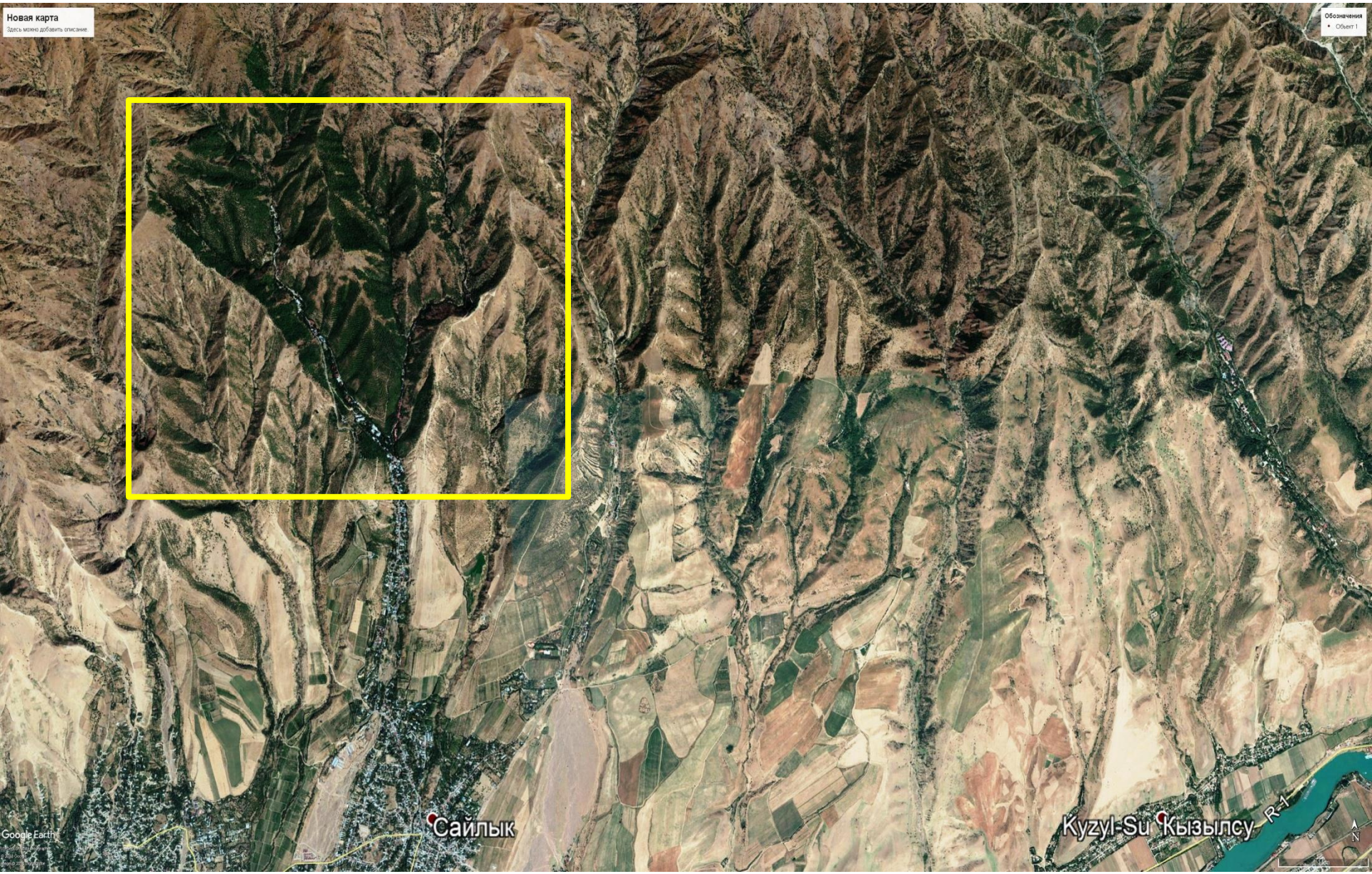
Forest as a factor in stabilizing soil fertility, regulator of hydrological regime

Small watershed management by means of forest reclamation in Aktash.
Start of work – 1896 41°39′32.29″N; 69°47′16.64″E

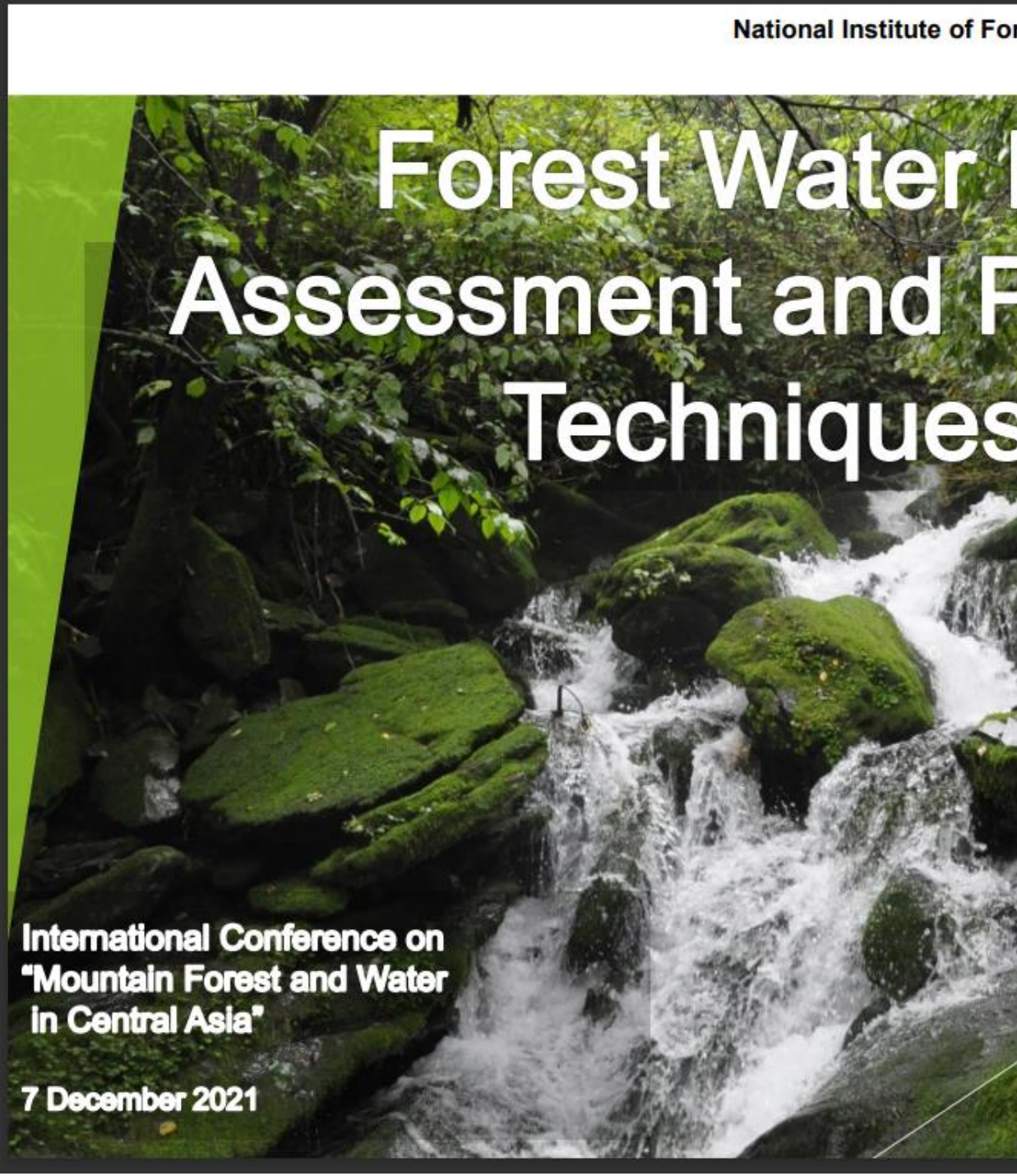
Houses of local residents and boarding houses in the riverbed

River flow does not stop all year round.

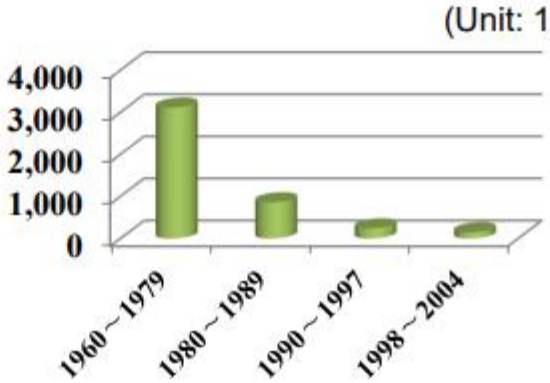
The only forested catchment area of the Aktashsay River



Slide from Dr. Hyung Tae Choi presentation

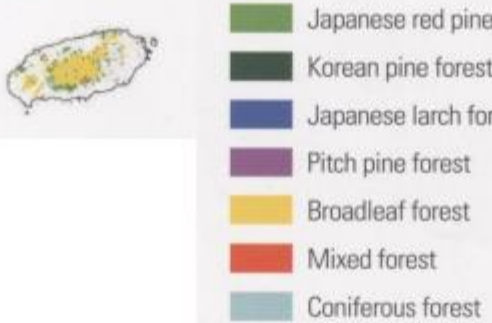


Reforestation area of South Korea



From 1960s, Korea began its reforestation in earnest led by the government.

Total reforestation area : 2.2 million ha

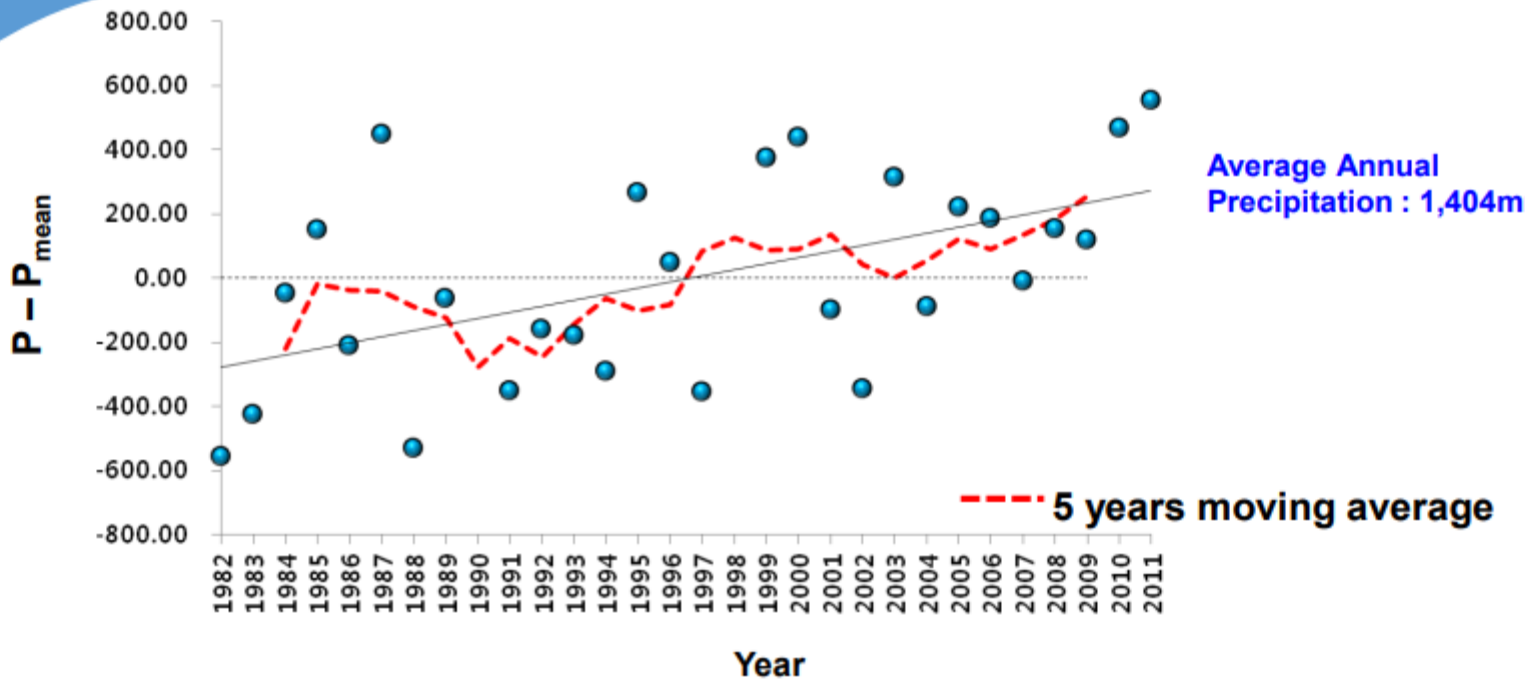


Denued land

Reforestaion

1. Change of annual precipitation

Annual precipitation increases 1.3% every years.



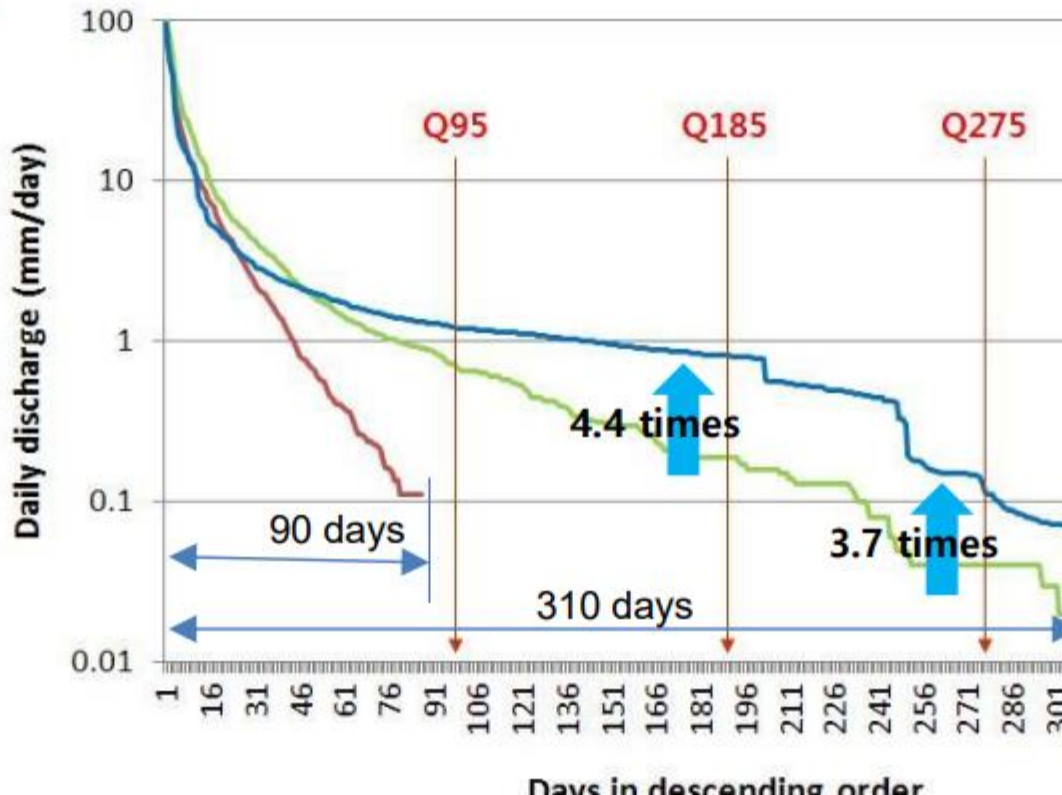
※ $P - P_{mean}$ = Annual precipitation – Annual average precipitation (1982~2011)

Slide from Dr. Hyung Tae Choi presentation

3. Change of the Flow duration curves

The Flow Duration Curve analysis shows that i
flow duration period was increased, and the
became a perennial stream.

This result implies that the reforestation of denu
great assistance to increase the water supp




Thank you for your attention