The Integrated Forest Ecosystem Management project in the Kyrgyz Republic (IFEMP)

Part 2 - NFI#2 design and field methodology

Unique-CAREC:

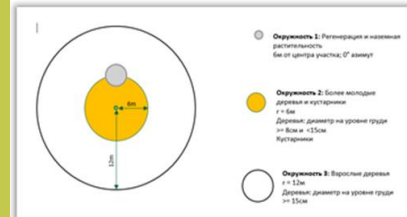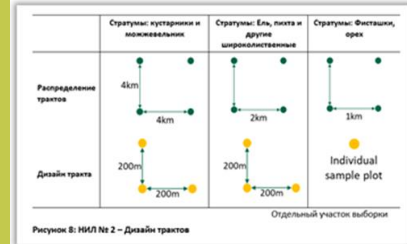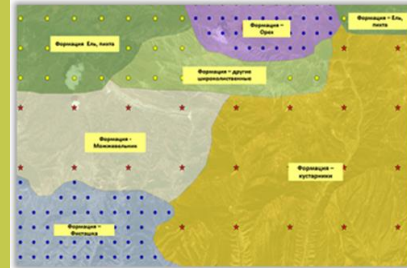Kuban Matraimov

17.05.2024

NFI#2 design and field methodology

Content

1. Introduction and short overview

2. NFI#2 design (grid, tracts, plot)

3. Methodology for field works

4. Balance of field work
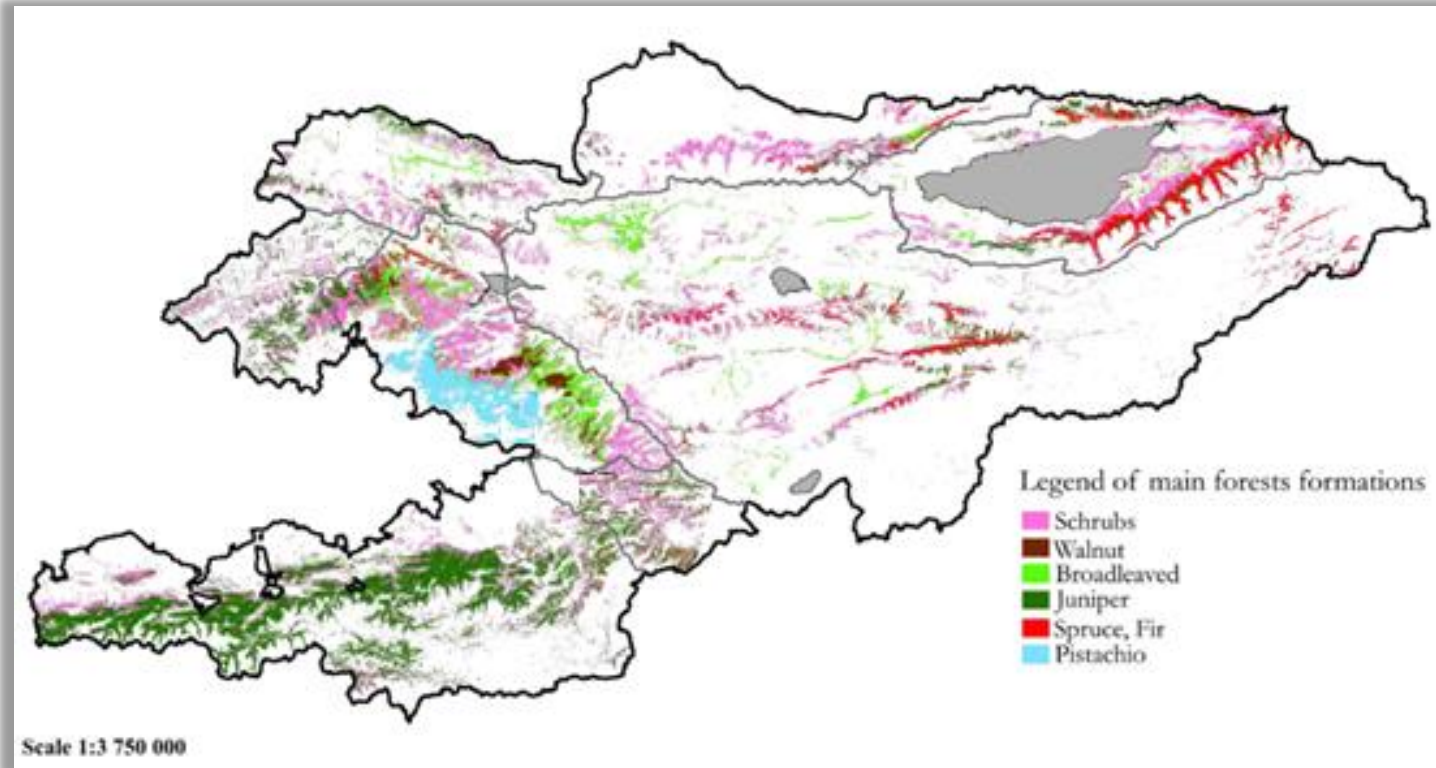

Рисунок 8: НИЛ № 2 – Дизайн трактов

1

Introduction and short overview

- Carried out throughout the country

- For 6 "Main Forest Formations"

Map of the Main Forest Formations of Kyrgyzstan (developed by ECOGIS Public Foundation and by Ennio Grisa, 2003-2008)

4

2
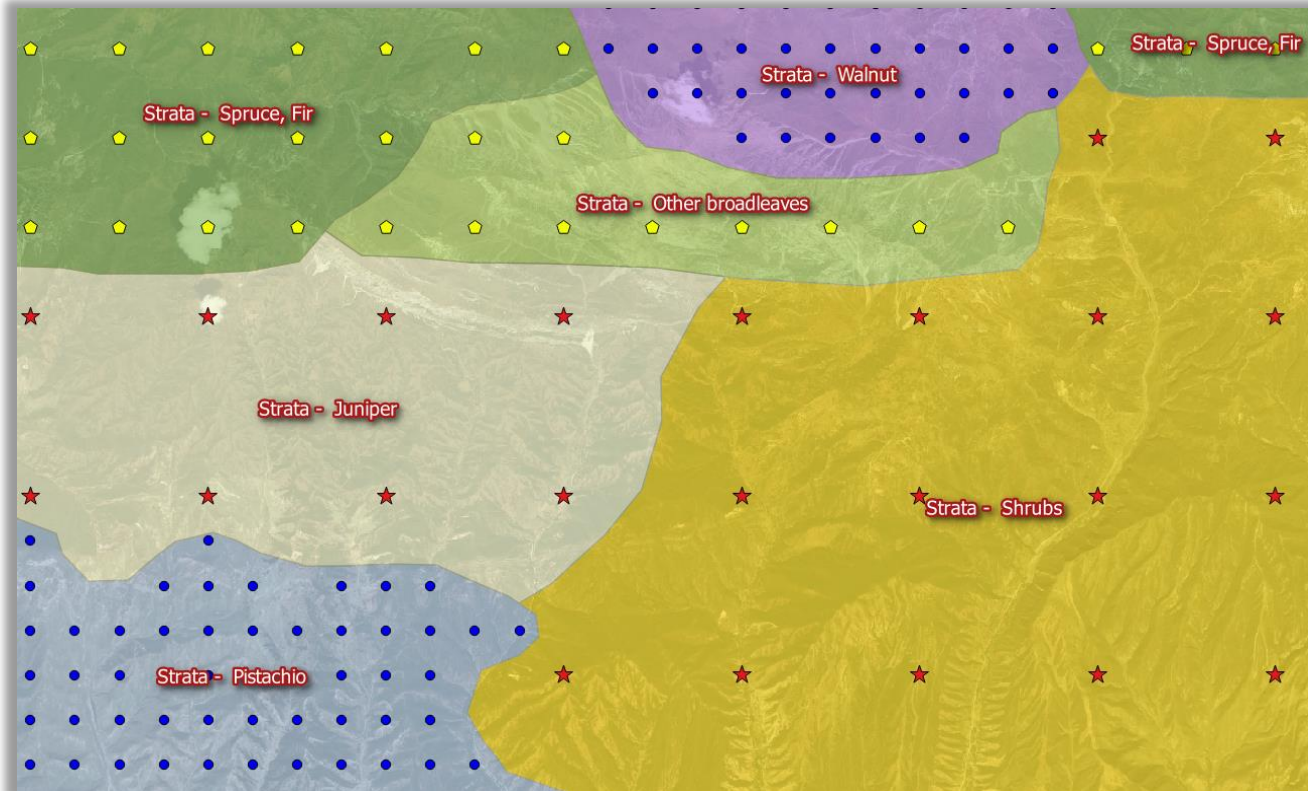
NFI#2 design
(grid, tracts, plots)

Forest strata and grid size

Level 1 (Basic Level)	Level 2 (LC Map)	Grid size (km x km)	Stratum area (1000 ha)	Stratum area (in %*)
Forests (tree canopy Cover > 10 %)	Other broadleaves	4 x 4	3,122,053	15.6
	Juniper - 8x16	8 x 16	1,062,324	5.3
	Juniper - 8x8 densified to 4x4	4 x 4	2,188,093	1.0
	Juniper - 8x8 densified to 4x8	4 x 8	2,807,782	14.1
	Pistachio	2 x 2	559,011	2.8
	Spruce	2 x 4	4,678,654	23.4
	Walnuts	2 x 4	672,068	3.4
Other Wooded Land (tree cover < 10%)	Shrubs	8 x 16	4,886,692	24.5
Total country			**19,995,089**	100.0

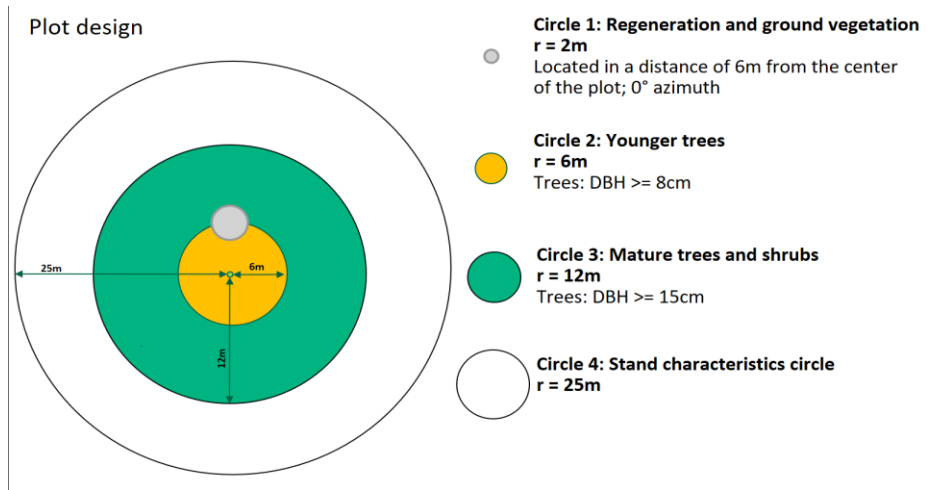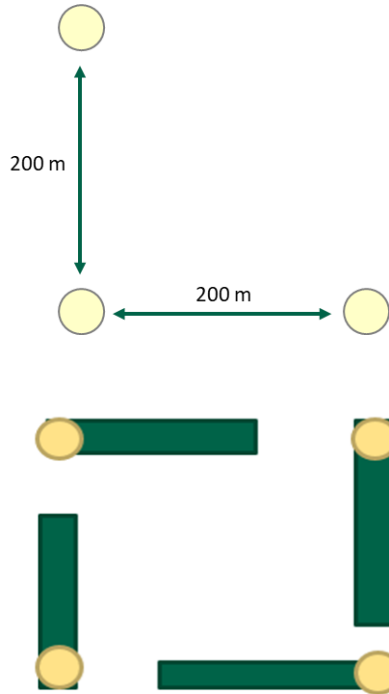## Applying different grid densities in different strata

Comparison NFI#1 versus NFI#2

- 776 <> 9,990 tracts established
- 210 <> 2,655 plots with forest identified and checked
- No wall-to-wall remote sensing based land cover classification and no use of VHR images for the forest – non-forest preclarification

9,990 tracts   **30,940 plots**

NFI #2: Standard field tract with 3 plots

200 m

200 m

Plot design

25m

6m

12m

Circle 1: Regeneration and ground vegetation
r = 2m
Located in a distance of 6m from the center
of the plot; 0° azimuth

Circle 2: Younger trees
r = 6m
Trees: DBH >= 8cm

Circle 3: Mature trees and shrubs
r = 12m
Trees: DBH >= 15cm

Circle 4: Stand characteristics circle
r = 25m

NFI#2 plot allocation in case of a NFI#1 tract

9

3

Methodology and implementation of field work

Several weeks of **online training for the Supervision Team** and subsequent two-day theoretical training of Field Team Leaders in Bishkek in May 2020 (Covid lock-down)
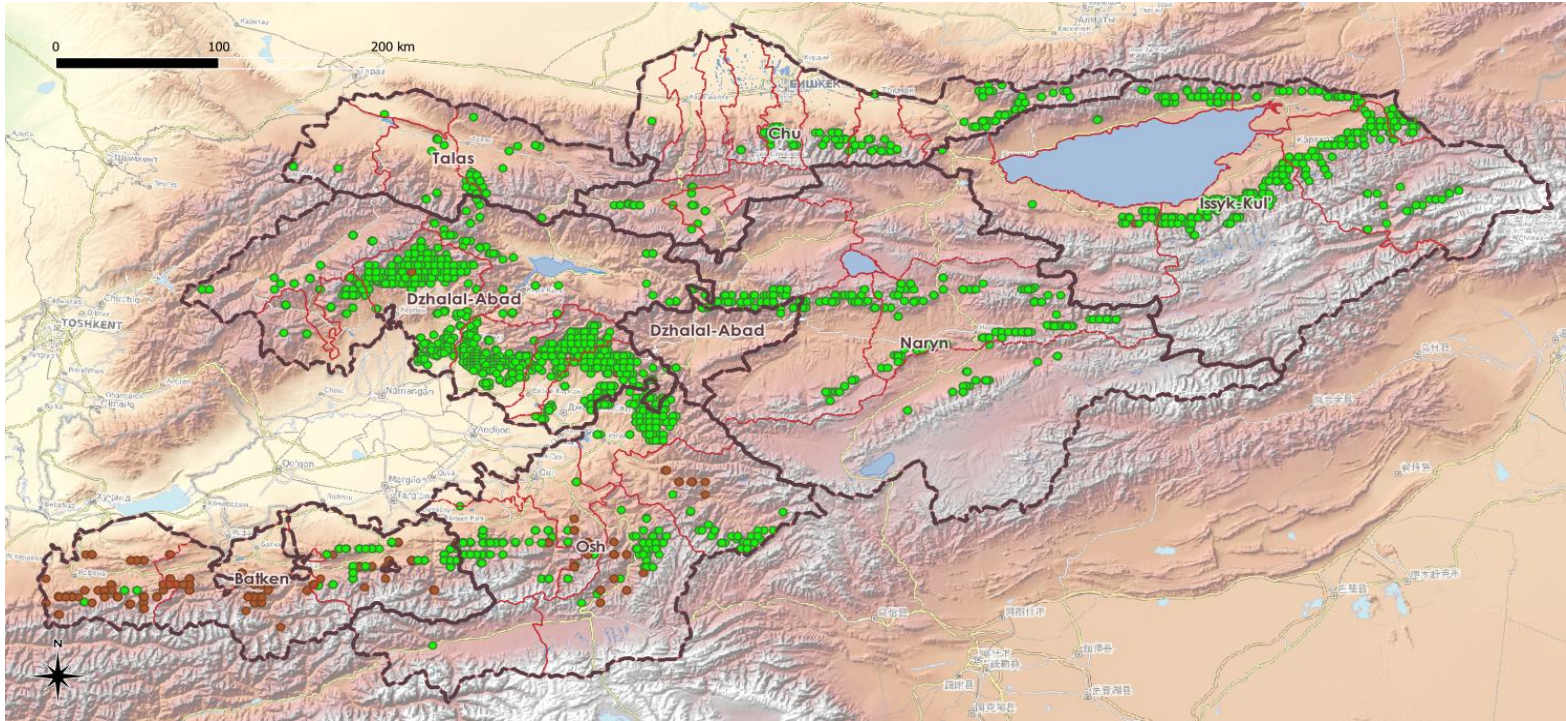
One-week practical training was conducted in Kegete, Chui Oblast

- 2020: 14 field teams were formed for 3-day theoretical training and a week-long practical training in the Kegetinsky Gorge

- Field work began on June 22, 2020 and was carried out in parallel in all regions of the country, across all strata

- Field teams are provided with the necessary field tools, equipment and materials

- Special software has been developed for collecting field data

- 2021: work of 5 field groups

Forest and accessible
Forest and inaccessible

13

Balance of field work

Overview on assessed sampling elements

Item	Amount
Number of NFI #2 tracts established in the grid	9,990
There of NFI#1 tracts	776
Number of NFI #2 plots established	30,694
Thereof NFI#1 plots	3,081
Number of NFI #2 tracts pre-clarified as forest	1,309
Number of NFI #2 plots pre-clarified as forest	2,653
Number of NFI #2 plots pre-clarified as forest and accessible	2,489
Number of NFI #2 tracts assessed in the field	1,244
Number of NFI #2 plots assessed in the field	2,289
Thereof NFI#1 plots	210
Number of NFI #2 plots accessible & measured in the field	2,235
Number of trees measured	13,757
Number of unique tree species	36
Number of stumps measured	1,346
Number of standing deadwoods measured	493
Number of lying deadwoods measured	686
Number of unique shrub species measured	26
Number of unique species found in the regeneration	34

End of part 2

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