Webinar EU Forest Strategy 2030
Mapping EU Primary and Old-growth forests

Where is Bulgaria toward 2024

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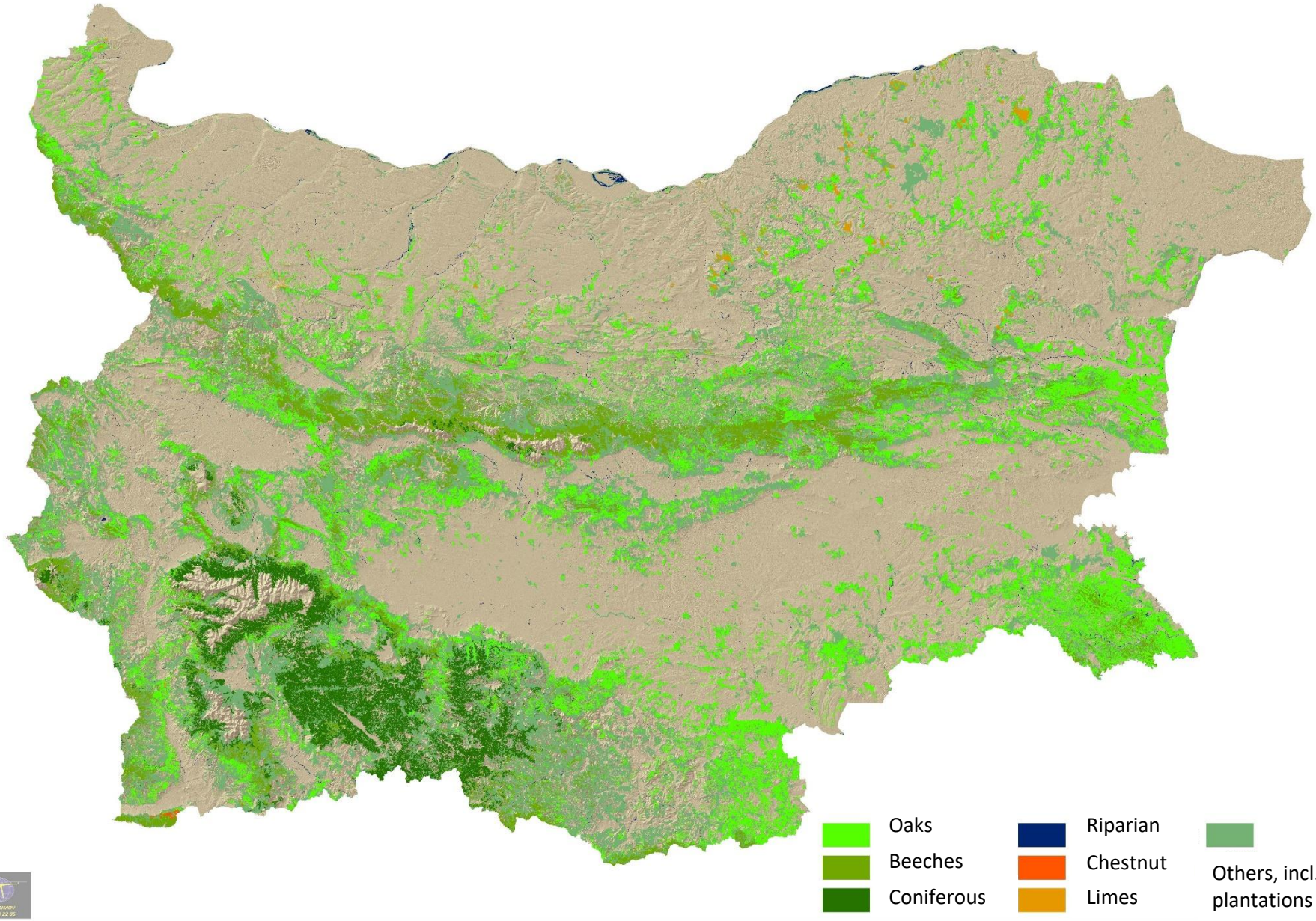
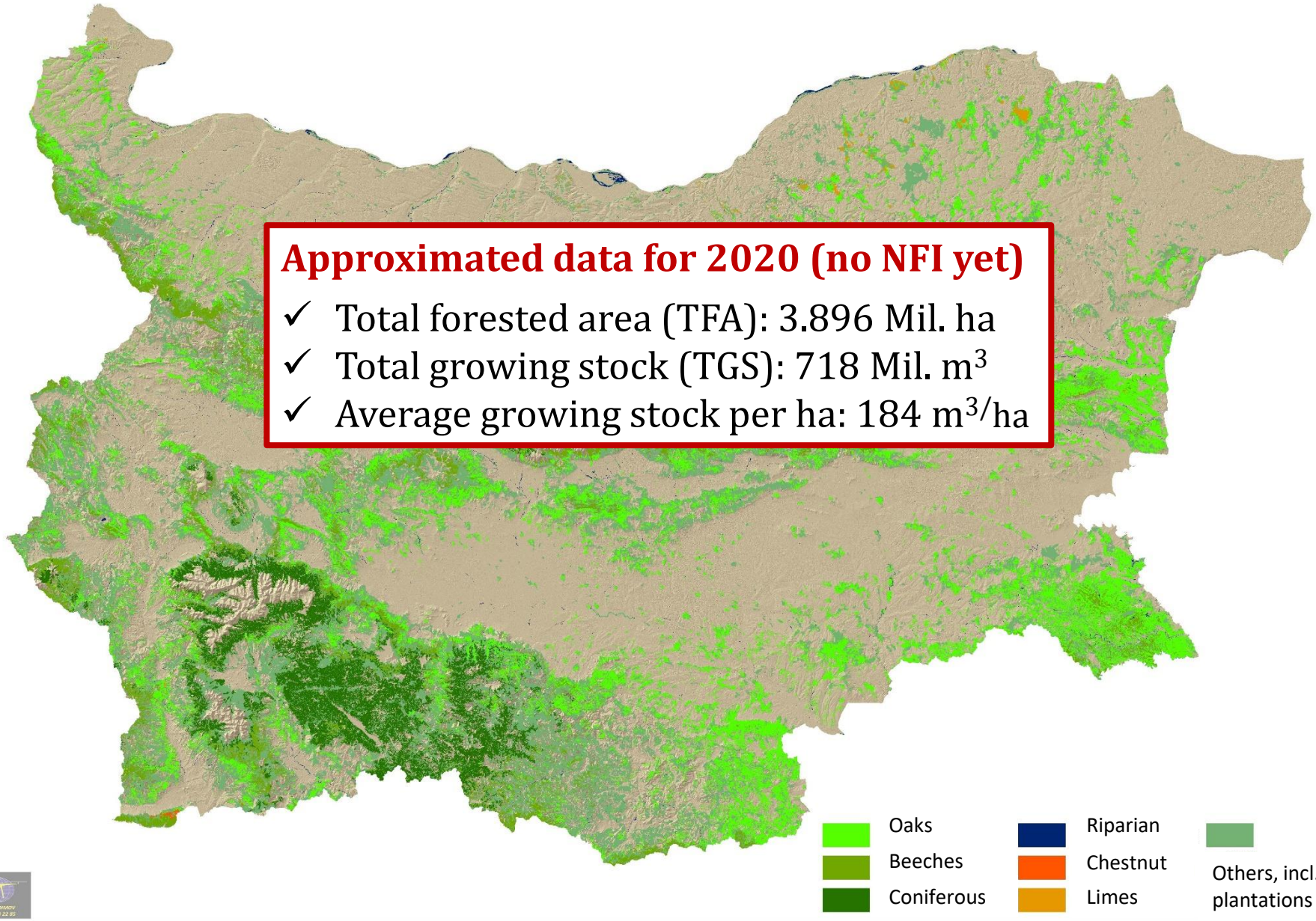
Current distribution of forests in Bulgaria



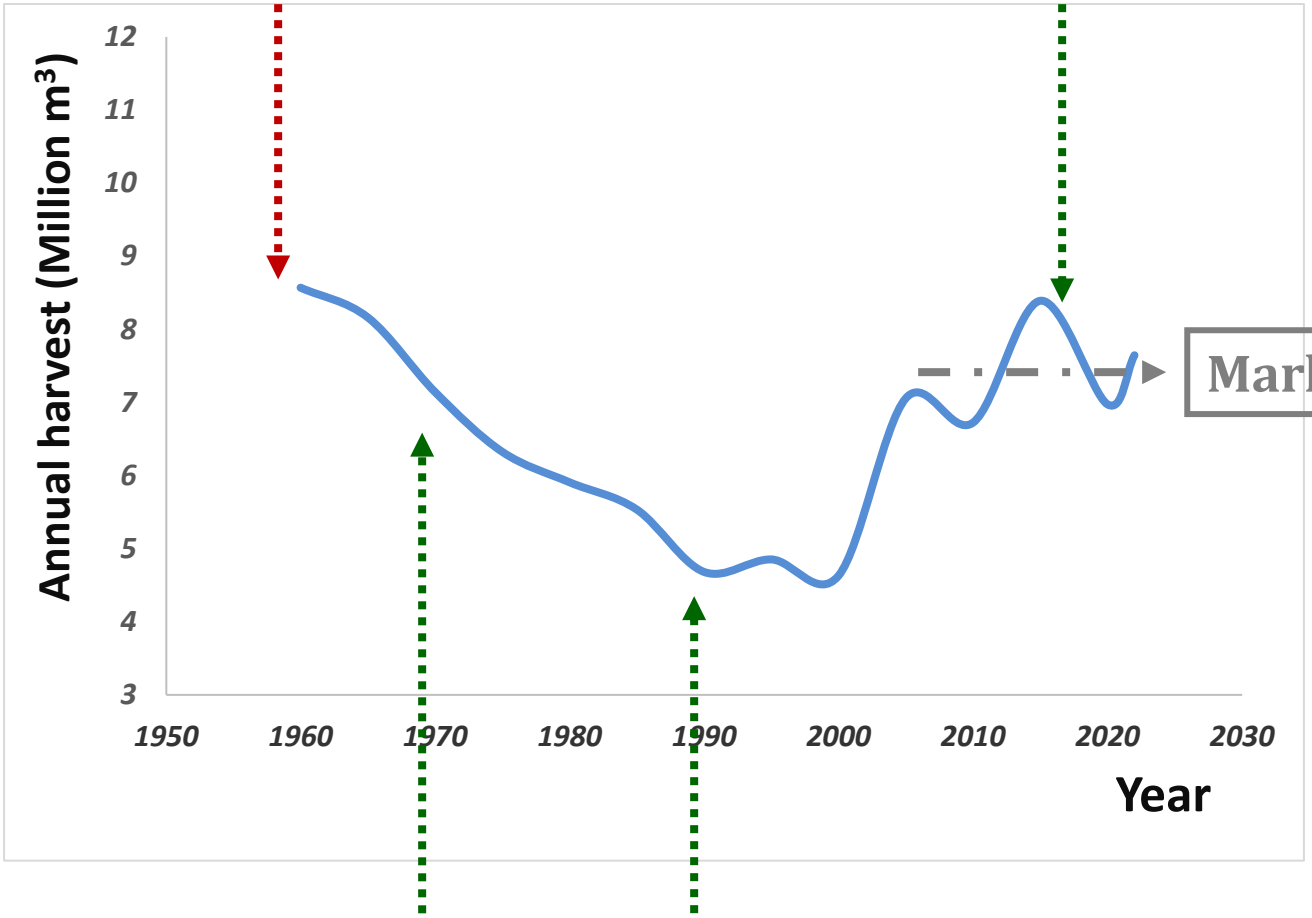
Current distribution of forests in Bulgaria



What happened during last 70 years (official data)

Bulgaria pays reparations to neighbor countries

109 kha designated for old-growth by MA



1968–1988 – Bulgaria imported wood from Komi Republic (Russia)

Species dominating old-growth forests

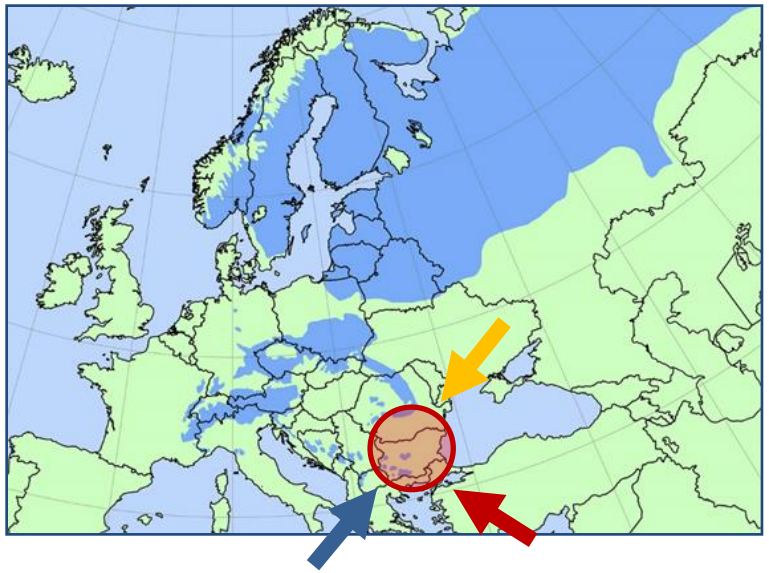
Most common: *F. sylvatica*

Common: *P. abies, A. alba, P. nigra*

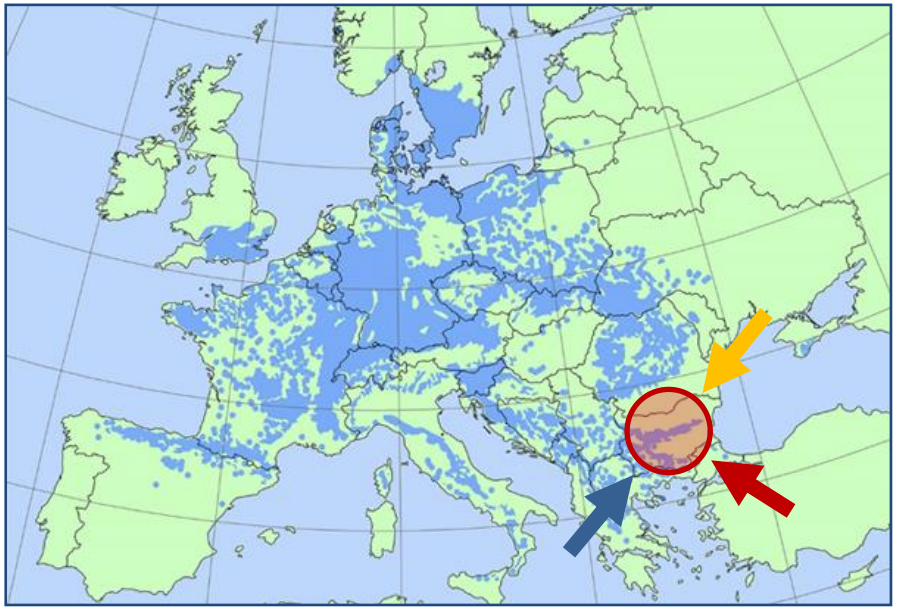
Rare: *F. orientalis, Q. petraea*

Strong effects of climate change, incl. dry and hot waves and storms

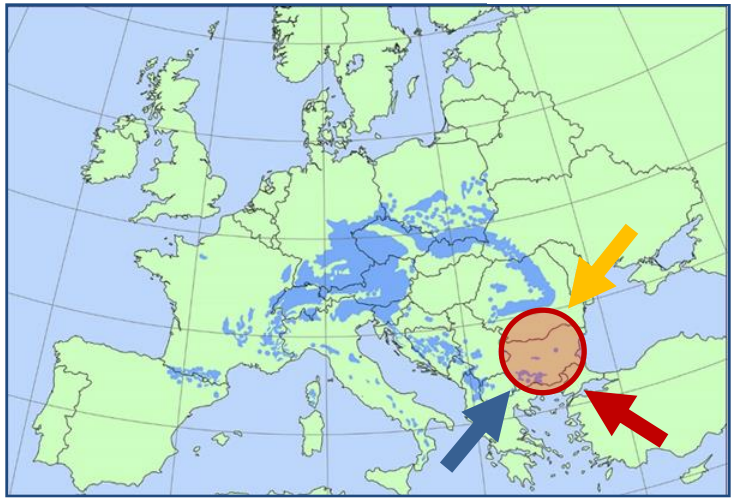
Picea abies



Fagus sylvatica



Abies alba



Clarify our general vision of what old-growth/primary forest should be

Steps:

1. Identification of list of parameters to define old-growthness
2. Elaboration of thresholds for each parameter, incl. elaboration of Index of growthness

Clarify our general vision of what old-growth/primary forest should be

1. Identification of list of parameters to define old-growthness

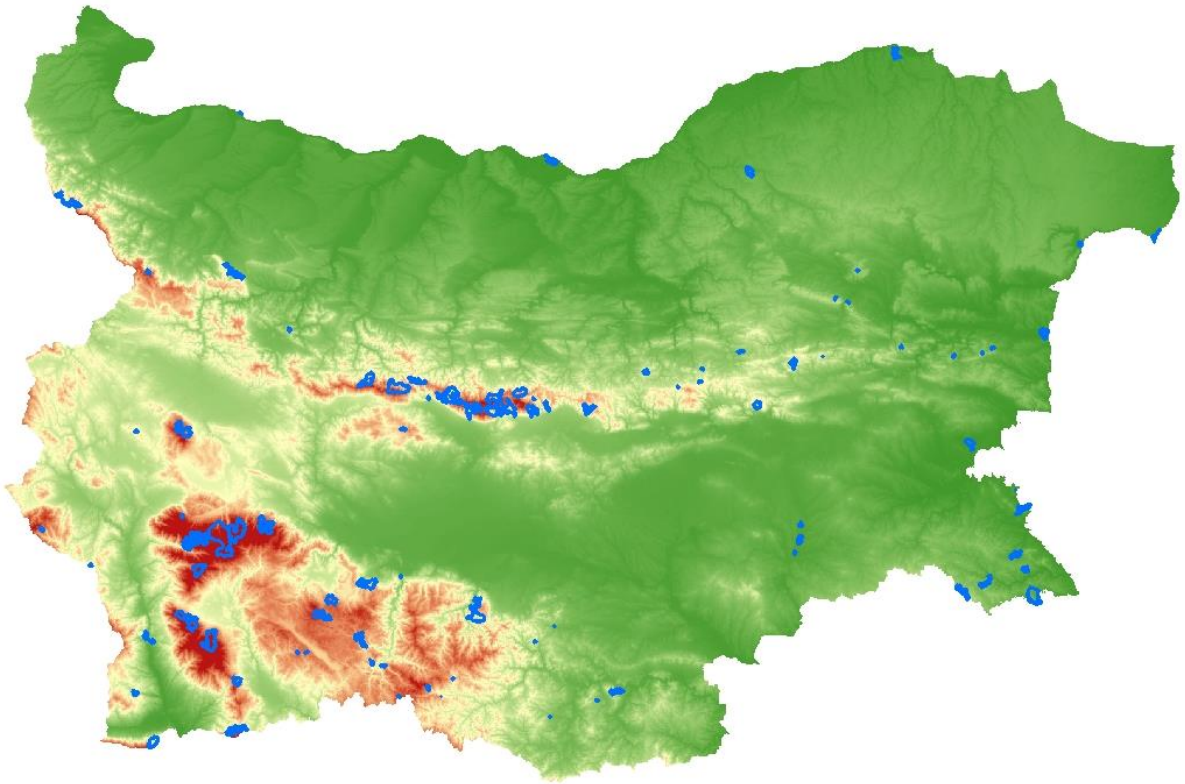
- Presence of large tress
- Diameter distribution
- Spatial structure
- Accumulation of dead organic matter
- Lack of signs of management

Clarify our general vision of what old-growth/primary forest should be

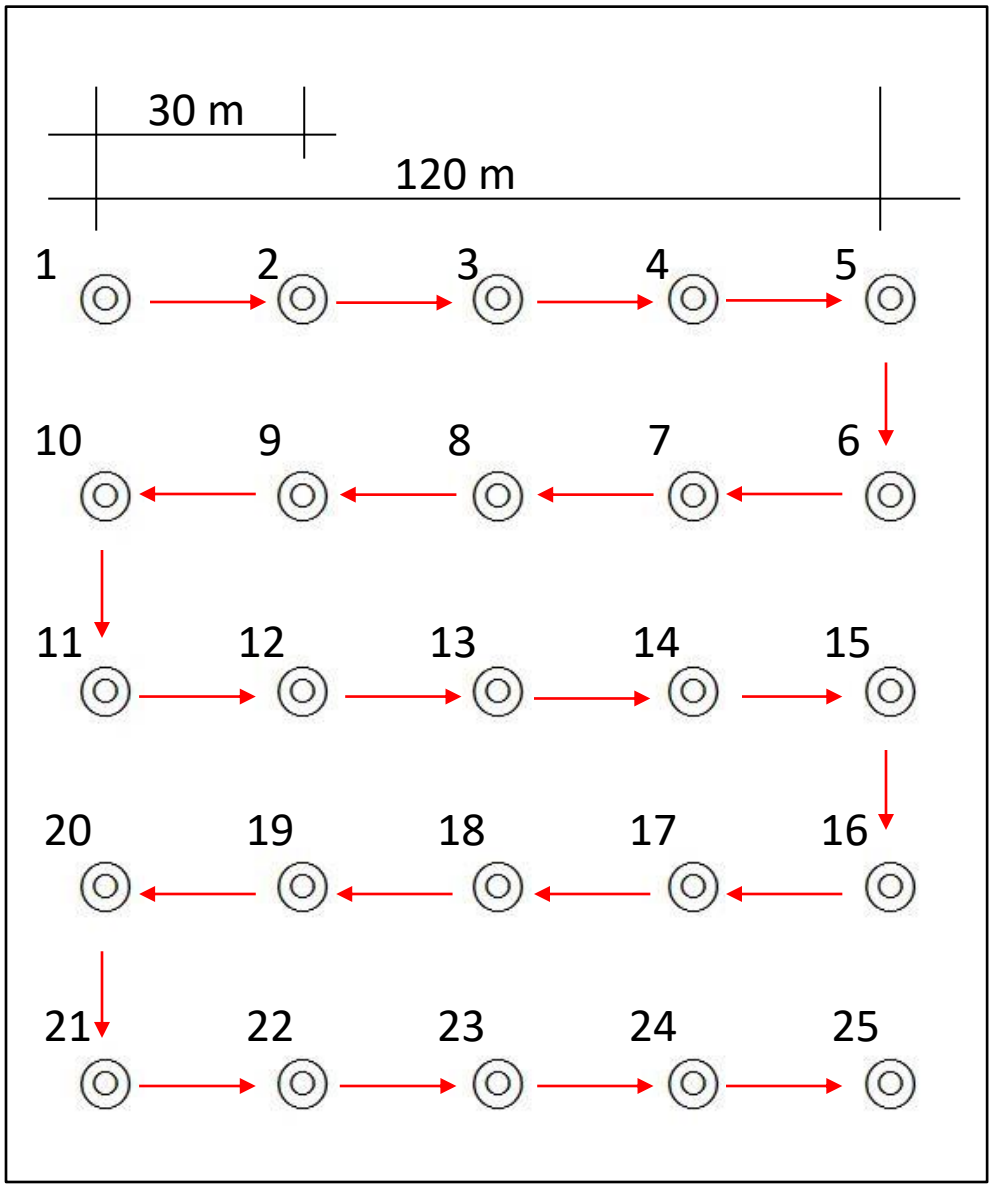
1. Elaboration of thresholds for each parameter

- Measurements in forest reserves, containing the most valuable old-growth/primary forests.

First reserve in Bulgaria was established 1931 (Silkosiya)



Sample plot design



Plot scale

Big circle 100 m^2;

- Site
- DBH trees
- Dead wood

Small circle 25 m^2;

- regeneration stratum

Stand scale

- DBH and height of selected trees

Elaboration of thresholds for each parameter

Presence of large tress

at least 25 trees per ha with diameter above 70 cm for P. abies and A. alba
at least 15 trees per ha with diameter above 70 cm for F. sylvatica and Q. robur
at least 15 trees per ha with diameter above 62 cm for Pinus sp, Q. petrea and Q. frainetto forests

Diameter distribution

Gradual reduction of the number of trees with the diameter increase, diameter distribution often resembling rotated sigmoid curve

Spatial structure

Heterogeneous spatial structure on predominating part of the forest territory with presence of natural gaps and regeneration in different development phases

Accumulation of dead organic matter

Presence of standing and fallen dead trees in different wood decomposition classes with accumulation of coarse woody debris of at least 80 m^3ha^{-1} for P. abies and A. alba forests, 60 m^3ha^{-1} for F. sylvatica and 40 m^3ha^{-1} for Quercus sp. and Pinus sp

Lack of signs of management

Lack of signs of management activities in the past

Index for identification and evaluation of old-growth forests in Bulgaria

Elaboration of thresholds for each parameter

Main points

Presence of large tress

at least 25 trees per ha with diameter above 70 cm for P. abies and A. alba

at least 15 trees per ha with diameter above 70 cm for F. sylvatica and Q. robur

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and Pinus sp

Lack of signs of management

Lack of signs of management activities in the past

НАУКА ЗА ГОРАТА, КН. 1/2, 2013
FOREST SCIENCE, No 1/2, 2013

ИНДЕКС ЗА ИДЕНТИФИКАЦИЯ И КОМПЛЕКСНА ОЦЕНКА НА ГОРИ ВЪВ ФАЗА НА СТАРОСТ В БЪЛГАРИЯ

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Mapping of old-growth forests in state owned forests (2013-2016) WWF plus experts from IBER and FRI

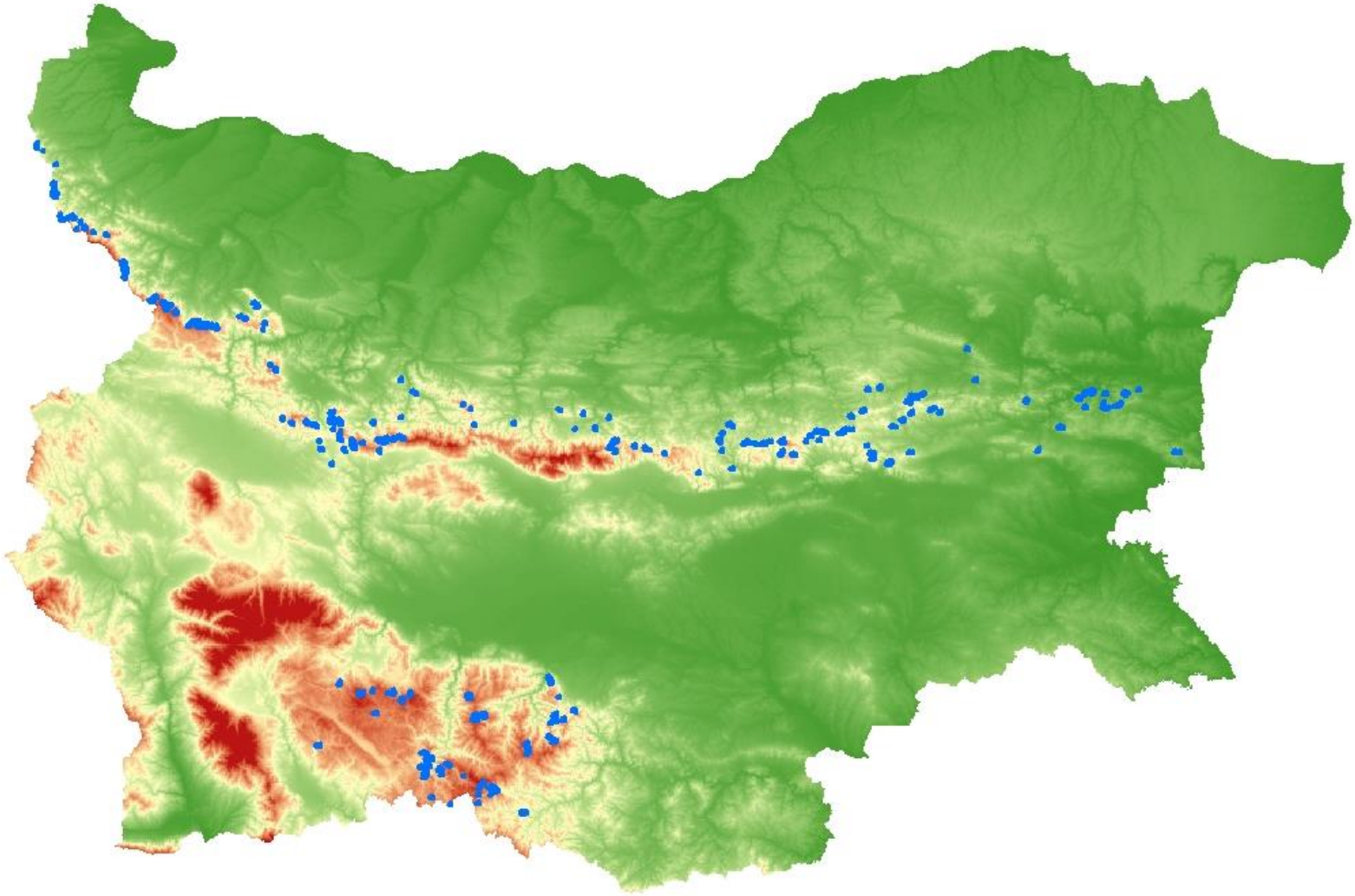
Step 1: Selection of potential old-growth candidates

- Data from FMPs (current and old) & Orthophoto and satellite imageries
- More than 300 potential locations across Bulgaria initially selected, based on age, topography, landscape, accessibility (roads) and area (≥30-40 ha)

Step 2: On the field verification

- Visual observation of potential candidates
- Measurement of stand structural parameters

Selection of potential forests to be proposed for protection as old-growth



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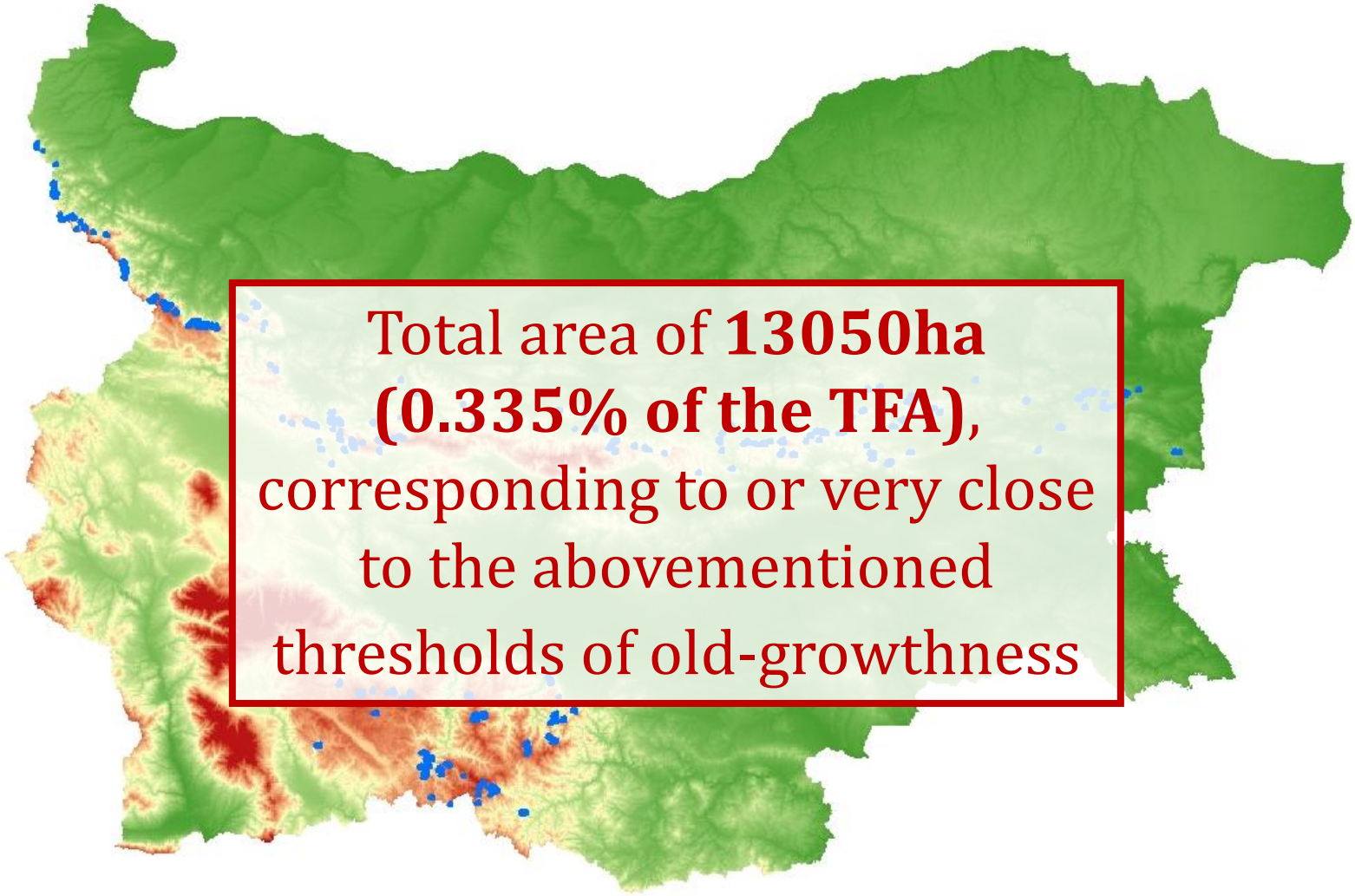

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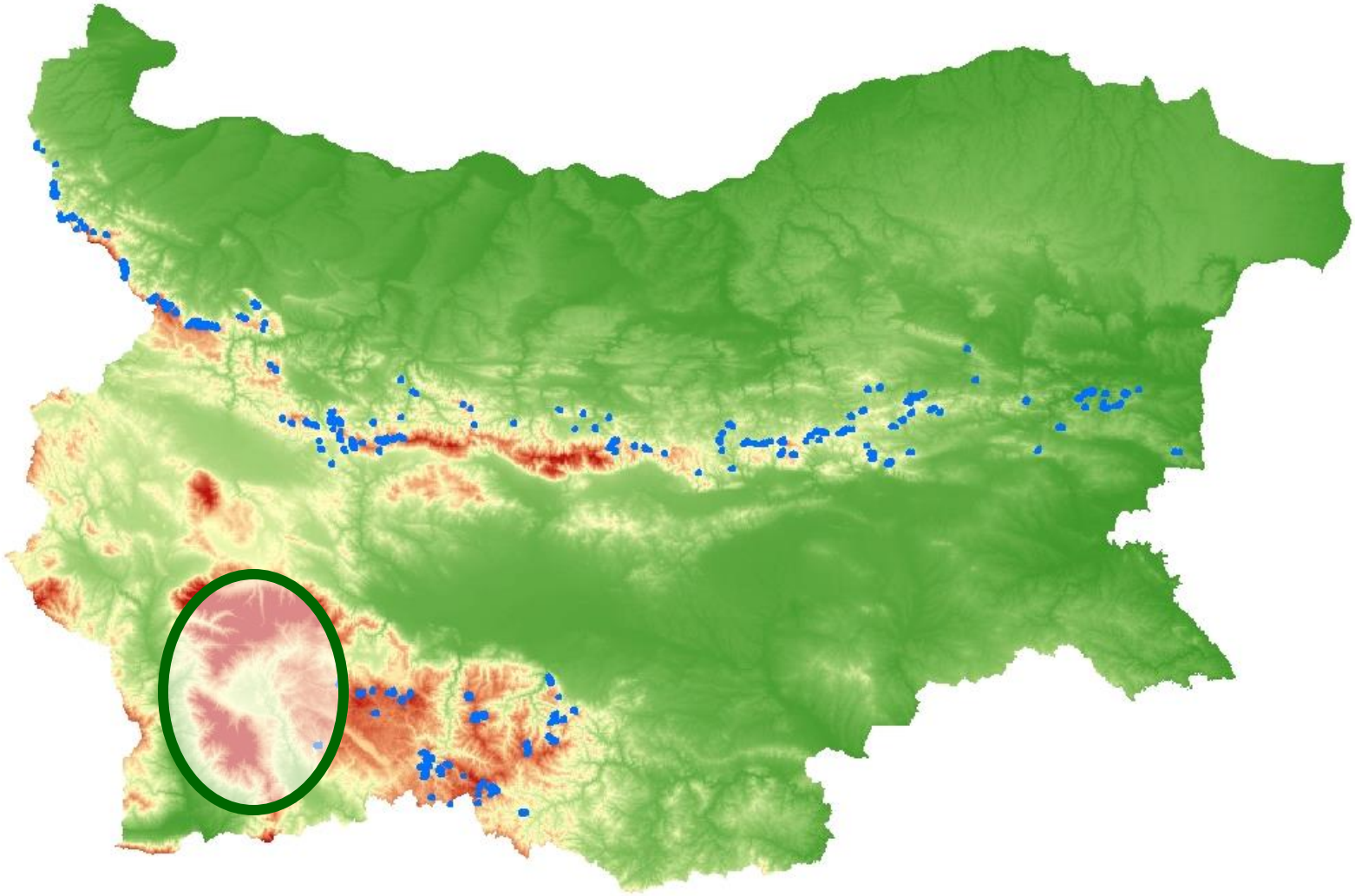
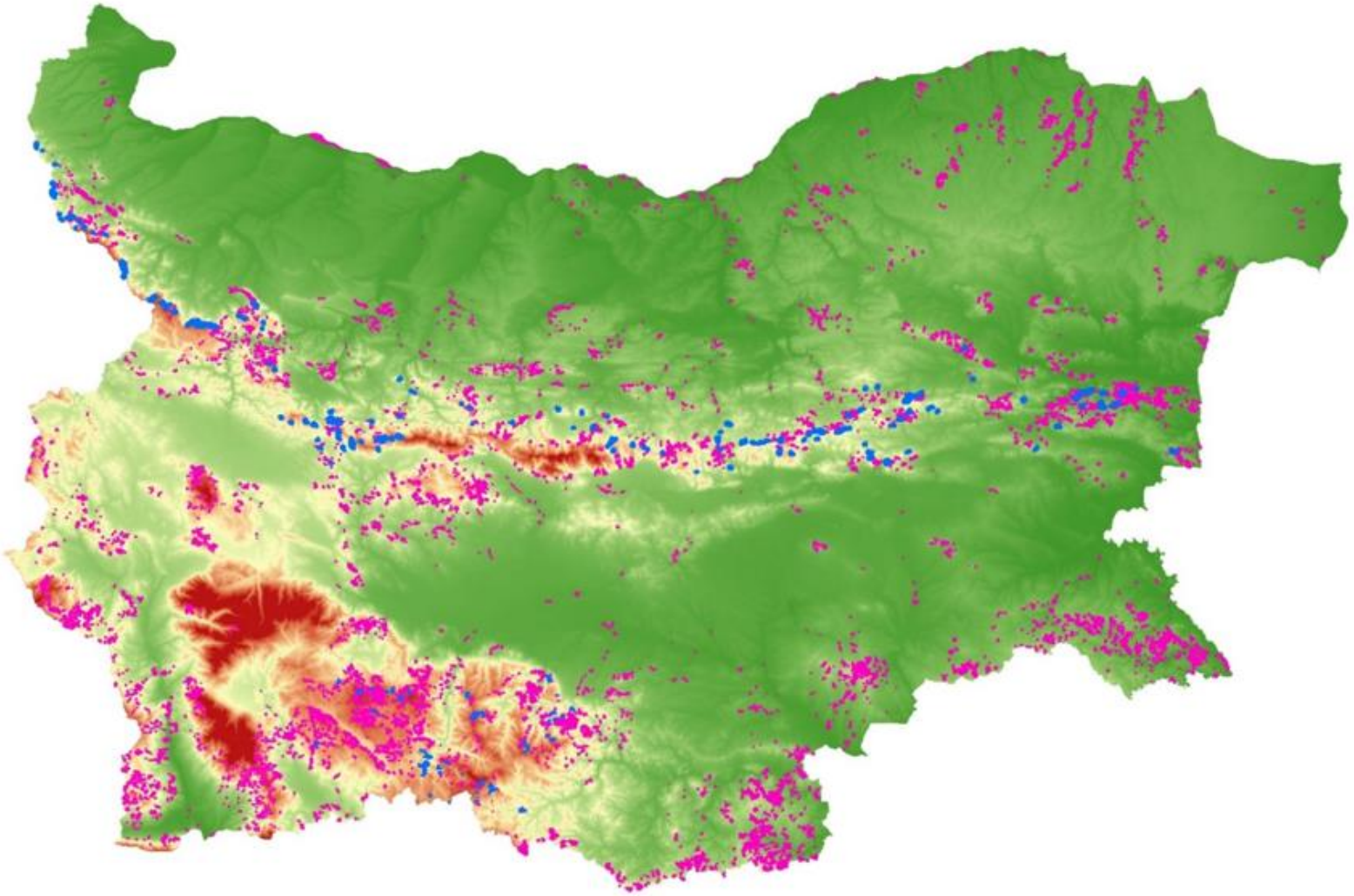


SW Bulgaria – Two NP (Rila & Pirin)

In 2016 MA designated 109kha for old-growth forests (OGF) (order of the minister № РД 49-493) Approx. 10% of the state forests in Natura 2000



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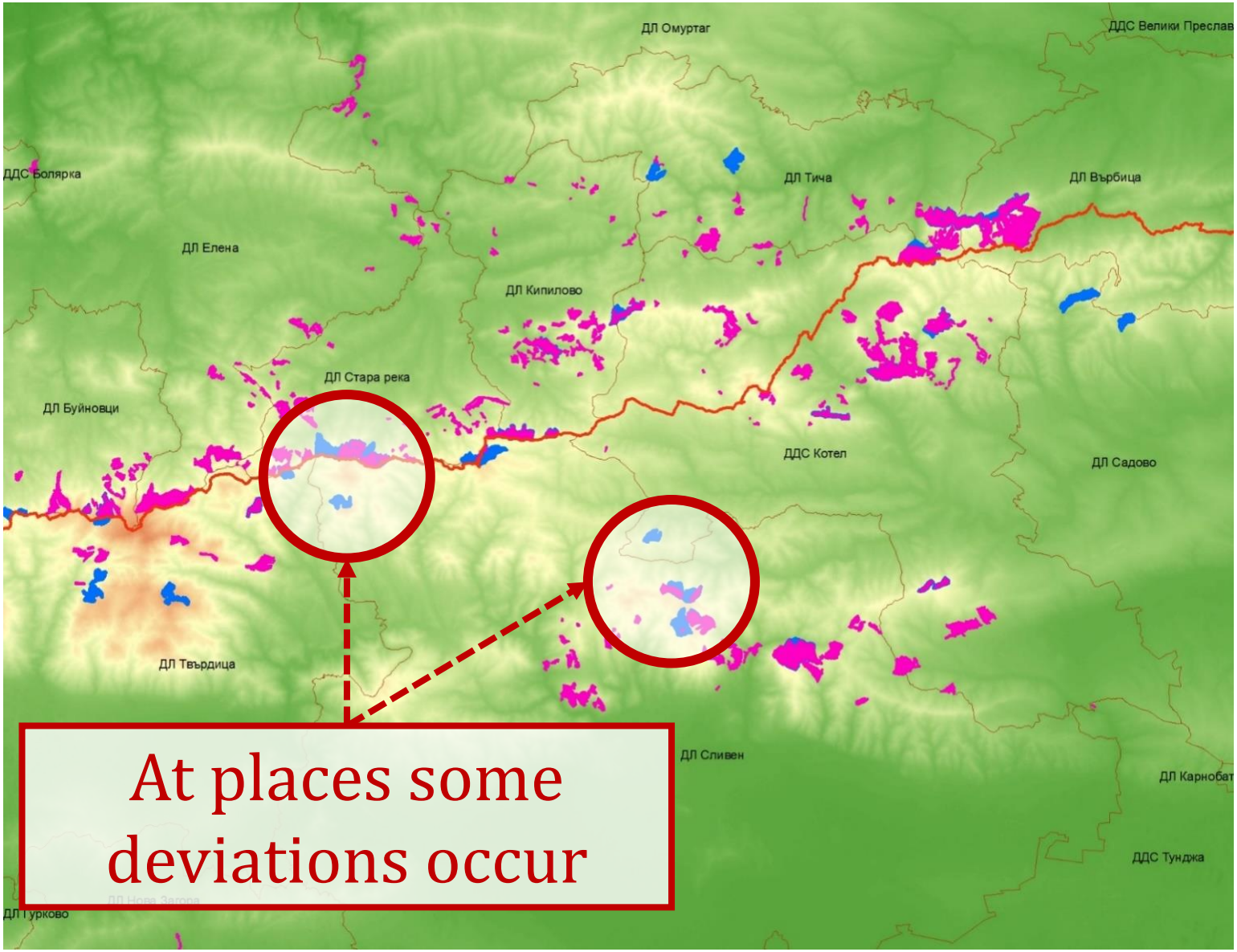
- ✓ MAF Selection based on habitats
- ✓ A bit of each habitat protected
- ✓ Not always the most suitable stands selected, but generally a GREAT ACHIEVEMENT

In 2016 MA designated 109kha for old-growth forests (OGF) (order of the minister № РД 49-493) Approx. 10% of the state forests in Natura 2000

Potential threats:

- ✓ Salvage cuttings
- ✓ Illegal cuts
- ✓ Change of status
- ✓ ... other issues ...

Intersection between MA and WWF OGF



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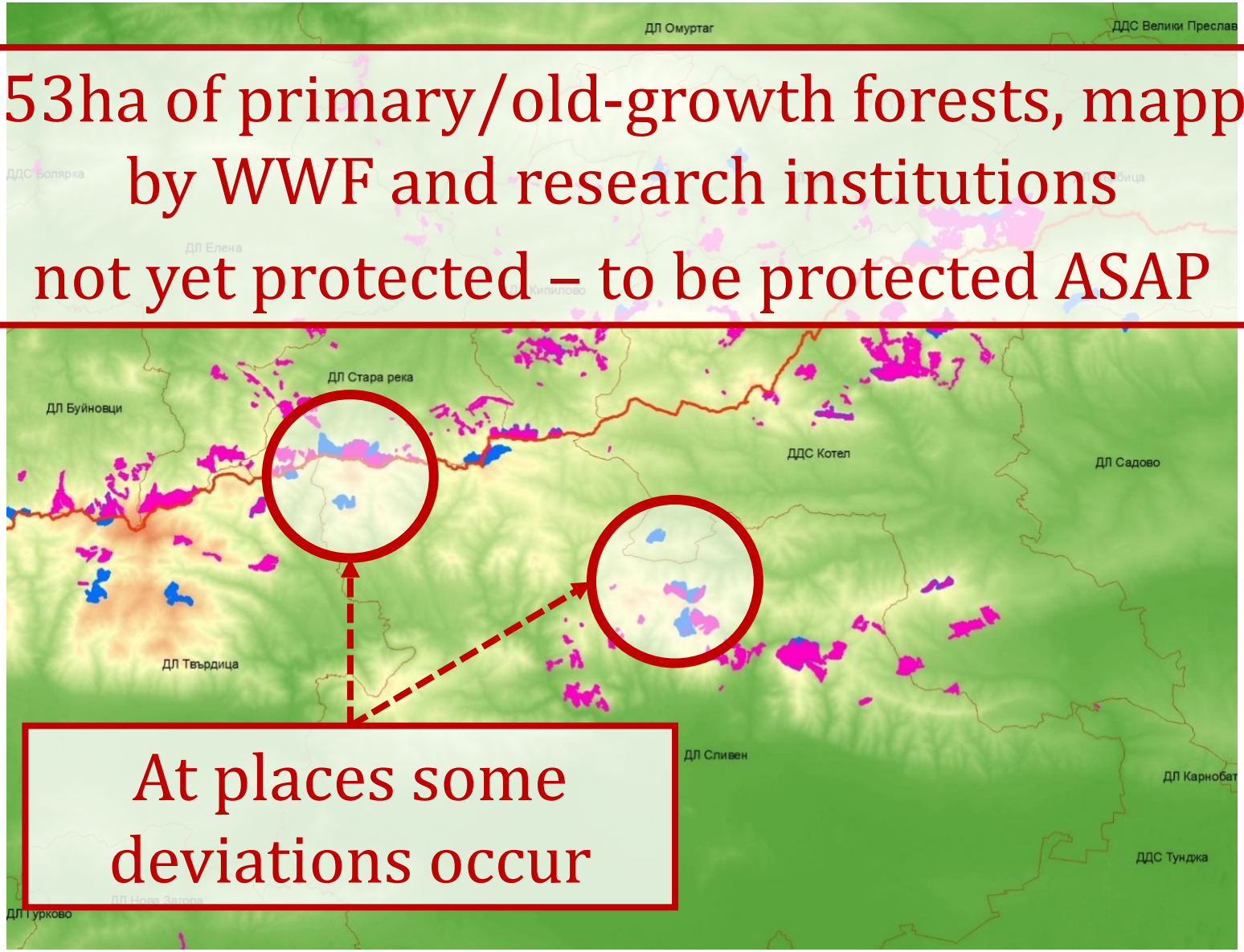

4553ha of primary/old-growth forests, mapped by WWF and research institutions

not yet protected – to be protected ASAP

At places some deviations occur

Mapping of old-growth forests in municipality owned forests (2017-2020) WWF plus experts from IBER and FRI

Step 1: Selection of potential old-growth candidates

- Data from FMPs (current and old) & Orthophoto and satellite imageries
- More than 150 potential locations selected, based on age, topography, landscape, accessibility (roads) and area **(≥20-25 ha)**

Step 2: On the field verification

- Visual observation of potential candidates
- **No measurement, only expert evaluation**

Mapping of old-growth forests in municipality owned forests (2017-2020) WWF plus experts from IBER and FRI

Step 1: Selection of potential old-growth candidates

- Data from FMPs (current and old) & Orthophoto and satellite imageries
- More than 150 potential locations selected, based on age, topography, landscape, accessibility (roads) and area **(≥20-25 ha)**

Step 2: On the field verification

- Visual examination of potential candidates
- **No measurements were taken**

8192.3 ha out of 521000ha

(1,6% of municipality owned forests)

proposed for protection as OGF

Forests in 62 out of 255 municipalities in Bulgaria were selected

Only 11 Municipalities accepted protection

What we have achieved by now

- Strict reserves – 81481.65ha, of them 70217.47ha forests (2.09% or 1.8% of Total forested area)
- Designated for old-growth forests (OGF) by MA – 109000ha, (2.8% Total forested area)
- Non-managed forests only in National parks ??? (MEW)
- Forests in other protected territories with strict conservation status ??? (MEW)

Where is the potential

- We propose **all 13050ha primary/old-growth forests**, mapped by WWF and research institutions (0.335% of the TFA) **to be declared as protected sites** and this to be initiated by MEW. Maps, list of stands and measurements in these forests have already been officially submitted by the scientific council of the Institute of Biodiversity and Ecosystem Research, Bulgarian Academy of Sciences and by WWF to MOW and MA.
- **4553ha** of abovementioned mapped primary/old-growth forests not yet protected. We recommend for these **to be protected ASAP.** We are ready to further help, e.g. defining the stands that have not been declared as OGS by MF yet.
- Majority of municipality owned old-growth forests, mapped by WWF and research institutions not yes protected - 51 Municipalities.

Thank you for the attention