

EUFORGEN, 14<sup>th</sup> Steering Committee Meeting  
**Preliminary Webinar – Summary**  
Zurich/Bonn, 26 March 2019

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WG7

**Decision support tool  
for the management of dynamic  
genetic conservation units**

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# Conclusions

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## □ Additions to the report

- Annex 3  
case studies showing the mode of operation based on exemplary cases
- Table 12  
standards/definitions of implementation measures of management actions

## □ Recommendations to the Steering Committee

- Approval of the additions to the report and according procedure
- Finalization of the report, publication and implementation in coordination with the EUFORGEN Secretariat and EUFGIS upgrade

# Exemplary case studies

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## □ Advantages

- the recommendations give hints without obligations for the GCU manager, so the tool facilitates discussion and decision making
- the cumulation of indicators guarantees the coverage of different relevant risks and threatening processes (also on short term and also on the basis of irregular observations)
- the system is flexible regarding available data, so costs for a basic monitoring can be adjusted to national conditions
- costs for the implementation in EUFGIS are low

## □ Proposed procedure

- addition of the case studies to the report (Annex 3)
- integration into EUFGIS database and interface as part of the upcoming revision of EUFGIS
- instruction for GCU managers in the context of EUFGIS courses

# Indicators & verifiers

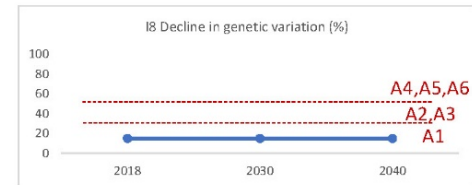
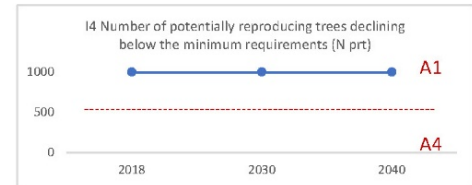
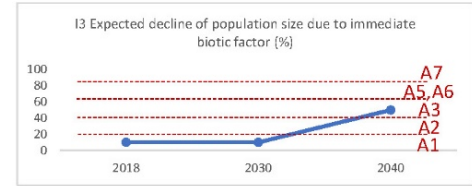
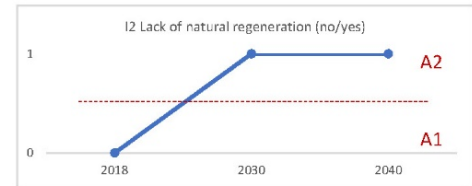
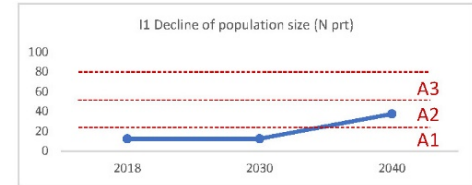
# Monitoring values :

<b>(2) Silver fir, scenario of an unstable forest stand, incl. dieback + browsing</b>		Monitoring values		
Silver fir seed stand & LIFEGENMON monitoring plot Smolarjevo, Slovenia (starting with real data 2018)		2018	2030	2040
<b>Indicator &amp; verifier</b>				
<b>I1 Decline of population size</b>				
I1a	Decline of the number of reproducing trees	1800	1500	1000
I1b	Increase of the number of dead trees			
I1c	Decline of the population share			
<b>I2 Lack of natural regeneration</b>				
I2a	Lack of natural regeneration	sporadic	requires managment.	requires managment.
<b>I3 Expected decline of population size due to immediate threatening biotic factor</b>				
I3a	Due to presence of a severe specific pest or disease	1800	1500	1000
I3b	Due to presence of a severe competing species including invasive neophytes	1800	1500	1000
I3c	Due to presence of severe specific seed predation or browsing	1800	1500	1000
<b>I4 Number of potentially reproducing trees declining below the minimum requirement</b>				
I4a	Below the threshold for widely occurring and stand-forming species	1800	1500	1000
I4b	Below the threshold for marginal or scattered tree populations			
I4c	Below the threshold for remaining populations of rare or endangered tree species			
<b>I5 Population size had broken down to below minimum requirements (but conservation of genotypes is still possible)</b>				
I5a	Below the threshold for widely occurring and stand-forming species	1800	1500	1000
I5b	Below the threshold for marginal or scattered tree populations			
I5c	Below the threshold for remaining populations of rare or endangered tree species			
<b>I6 Population size is in great danger to decline to below the minimum requirements due to a natural or anthropogenic event of high probability</b>				
I6a	Below the threshold for widely occurring and stand-forming species	trend 1800	trend 1200	trend 650
I6b	Below the threshold for marginal or scattered tree populations			
I6c	Below the threshold for remaining populations of rare or endangered tree species			
<b>I7 Population size is in danger to decline to below the minimum requirements due to a natural or anthropogenic event of low probability</b>				
I7a	Below the threshold for widely occurring and stand-forming species	trend 1800	trend 1200	trend 650
I7b	Below the threshold for marginal or scattered tree populations			
I7c	Below the threshold for remaining populations of rare or endangered tree species			
<b>I8 Decline in genetic variation (genetic erosion)</b>				
I8a	Decline in number of alleles (Na) or allelic richness (Ar)	10.52	10.5	9.5
I8b	Decline in expected heterozygosity (He)	0.5803	0.575	0.5643
I8c	Decline in allele and genotype frequencies			
I8d	Decline in effective population size (Ne)			

Recommended management action

# Examples (cf. Annex 3)

(2) Silver fir, graph of time series data with thresholds



# Definitions of management action

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## □ Advantages

the definitions of implementation measures for management actions ...

- ... will not lead to restrictions regarding recommendations and decision making
- ... are useful standards for documentation of implemented measures
- ... will allow the monitoring of the impacts of management on long term

## □ Proposed procedure

- formation of a small subgroup with experts on GCU management (summer 2019, one subgroup meeting)
- completion of table 12 by definitions on implementation measures (open list)

# Embedded Decision support tool

