



MINISTERO DELL'AMBIENTE
E DELLA TUTELA DEL TERRITORIO E DEL MARE



Provincia Autonoma
di Trento

THE
ALPINE
CONVENTION
IS THE FIRST
INTERNATIONAL
TREATY FOR
THE PROTECTION
AND PROMOTION
OF THE SUSTAINABLE
DEVELOPMENT
OF A CROSS-BORDER
MOUNTAINOUS
REGION

italian presidency 2013-2014
alpine convention

Forest management and wood chain in Switzerland – Swiss Forest Policy 2020

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Content

- Alpine forests in Switzerland – wood potential
- Forest Policy 2020
- Finances for measures implementing the Policy



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Alpine Region in Switzerland



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Yield + mortality

Einheit: $\text{m}^3/\text{J./ha}$

	$2.6 \pm 23 \%$	Mittelland
	$1.7 \pm 27 \%$	Jura
	$1.5 \pm 28 \%$	Voralpen
	$0.2 \pm 45 \%$	Alpen
	$0.2 \pm 99 \%$	Alpensüdseite
	$1.2 \pm 14 \%$	Schweiz

LFI3-LFI4a

Jährliche Nutzung* und Mortalität*: Hauptbaumart · Produktionsregion

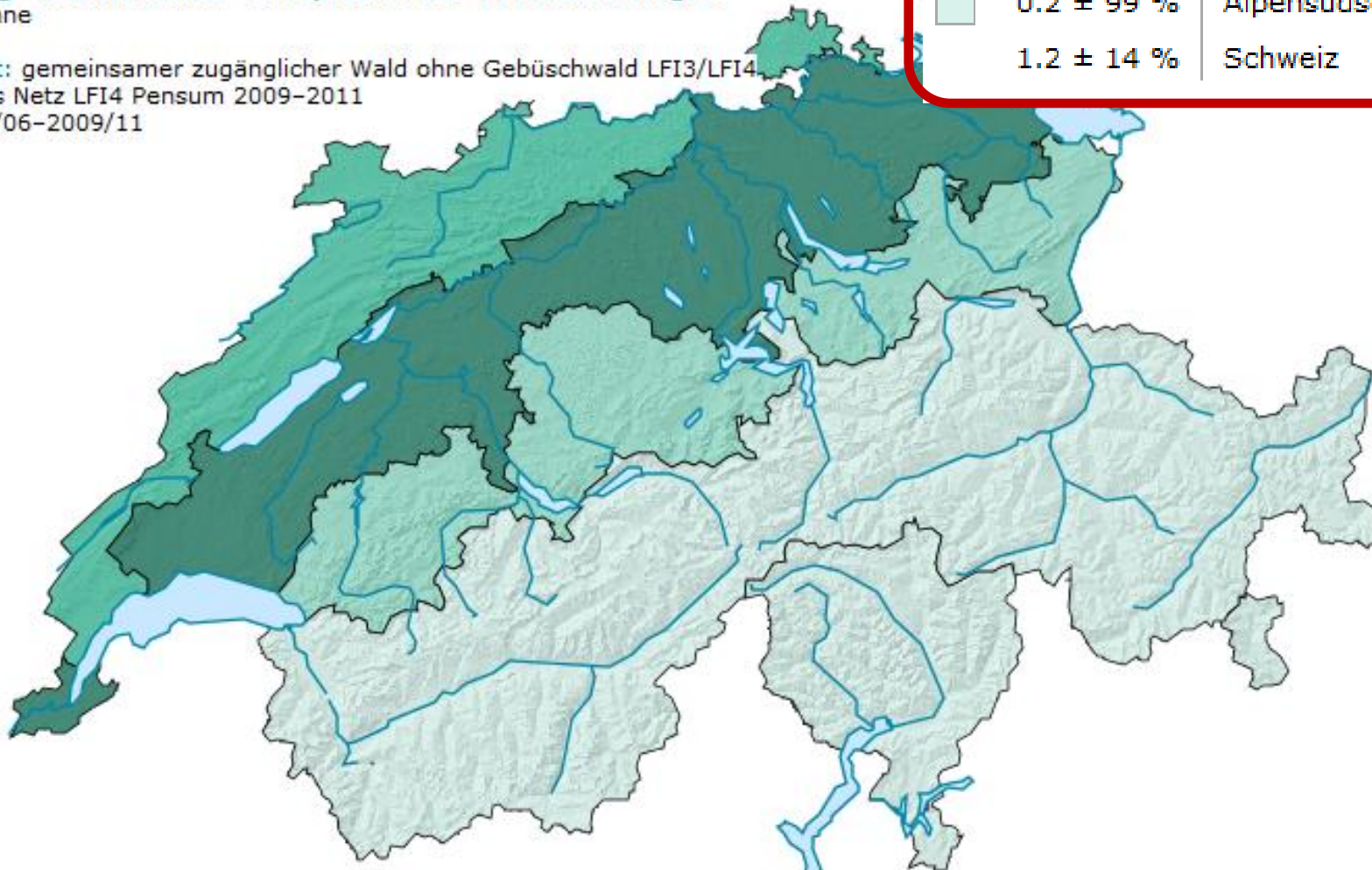
Hauptbaumart: Tanne

Einheit: $\text{m}^3/\text{J./ha}$

Auswertungseinheit: gemeinsamer zugänglicher Wald ohne Gebüschwald LFI3/LFI4

Netz: terrestrisches Netz LFI4 Pensum 2009-2011

Veränderung 2004/06-2009/11





Growth in m³/ha/a

Einheit: m³/J./ha

	2.4 ± 11 %	Mittelland
	2.3 ± 9 %	Jura
	2.3 ± 9 %	Voralpen
	0.4 ± 16 %	Alpen
	0.2 ± 38 %	Alpensüdseite
	1.4 ± 5 %	Schweiz

LFI3-LFI4a

Jährlicher Zuwachs*: Hauptbaumart · Produktionsregion

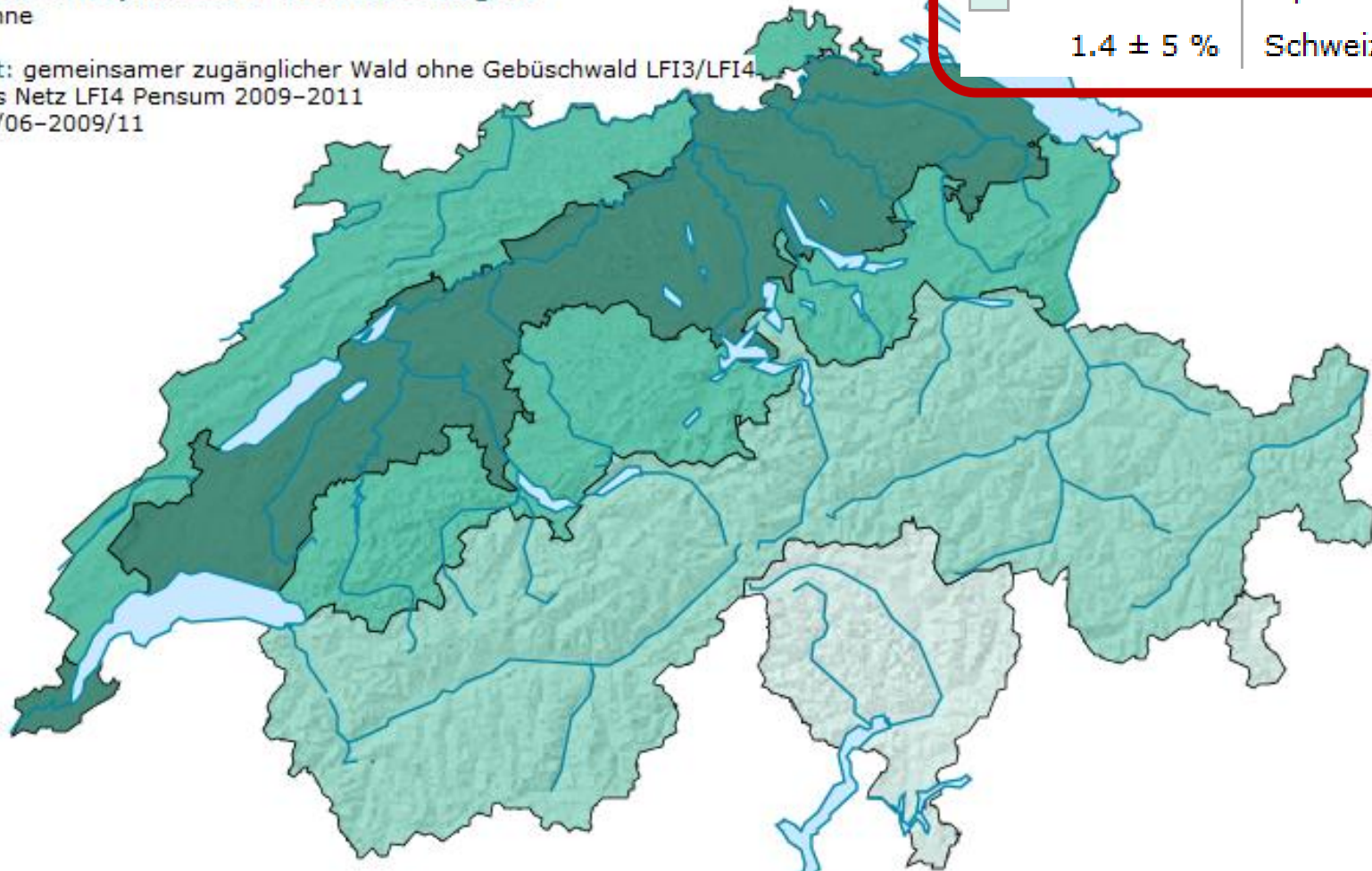
Hauptbaumart: Tanne

Einheit: m³/J./ha

Auswertungseinheit: gemeinsamer zugänglicher Wald ohne Gebüschwald LFI3/LFI4

Netz: terrestrisches Netz LFI4 Pensum 2009-2011

Veränderung 2004/06-2009/11



0 30 60km

Erschliessungsdichte: Hoch-/Tieflagen - Eigentum - Produktionsregion

Hoch-/Tieflagen: Tieflagen

Eigentum: Total

Einheit: m/ha

Auswertungseinheit: zugänglicher Wald ohne Gebüschwald

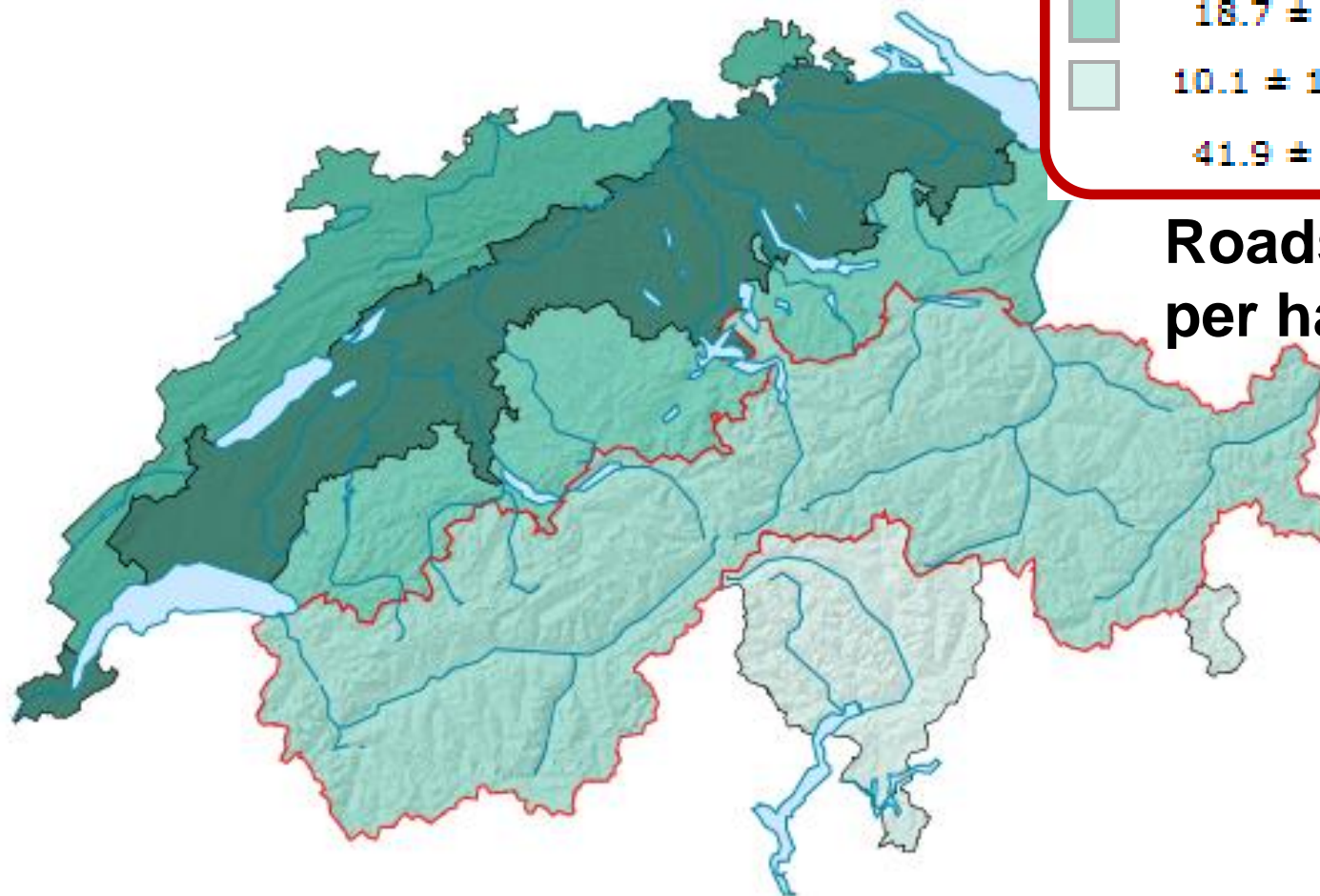
Netz: terrestrisches Netz LFI3

Zustand 2004/06



	60.5 ± 2 %	Mittelland
	49.8 ± 4 %	Jura
	23.4 ± 7 %	Voralpen
	18.7 ± 8 %	Alpen
	10.1 ± 11 %	Alpensüdseit
	41.9 ± 2 %	Schweiz

Roads in m
per ha



Acess to forests



Last intervention > 50 years

LFI3

Waldfläche: Zeitpunkt des letzten Eingriffs · Vegetationshöhenstufe

Einheit: %

Auswertungseinheit: gemeinsamer zugänglicher Wald ohne Gebüschwald LFI1/LFI2/LFI3

Netz: 1.4 x 1.4 km Netz

Zustand 2004/06

Vegetationshöhenstufe	Zeitpunkt des letzten Eingriffs												Total	
	vor ≤ 5 Jahren		vor 6-10 Jahren		vor 11-20 Jahren		vor 21-30 Jahren		vor 31-50 Jahren		vor > 50 Jahren			
	%	±	%	±	%	±	%	±	%	±	%	±	%	±
obere subalpine	3.6	1.2	2.8	1.1	10.8	2.1	8.4	1.8	14.0	2.4	60.4	4.8	100.0	6.1
untere subalpine	17.4	1.3	12.3	1.1	18.2	1.3	11.9	1.0	14.5	1.1	25.8	1.5	100.0	2.7
obere montane	26.8	1.4	16.3	1.1	17.6	1.1	10.6	0.9	12.6	1.0	16.0	1.1	100.0	2.4
untere montane	35.3	1.6	18.8	1.2	16.2	1.1	10.0	0.9	9.6	0.9	10.1	0.9	100.0	2.5
kolline/submontane	43.0	1.5	18.2	1.1	14.0	0.9	9.0	0.8	5.6	0.6	10.1	0.8	100.0	2.0
Total	30.4	0.6	16.0	0.5	16.1	0.5	10.2	0.4	10.4	0.4	16.9	0.5	100.0	0.6

Berechnet pro Aussageinheit: Produktionsregion



Forest Policy 2020: Focal points

Potential wood supply (incl. Forests access)

Climate change

Protective capacity

Biodiversity

Forest area

Economic performance

Soil, drinking water and vitality

Harmful Organisms

Forest – wild game

Recreation

Education, research, knowledge



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Potential wood supply

Strategic approaches

- Decisions based on scientific background
- Ensure access to forest resources
requires adaptation of access roads to modern harvesting techniques
- Improved processing and marketing channels for hard wood
(=broad leaved trees like beech, ash, oak)

Impact on national financing➔





Climate change (Adaption and mitigation)

Strategic approaches

- Research on impact of c.c. and adaptation of management
- Enhancement of resilience
requires regular and early thinnings, adapted forest stands,
regeneration in protective forests, transition of endangered stands into
stable stands, selection of **species** in regeneration
- Support in case of disturbance or damage
targeted prevention measures, restoration and reforestation

Impact on national financing ↑





Ensuring protective capacity of forests

Strategic approaches

- Harmonised zoning of protective forest areas
- Continuous financing of caring young forests through agreements federal-cantonal

Impact on national financing →





Programme: Protective Forest

- Protective forest maintenance in accordance with national guidelines / Sustainability in the Protective Forest)
- Forest-game concepts and measures
- Infrastructure for protective forest maintenance including fire protection



🇨🇭 Protection of human life and important infrastructure assets by....

Integrated Risk Management

- land-use planning (hazard maps etc.)
- preparedness measures (early warning, evacuation etc.)
- technical measures (dams, snow-rakes etc.)
- biological measures (protection forests, bioengineering etc.)



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Conserve and enhance biodiversity

Strategic approaches

- near-natural silviculture on the entire managed forest area
- Protected forest areas from 4% to 8% in 2020, to 10% in 2030
- Additional measures to enhance biodiversity according regional targets (structured forest edges, dead wood, light-flooded forests, support to rare and forest species/old trees relevant for biodiversity)

Impact on national financing ↑

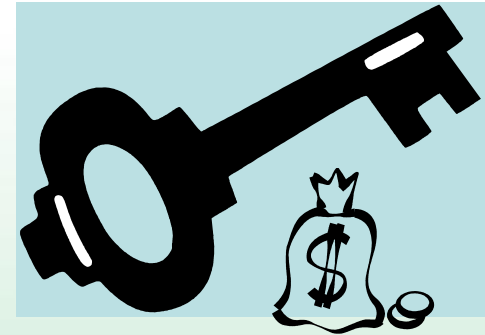




Finances on forest biodiversity

11 Indicators, e.g.

- Forest Reserves (small and big)
- Traditional types of forest management
- Endangeres species (fauna and flora)
- Dead wood
- Compat invasive species
- etc.



Federal contribution

- **11 Mio per year**

Cantonal contribution

- **15 Mio per year**



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Preserve forest area and govern further development

Strategic approaches

- Enforce present strict ban of forest clearance
- Assess carefully scope for exceptions
- Use flexible compensating measures for forest clearance to enhance biodiversity
- Use potential of static demarcation of forest boundaries towards open land



Impact on national financing →





From Policy to implementation

Estimated additional financial input by the Confederation 2020:
→ Cantonal monetary inputs of the same amount are required

Focal issues	Till 2020
• Potential wood supply (incl. access to forests); 	↗
• Climate change (resilient forest stands)	↑
• Protective capacity (present 60 Mio.) 	→
• Biodiversity (<i>present 10 Mio.</i>)	↑
• Harmful organisms (<i>present 5 Mio.</i>)	↗
• Other focal issues (forest area, etc.)	→
Total (2011 = 94 Mil. CHF)	About 150 Mil. CHF



Thanks!