

Preparatory Activities to Implement Forest Management in Switzerland

1. Swiss sink policy

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2. Evaluation project

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3. Allocation and Use of RMUs Wolfram Kägi BSS

CO₂-Law

- **Entry into force: 2000**
- **Target 2010: 10 % reduction of CO₂-emissions from fossil fuels since 1990**
- **No targets for other GHG**
- **Sinks are not taken into account**

Decisions taken by parliament

- **2004: Sinks to be accounted in the Kyoto Protocol**
- **2004: Promotion of agricultural and forestry activities to enhance sinks**
- **2004/05: Wood products to be accounted for sinks**

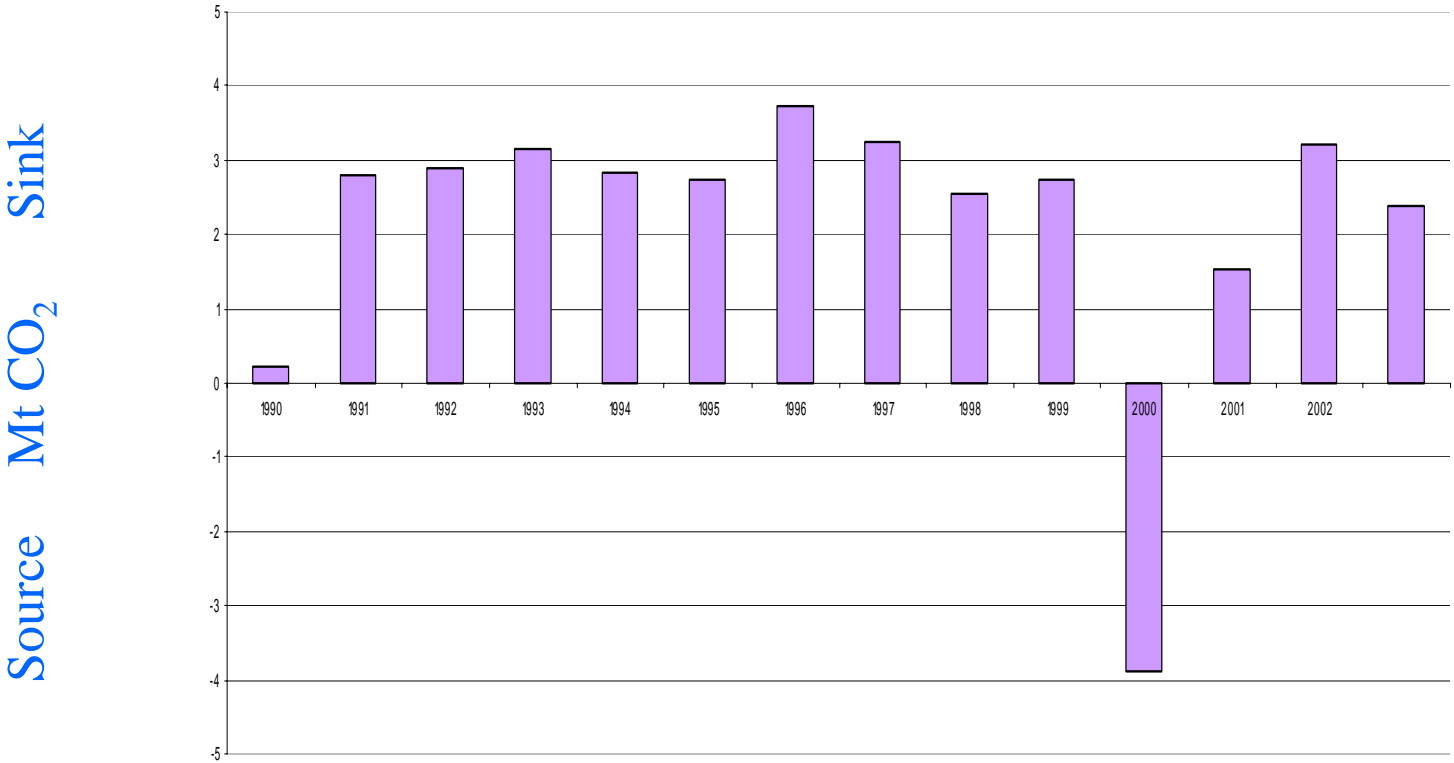
Ongoing projects

- **Carbon pools and fluxes of Swiss forests**
- **Assessing the substitution and sink effect of harvesting and use of wood products**
- **Participation in Kyoto INV (ESA project)**
- **Case studies on**
 - **monitoring methods**
 - **effects on forest functions**
 - **marketing of sinks**

Open questions

- Reporting: 3-years average vs. 1-year records?
- How will Annex Z in the 5-year and 1-year accounting be applied?
- Who shall benefit of the sink accounted for?
- How to find an optimal balance between accounting for sinks and harvesting with regard to sustainability?

CO₂-balance of biomass in Swiss forests



2. Evaluation project

Evaluation of opportunities to count „forest management“ as sinks in Switzerland according to Kyoto Protocol Artikel 3.4

- National interpretation of „forest management“ (how much can be accounted?)
- Pilot areas approach (how can the forest owners participate?)
- Monitoring
- Economic, institutional issues

„Forest management“

- All forests in Switzerland are considered legally as „managed“ if they are not official reserves (i.e. National Park)
- But: Large areas have not been used for more than 15 years (before 1990) for economic reasons. And the forest owners have the right to plan and do it any time.
- The definition of the area of „forest management“ may be difficult. Also the reporting of those areas 1 ha wise.

Potential Role of Forests

Results from NFI2 1985-1995:

- Increment of carbon stock: 0.7-1.1 mio t C/year
- Cap, maximum to be accounted for Switzerland:
0.5 mio t C/year
- Forecast gap to reach the emission reduction target of Switzerland: 0.7 – 1.0 mio t C/Year

Pilot areas

How can Art. 3.4 be handled on concrete areas?

- Forest reserve Bollement, Commune of St.Brais JU, 28 ha
- State forest Val Morobbia, Canton Ticino, 1'400 ha
- Forest of the city of Baden, 895 ha
- Oberallmeindkorporation Schwyz, 9'000 ha

Pilot area 1

Forest reserve Bollement,
Commune of St.Brais

- Area 28 ha
- Reserve since 2002
(Nature conservation)
- no conflicts with carbon
sequestration



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Pilot area 1 potential estimation

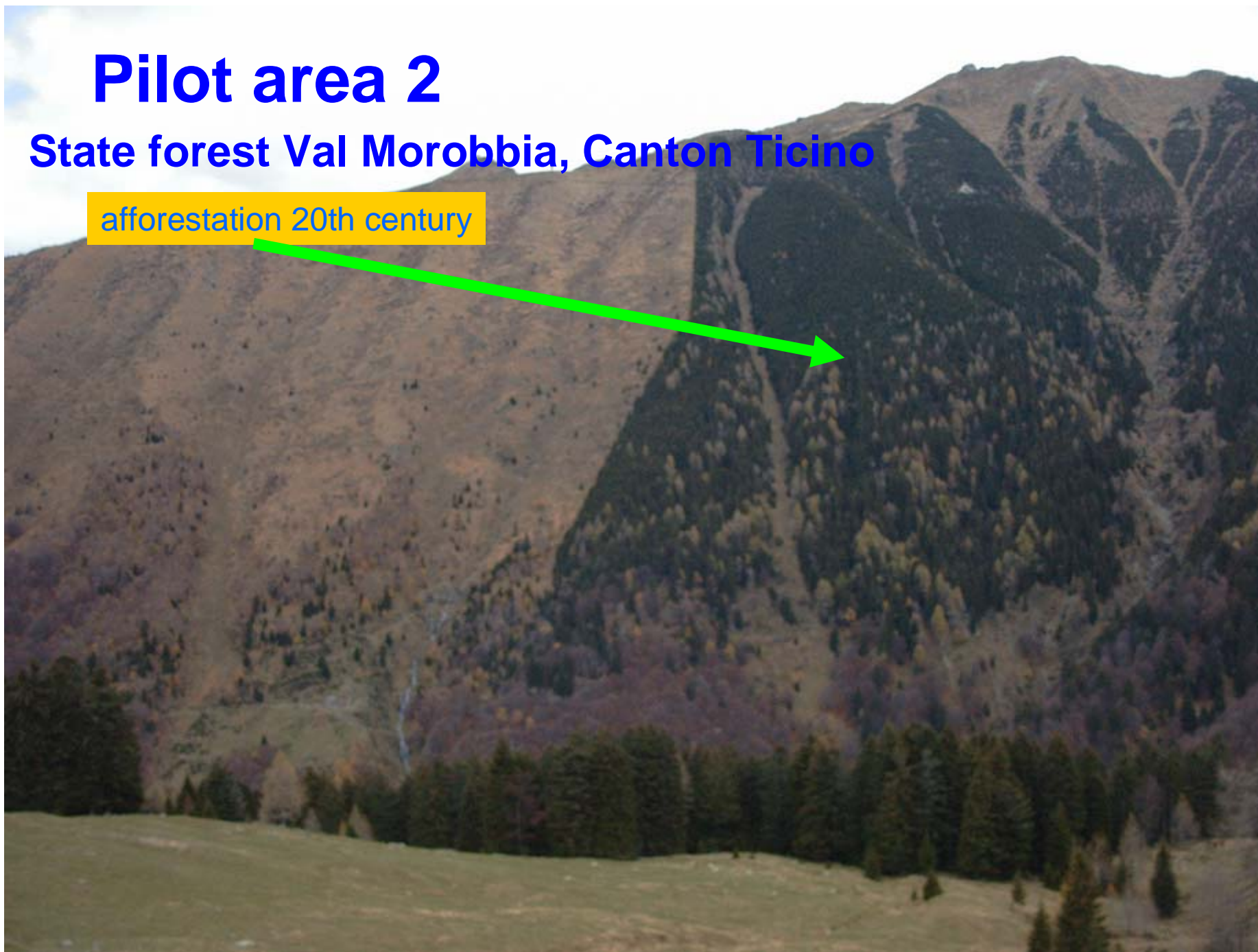
Carbon sequestration potential estimation				
			total	
			28.21	ha total
Assumptions	50 con	50 leaf	6.83	ha rocks
ha	10.69	10.69	21.38	
Yield m ³ /ha/Y.	10	5	7.5	
Yield 5 Years m ³	535	267	801.75	
density	0.4	0.55		
Carbon 0.5	0.5	0.5		
Biomass-expansion factor	1.53	1.49		
C t	164	110	273	
CO ₂ e t in 5 years	600	402	1'001	



Pilot area 2

State forest Val Morobbia, Canton Ticino

afforestation 20th century



Pilot area 2 Information

State forest Val Morobbia, Canton Ticino

- Area: 1'400 ha
- Afforestation mid 20th century
(erosion, water run off regulation).
- Partly from natural regeneration
- Not used yet, far remote area
- Carbon sequestration on the whole area
- No conflicts with carbon sequestration yet
- Potential: 40'000 t CO₂e in commitment period

Pilot area 3

Community forest Baden

- Area 687.4 ha
- Forest close to the city of Baden historically intensively managed and used
- Storm damages (1999) on 20% of the area



Pilot area 3, Products

- Nature conservation
- Timber production
- ▶ - Carbon sequestration
- Recreation
- Services for third parties
- Finances forest owner

ha	%	
519	76	Carbon seq.
168	24	No Carb. Seq.
687	100	Total

Potential 20'000 t CO₂e

Pilot area 4

Oberallmeind-
korporation
Schwyz



- Area 9'000 ha
- Various Functions
(timber production, nature conservation,
protection against natural hazards, carbon
sequestration planned)
- Potential: 25'500 t CO₂e during 1st
commitment period, according to
management plan



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Pilot area studies

- **Forest management**
- **Quantification**
- **Monitoring methods, costs**
- **Standards, quality ensurance**

- **JI? GPG, Baseline**

3. Allocation and Use of RMUs

- Possible Allocation of RMUs
- Implications
- Opportunities and Risks

Possible Allocation of RMUs

1. State receives / keeps all RMUs
 2. Allocation to Forest Owners
 3. State keeps RMUs, but partial allocation to „Project Owners“
 4. Allocation to RMU Marketing Association
- After first stake holder discussion, options 3 and 4 will be worked out in more detail

Partial Allocation to „Project Owners“

- In principle RMUs are kept by the State
- State undertakes forestry policy which ensures that optimal quantity of RMUs are generated
- Individual forest owners may implement a „forest management“ project and receive RMUs according to the results. The project effect would be calculated as difference between baseline and project scenario.

Advantages / Problems

- **Advantages**
 - Easy to implement into current forestry policy
 - No windfall profits
- **Problems**
 - Article 3.4 risk is attributed to the state
 - „RMU-induced“ incentive to optimise CO2 balance of the forest is provided only for project owners.
 - Projects might cover only small percentage of total forest falling under article 3.4.
 - Baseline determination
 - Monitoring on a project level necessary

RMU Marketing Association

- **Idea: Forest owner organise a RMU marketing association**
- **All RMUs earned (or debits incurred) are transferred to the organisation**
- **The organisation allocates RMUs to forest owners or implements alternative incentives**
- **Prerequisite: most forest owners participate**

Advantages / Problems

- **Advantages**
 - **Self-organised**
 - **Incentive-based approach**
 - **No project-based monitoring necessary – incentives can be measure-orientated**
- **Problems**
 - **Most forest owners must take part**
 - **Risk is with forest owners**
 - **Possibly wind-fall profits**

Web resources

- **SAEFL:**
www.umwelt-schweiz.ch/climatereporting/eng/index.html
- **SILVACONSULT:** www.silvaconsult.ch
- **B,S,S. Economic Consultants:** www.bss-basel.ch

**Thank you for
your attention**



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