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High Nature Value Farmland in Europe,
Conference in Vilm, 14th – 18th June 2010

The Swiss political approach to ensure ecological compensation in the agricultural landscape

Erika Loser
Swiss Federal Office for Agriculture

Contents

1. Policies and instruments
2. Monitoring & evaluation
3. Agricultural biodiversity goals and development of policies and instruments

Reform of the agricultural policy

From the Second World War to 1993

o subsidies linked with production:

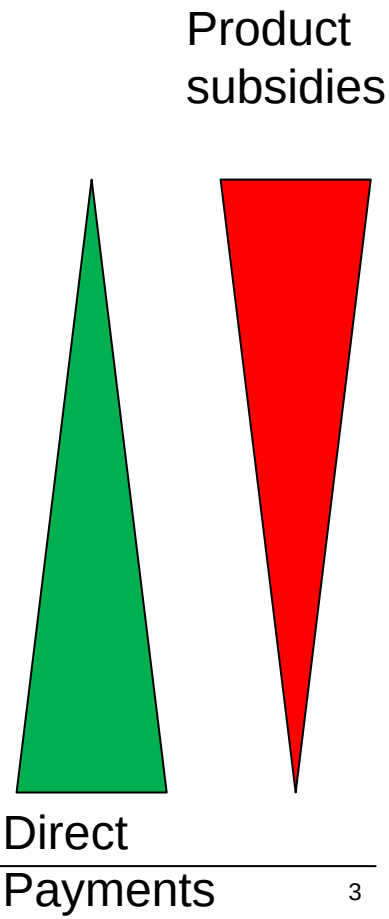
- fixed prices and
- sales guarantees

A fundamental change

1993 – today

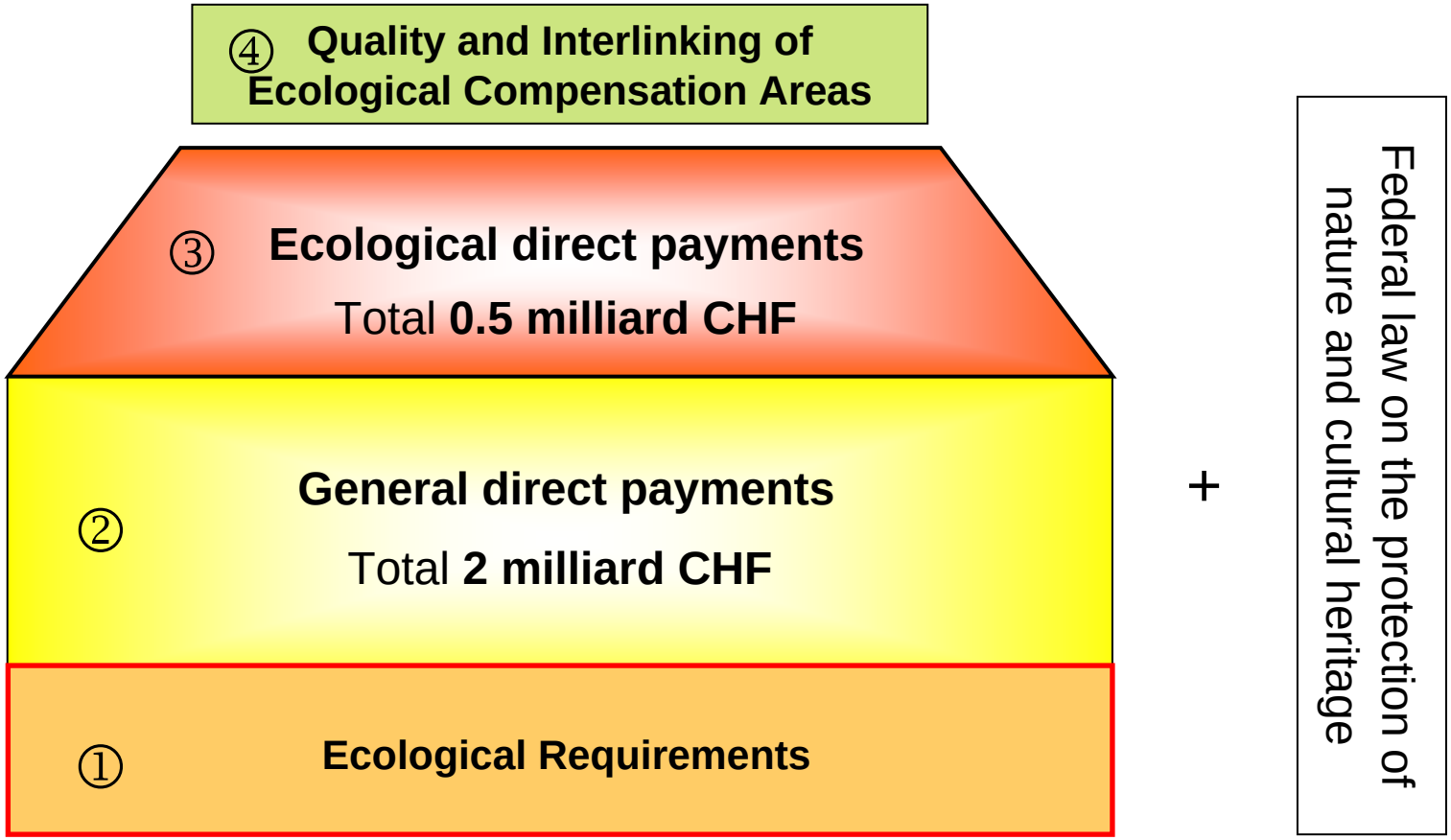
o subsidies (= direct payments) are linked to compliance with ecological standards

= Ecological cross compliance



Policies and Instruments

Overview



High nature value farmland in European countries: e.g.Switzerland

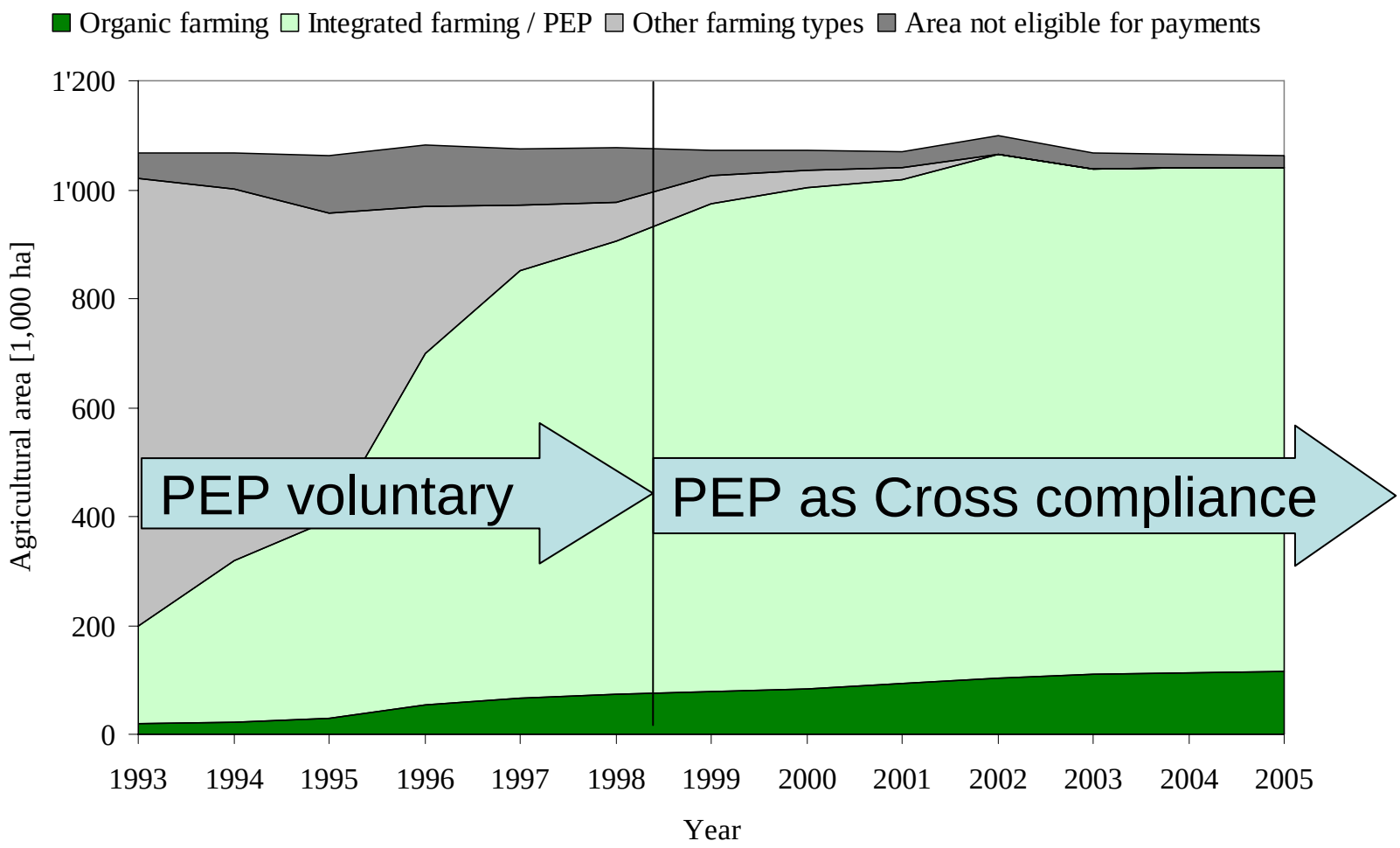
The Swiss political approach to ensure ecological compensation in agricultural landscape, Erika Loser, BLW, 17.06.2010

Ecological requirements (①)

Proof of Ecological Performance **(PEP)**
Based on the approach of “Integrated Production Principles”
Rules translated into regulations:

- animal welfare standards
- balanced use of fertilisers
- appropriate share of ecological compensation areas (7%)
- crop-rotation
- soil protection
- selected and targeted application of plant protection products

Farmers' uptake of ecological cross compliance in Switzerland



General direct payments (②)

- Payments per hectare for total utilised agricultural area
- Payments for roughage consuming animals
- Additional payments in hills and mountains for sloping terrain and animals

Ecological direct payments (③)

- Ecological compensation areas (ECA)
- Payments for extensive production of cereals and rape-seed
- Organic farming
- Payments for animal welfare commitments (animal-friendly stables and daily access to open air)

High nature value farmland in European countries: e.g.Switzerland

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Ecological Compensation Areas (ECA)

- Protect and restore ecosystems close to their natural state
- **Extensive meadows**
  - No fertilizer and no pesticides are allowed
  - Grass is mown at specific times allowing flowers to turn into seeds (plain: mid-June).
- **Meadows used with little intensity**
  - Same conditions as extensive meadows, except fertilisation (= 30 kg N / ha allowed)

High nature value farmland in European countries: e.g.Switzerland

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Others Ecological Compensation Areas (ECA) in Grassland

Litter Meadows

Wet location, no fertilizer and no pesticides, cut after 1 September.

Extensively used pasture

Forest pasture

Ecological Compensation Areas (ECA) in arable land

Crop preservation strips

Extensively managed strips, no N-fertilizer and no weed control.

3 to 12 m wide.

Fallow

Perenial strips of land, seeded with native wild flowers.

No fertilizer, weeds control only by single plan application.

Cut in winter

Ecological Compensation Areas (ECA)

High-Stem Fruit Trees

Hedges and bushes with extensively managed edge of 3 m in width

Native single trees

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Ecological Compensation Areas (ECA)

others (without contribution)

Water ditches, pools, ponds

Ruderal areas, stone heaps and stone banks

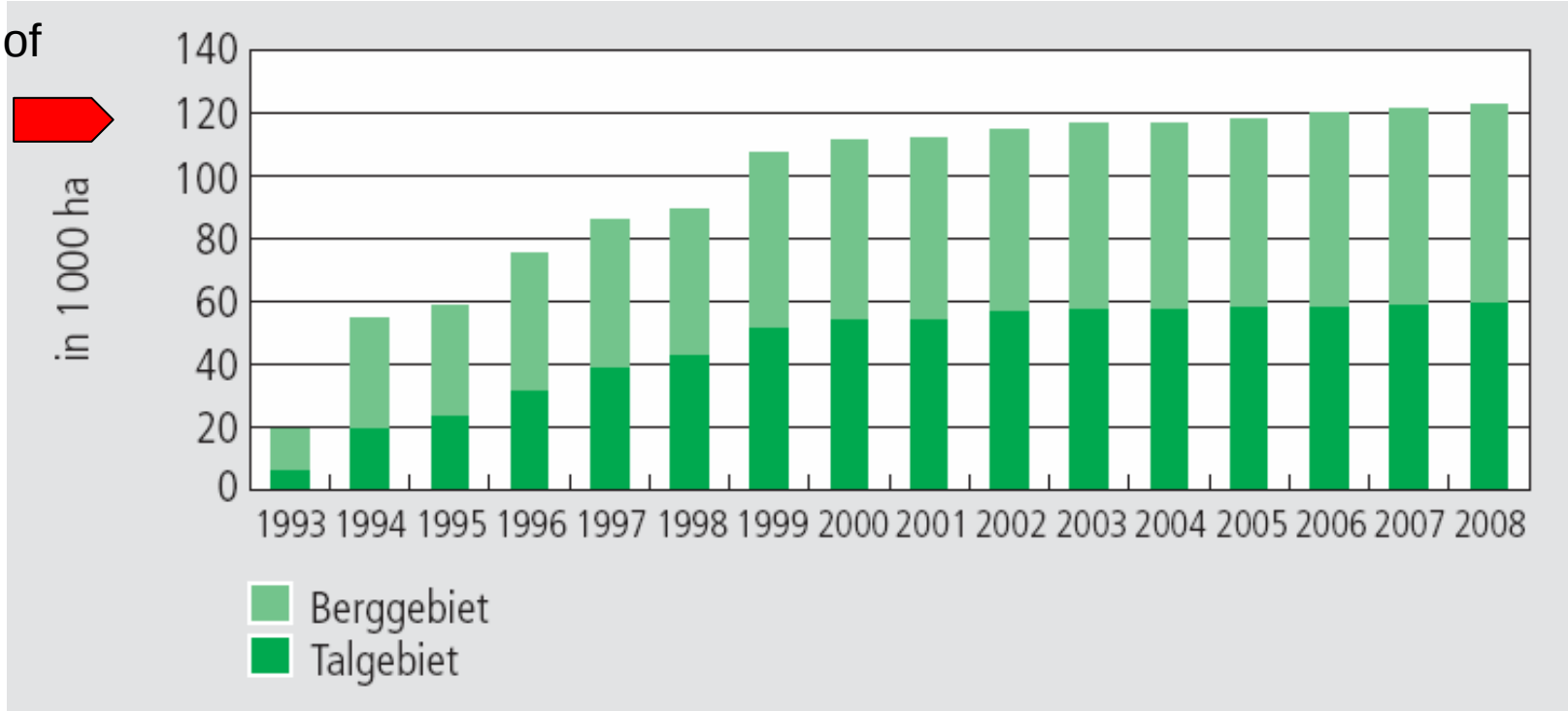
Dry stone walls

Wine growing areas with high diversity of species

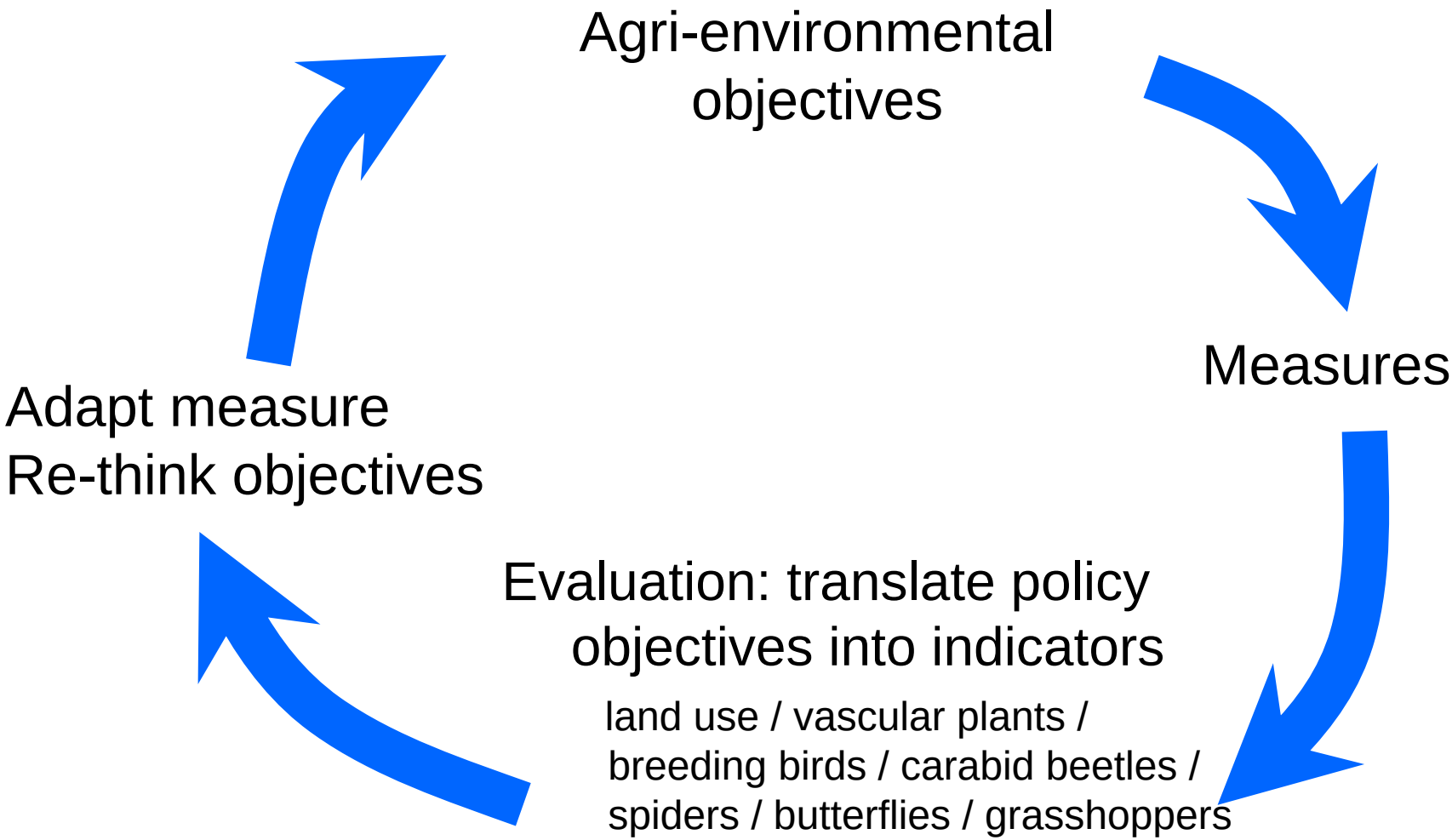
Policies and Instruments

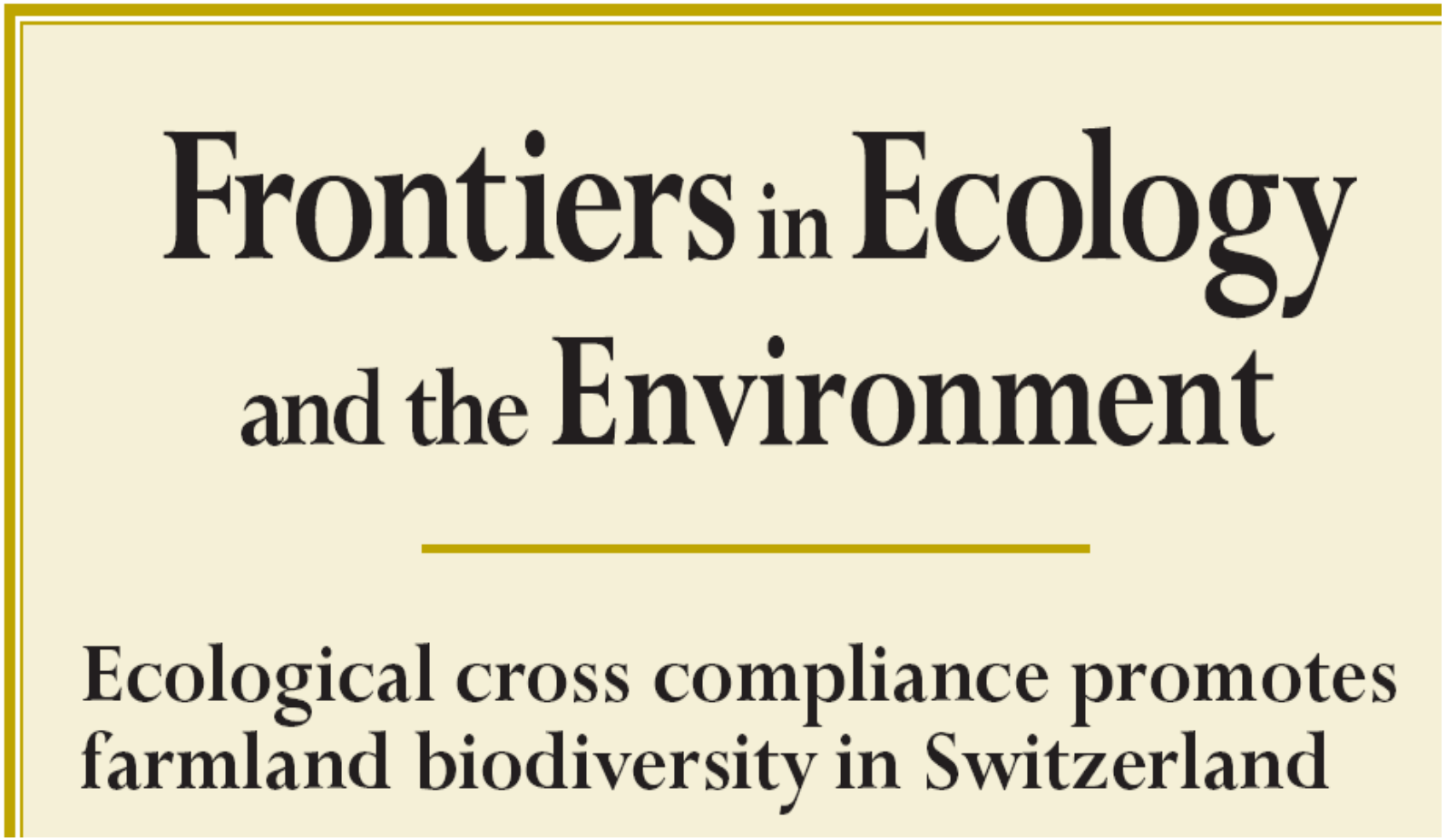
Trend in Ecological Compensations Areas

About 12% of agricultural area



Policy cycle
Assessing the effect on biodiversity





Front Ecol Environ 2009; 7,doi:10.1890/070197

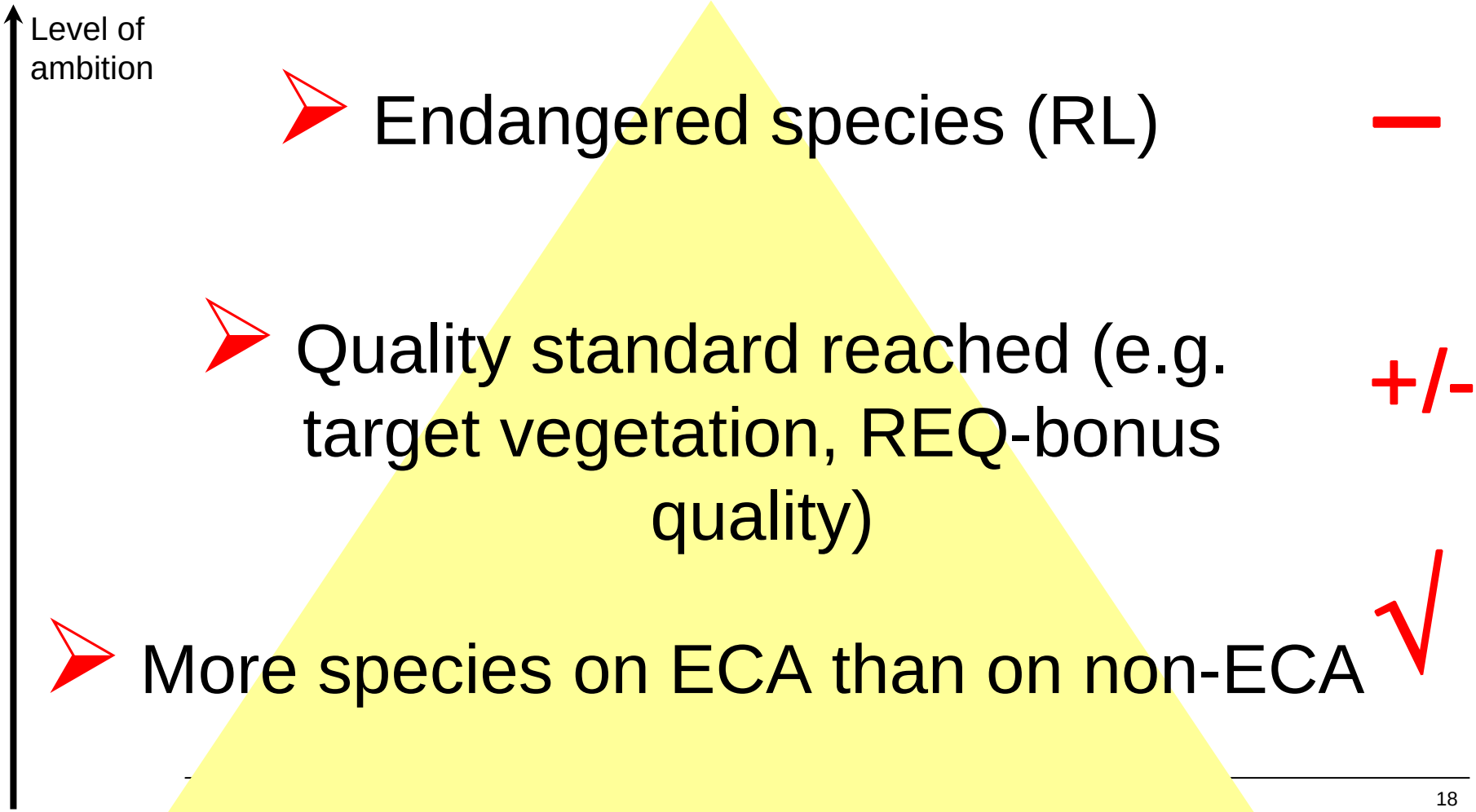
www.frontiersinecology.org

Conclusions

- Botanical quality of ECA meadows is heterogeneous, only 25% of „good quality“.
- Fauna indicators show positive reaction over time (arthropods) and in comparison to non-ECA.
- PEP works for some species, not sufficient for endangered species!
- Climate: Annual variations cover possible effects?
- Biodiversity reacts slower to extensification than to intensification.

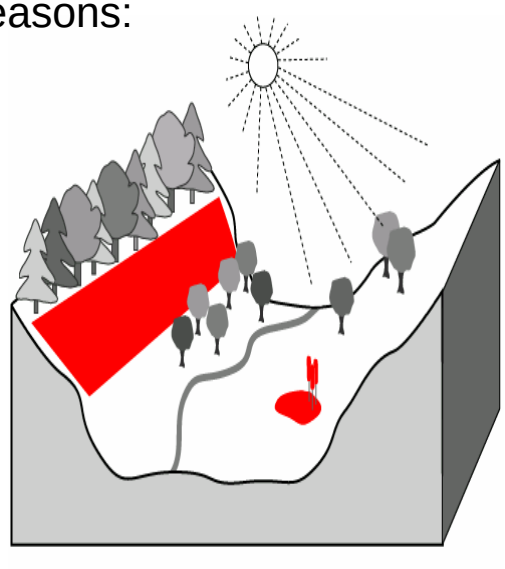
→ Good direction, moderately positive effect,
→ additional efforts required to fully reach the objectives

Enhancing biodiversity
Enhancing endangered (RL) species (biodiversity effects of ECA)

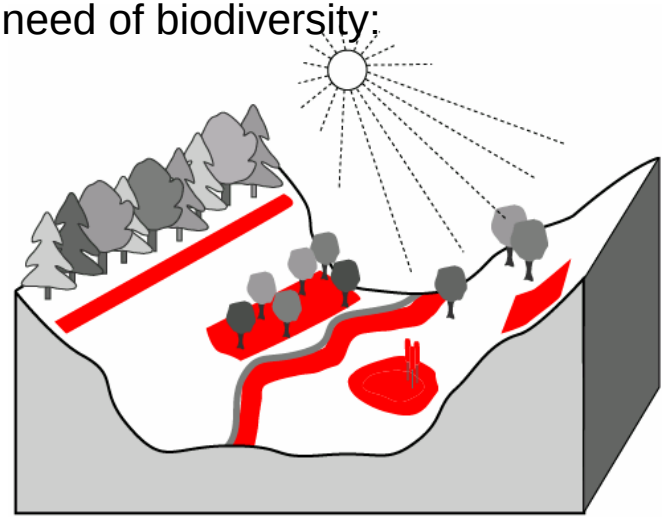


- **Poor quality of many Ecological Compensation Areas (ECA)**
- **ECA not interlinked**

ECA chosen for economic reasons:



ECA chosen according to the need of biodiversity:



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Ordinance on Eco-Quality (④)

(Regional Promotion of Quality and Interlinking of Ecological Compensation Areas)

- Poor quality of many Ecological Compensation Areas (ECA)
- ECA not interlinked

⇒ **Ordinance on Eco-Quality**

- Minimum standards by central government
- Voluntary basis
- Co-financing: 80% central government, 20% local

Ecological Compensation Areas

Ordinance on Eco-Quality

- Additional, voluntary bonus payments
- Result oriented
- Biodiversity: key species, target species

Proof of Ecological Performance

- Basic requirements for any direct payments (belongs to PEP)
- Management orientated
- Biodiversity: 7% of farmland as ECA

Ordinance on Eco-Quality (④)

Payments for ecological quality of Ecological Compensation Areas

- Number of species, occurrence of rare species in the ECA:
  - Extensive and less intensive meadows, litter meadows
  - Hedges
- Number of species in combination with structures in the ECA:
  - Extensively used pasture
  - Forest pastures
  - Vineyards with a high species diversity

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Ordinance on Eco-Quality (④)

Botanical quality
Additional bonus payments if 6 out of 47 plant species are present on an ECA meadow

Lowland meadows

20 % of ECA meadows fulfill the quality requirements (5 – 65 %)

Herzog et al. 2005

Mountain meadows

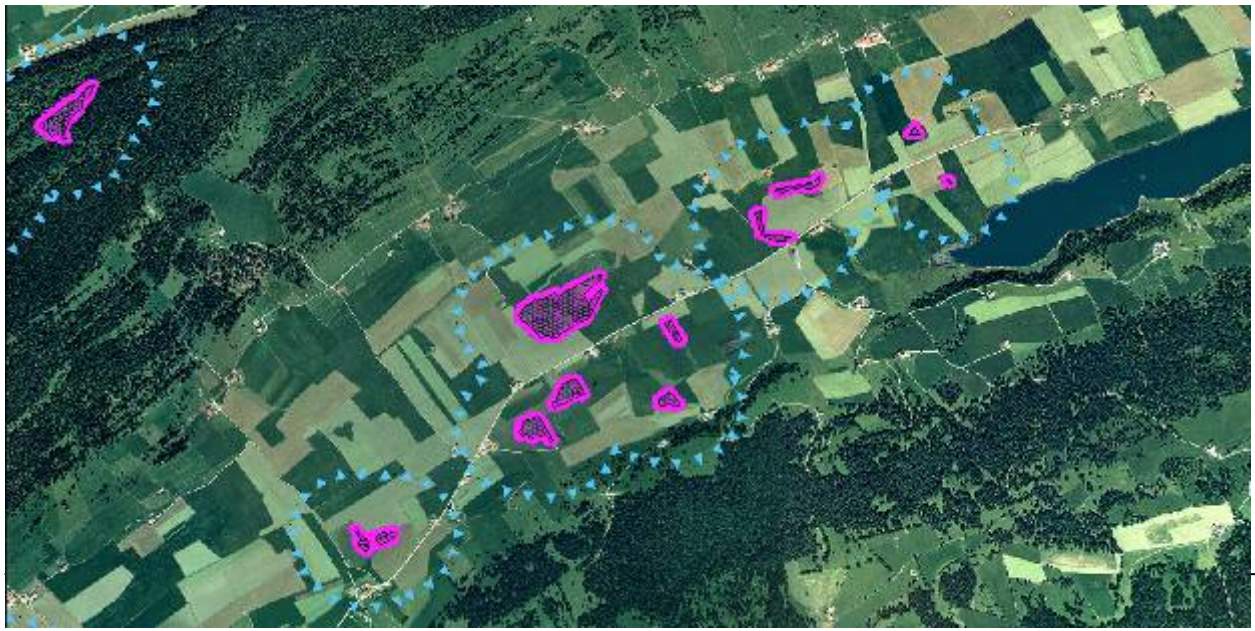
80 % of ECA meadows fulfill the quality requirements (75 – 90 %)

Kampmann et al. 2005

Ordinance on Eco-Quality (④)

Payments for Interlinking of Ecological Compensation Areas

- Regional network plan
  - Aims with regard to flora and fauna
  - Mesures and ECA-location in relation to the specific needs of the species



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Inspection - control

- PEP and ECA certified by control organization authorized ISO/IEC 17020
- Inspection by 30% of the farmers each year.

Environmental objectives for agriculture FOAG & FOEN, 2008

→Clarifying gaps and responsibilities of the agricultural sector; concerning biodiversity:

- Preservation and promotion of native specie habitats, occuring mainly on agriculturally used land or depending on agriculture, in their natural range
- Preservation and promotion of genetic diversity of native wild species, and significant contribution to the diversity of crop varieties and livestock breeds
- Preservation of ecosystem services on agricultural production area

Environmental objectives for agriculture - annexes

Defining the specific responsibility of agriculture:

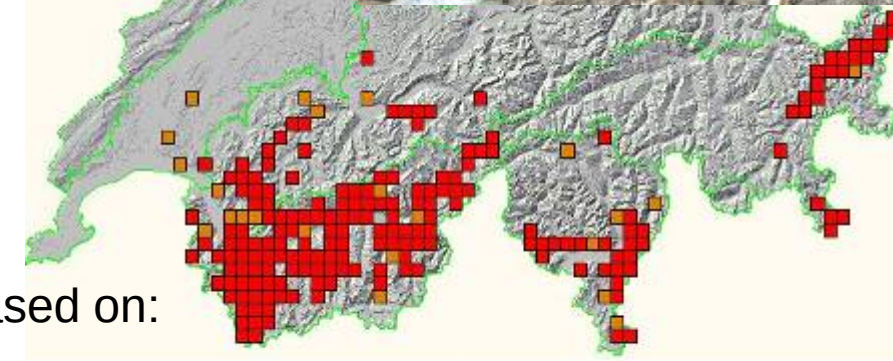
- Annex 1: 828 plant and 340 animal indicator- and target species
- Annex 2: 52 habitat types

➢ Regional differences in the natural range of these species and habitats

➢ Many target species only occuring on very limited areas

Operationalisation of goals:

how much is available where? Where to implement, how much and how?



FOAG & FOEN project:

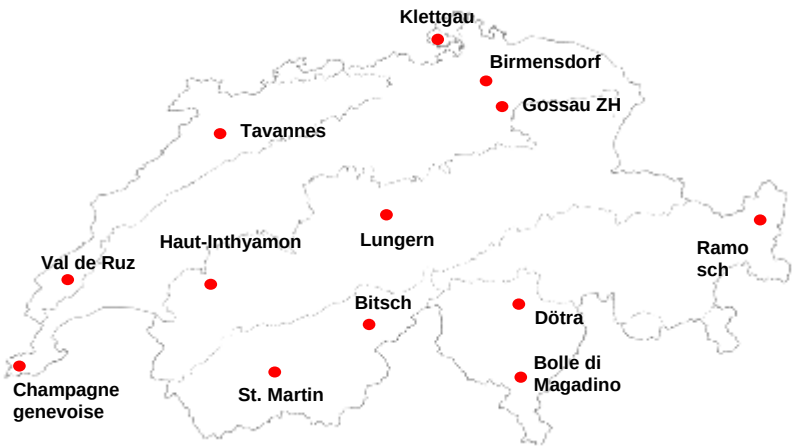
- Determine the current status, based on:
  - Habitat inventories
  - Point data (319 target species and indicator species)
  - Estimation models *(modèle pâturage)*

- Specify the objectives (range of about 1600 species modelled, based on environmental factors related to the observation data*)

  → To estimate the areas or other measures needed to ensure/promote species and habitats (annexes UZL**) in their natural range

  → Outlook: Define goals for the development of agricultural policy and adaptation of instruments (criteria for interlinking projects; measures for habitats / indicator species, and possibly for target species. Option: criteria for species protection/promotion concepts)

Operationalisation of goals (UZL)



Casestudy-areas

Flächenziele regional

xx % Extensive Wiese
xx % Extensive Weide
xx % Streuwiesen
etc.

Zielarten regional

Zielart 1	in mind. 1 Rasterzelle
Zielart 2	in mind. 3 Rasterzellen
Zielart 3	in mind. 3 Rasterzellen

agricultural landscape types →

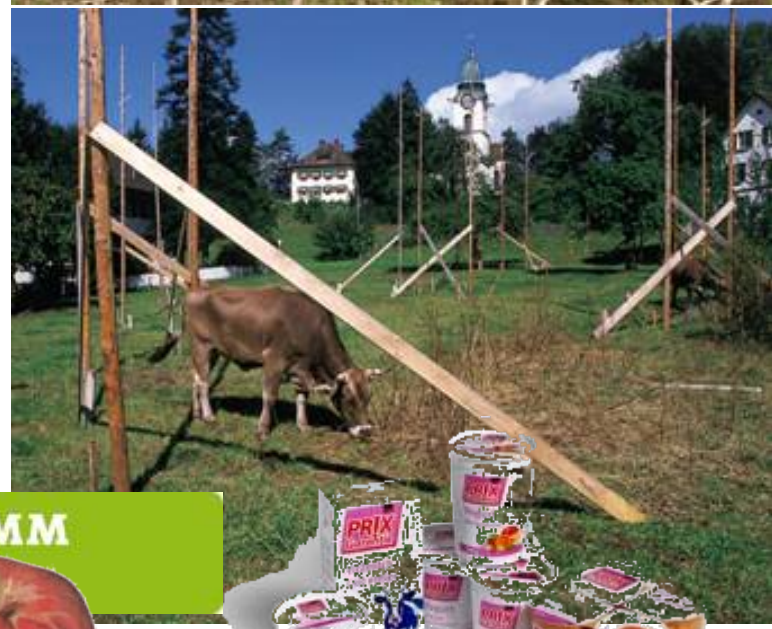
→ Baseline study for regionalized definition of goals on units of agricultural landscape types combined with agricultural zones and/or altitudinal zones

Conclusion: YES for biodiversity

- Yes, a lot has already been done.
- Yes, there is still a lot to be done.
- Yes, what has been done was worthwhile
- Yes, the development of policy measures is ok.
- Yes, other economic sectors must take their responsibility too.
- Yes, consumers have to be involved!

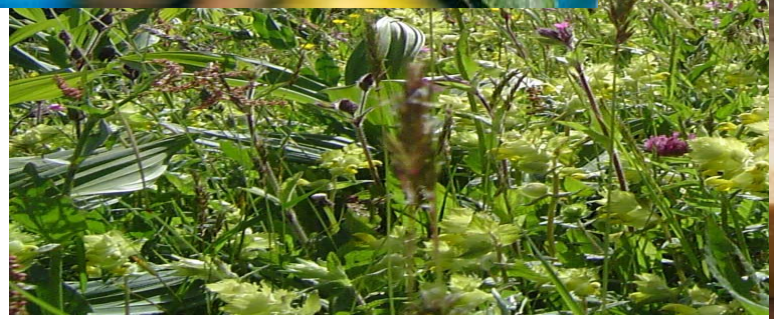
Engagement in different sectors needed Es braucht uns alle :

- Agriculture policy – improve incentives
- Agriculture – improve acceptance
- Land use planning –
  protect farmland from construction
- Trade/Consumption –
  Adjust supply and demand



Thanks for your attention!

Your swiss agriculture product:
….as well as…



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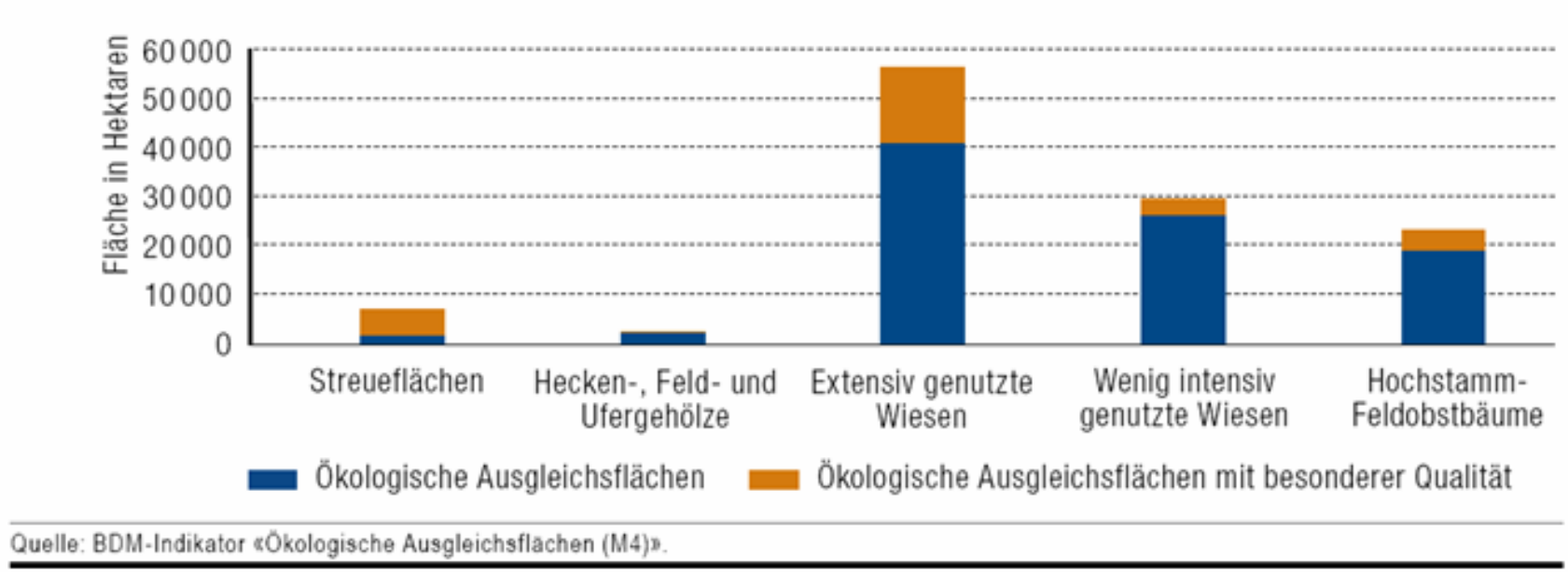
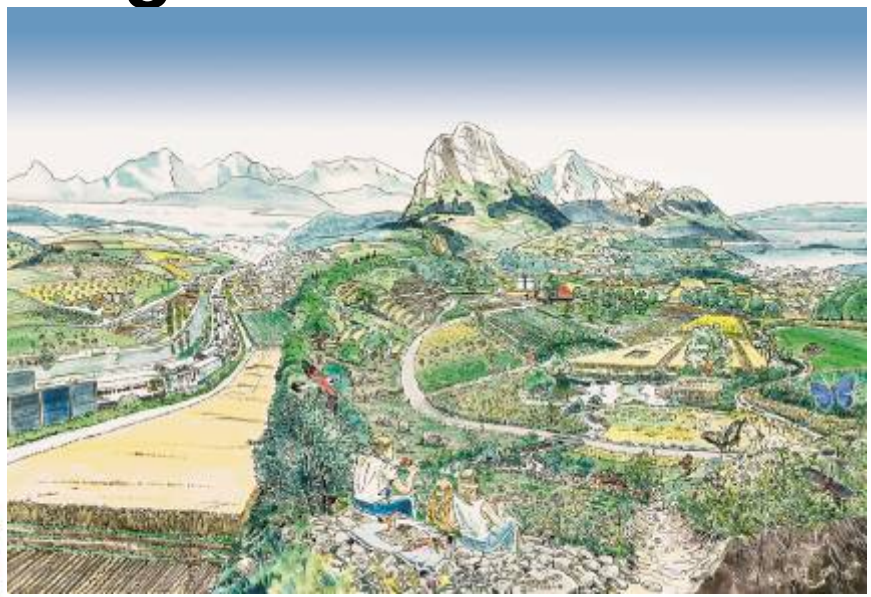
Evaluation of Ecological Compensations Areas with & without biological quality



Quelle: BDM-Indikator «Ökologische Ausgleichsflächen (M4)».

- → Increasing share of areas with contributions for quality
- → High share of areas with quality in mountain regions (up to 80%)
- → Not enough areas with quality especially in the lowland
- → Promotion of rather unspecific species diversity
- → Only moderately positive effect for biodiversity
- → The negative trend for endangered species is not stopped.

“Agriculture needs biodiversity Biodiversity needs agriculture”



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