

# Biotoper för biologisk mångfald längs vägar



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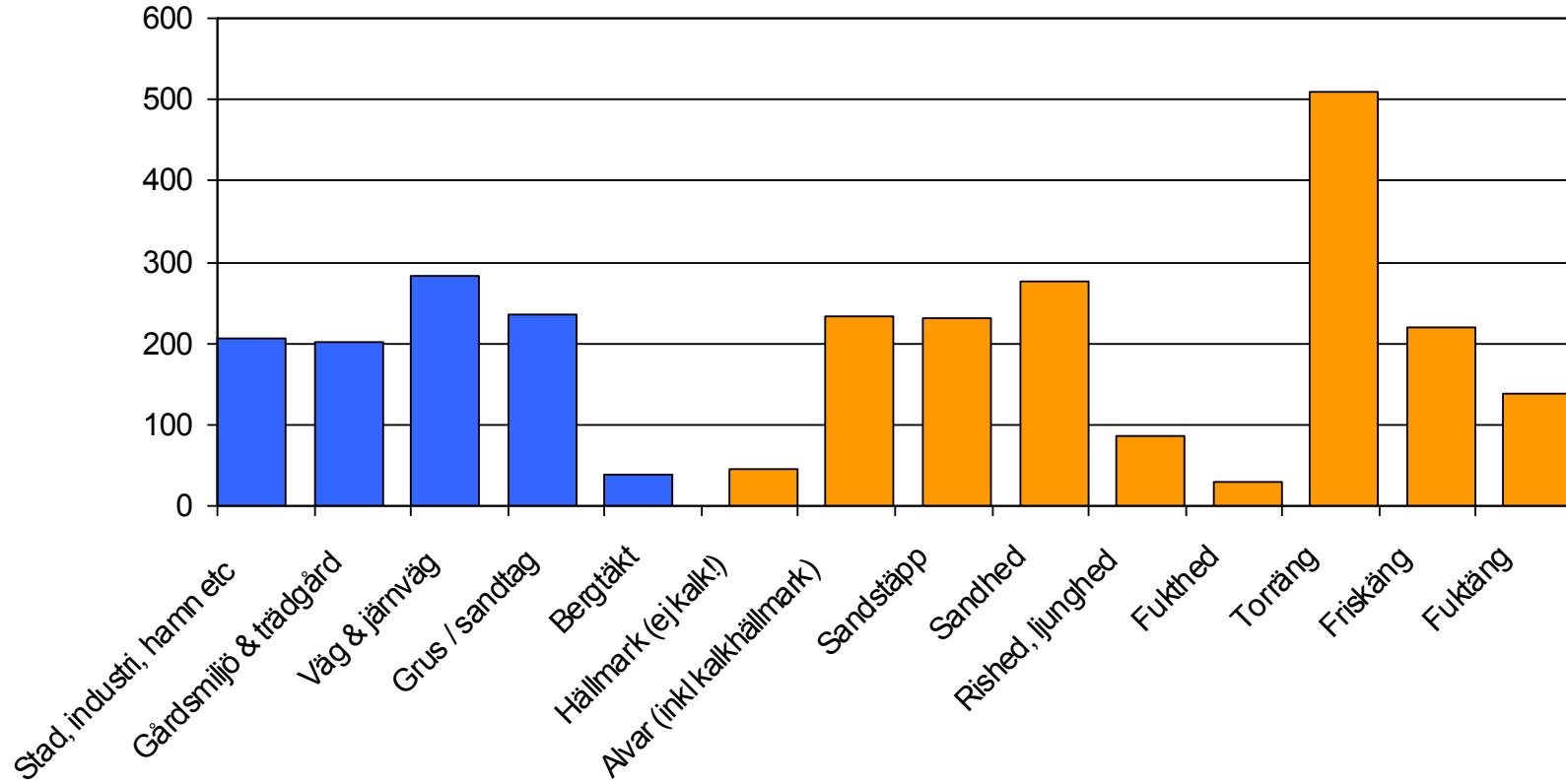
Sveriges lantbruksuniversitet  
Swedish University of Agricultural Sciences

Swedish Biodiversity Centre



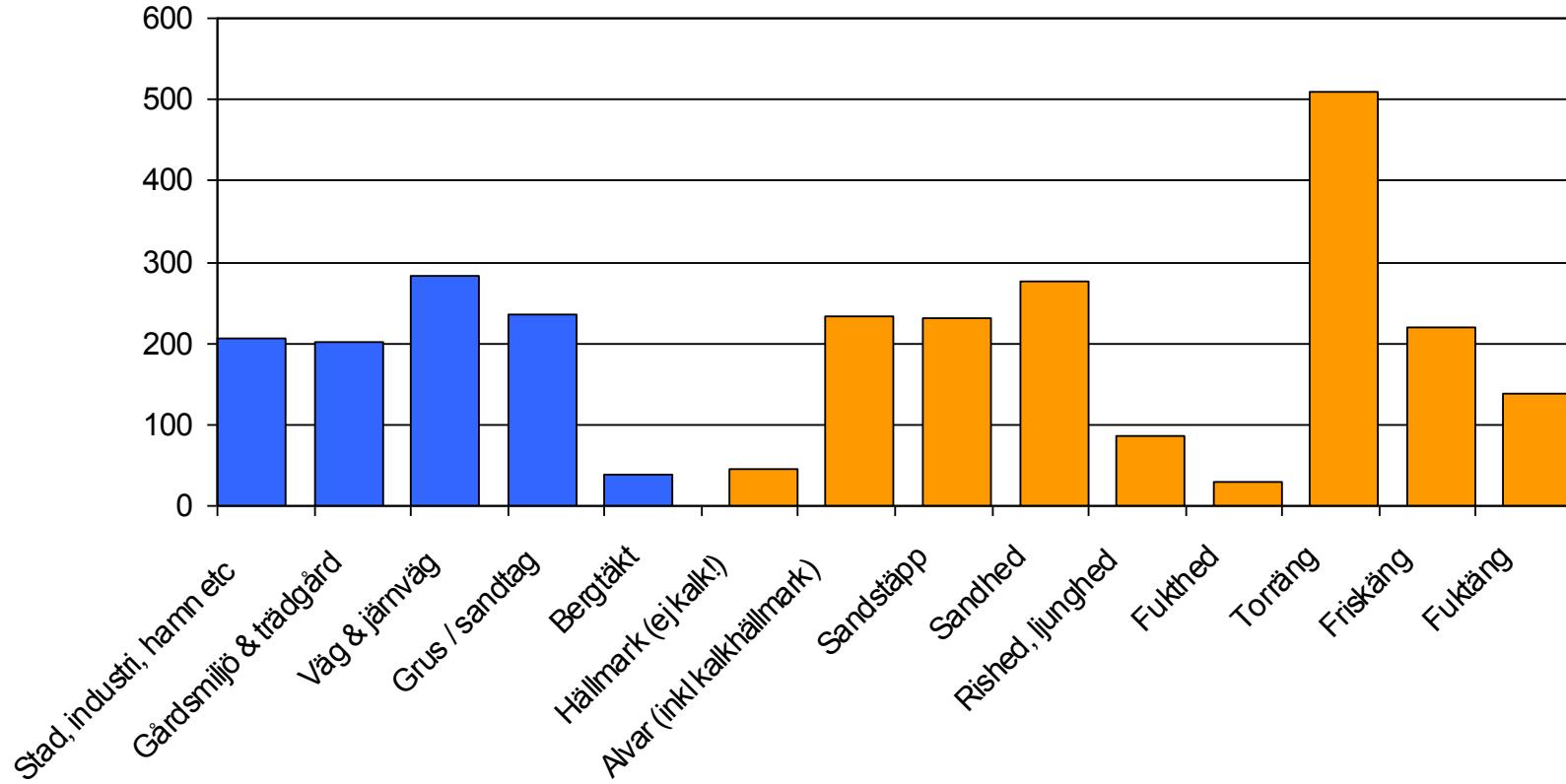
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Källa: BIUS 2013



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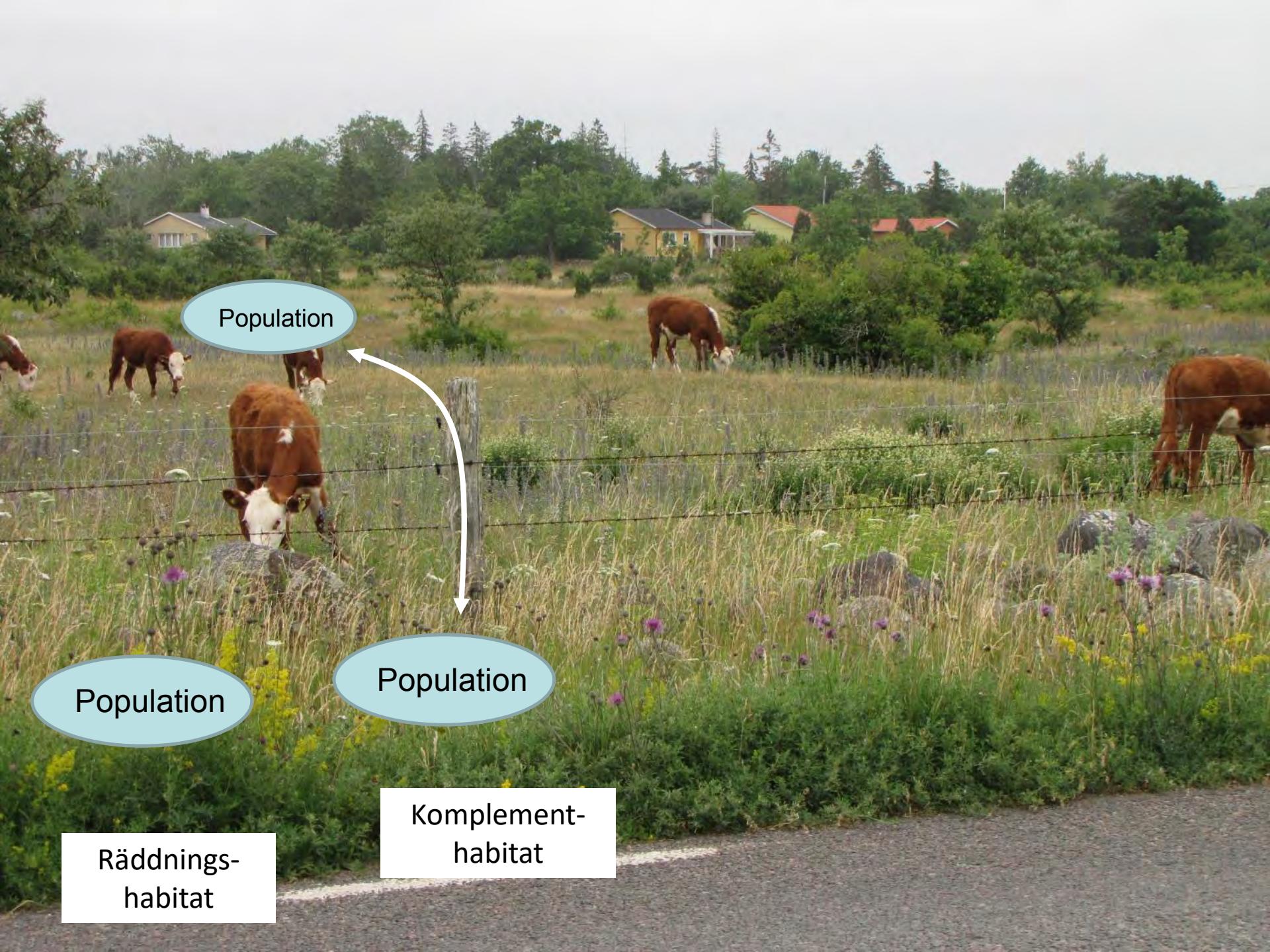
Många krävande, rödlistade och hotade arter i infrastruktur-biotoper

**Stor potential att gynna biologisk mångfald vid byggande och skötsel av vägarnas sidoområden**

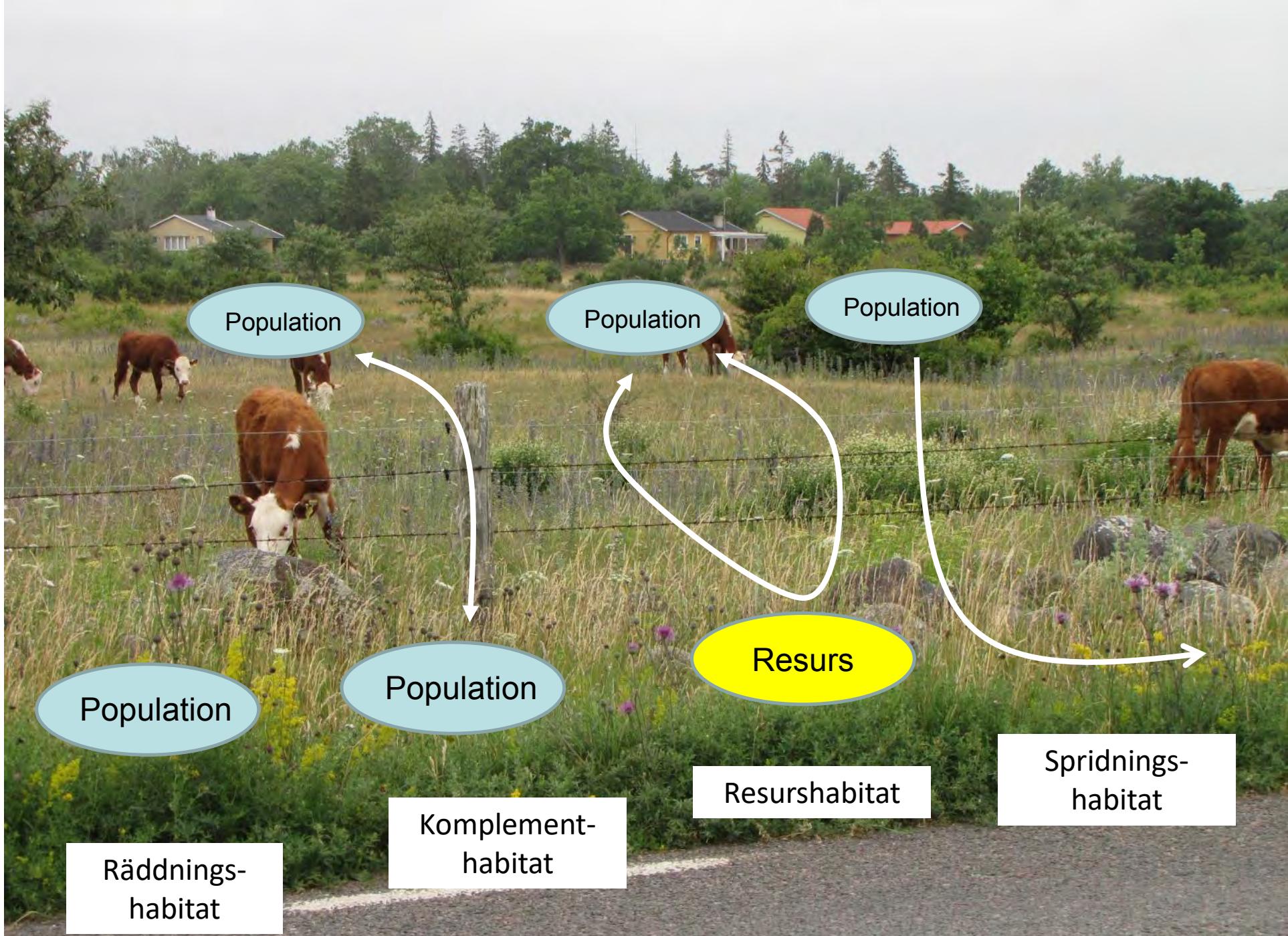
Biologiskt rika  
miljöer kan skapas  
längs vägar.

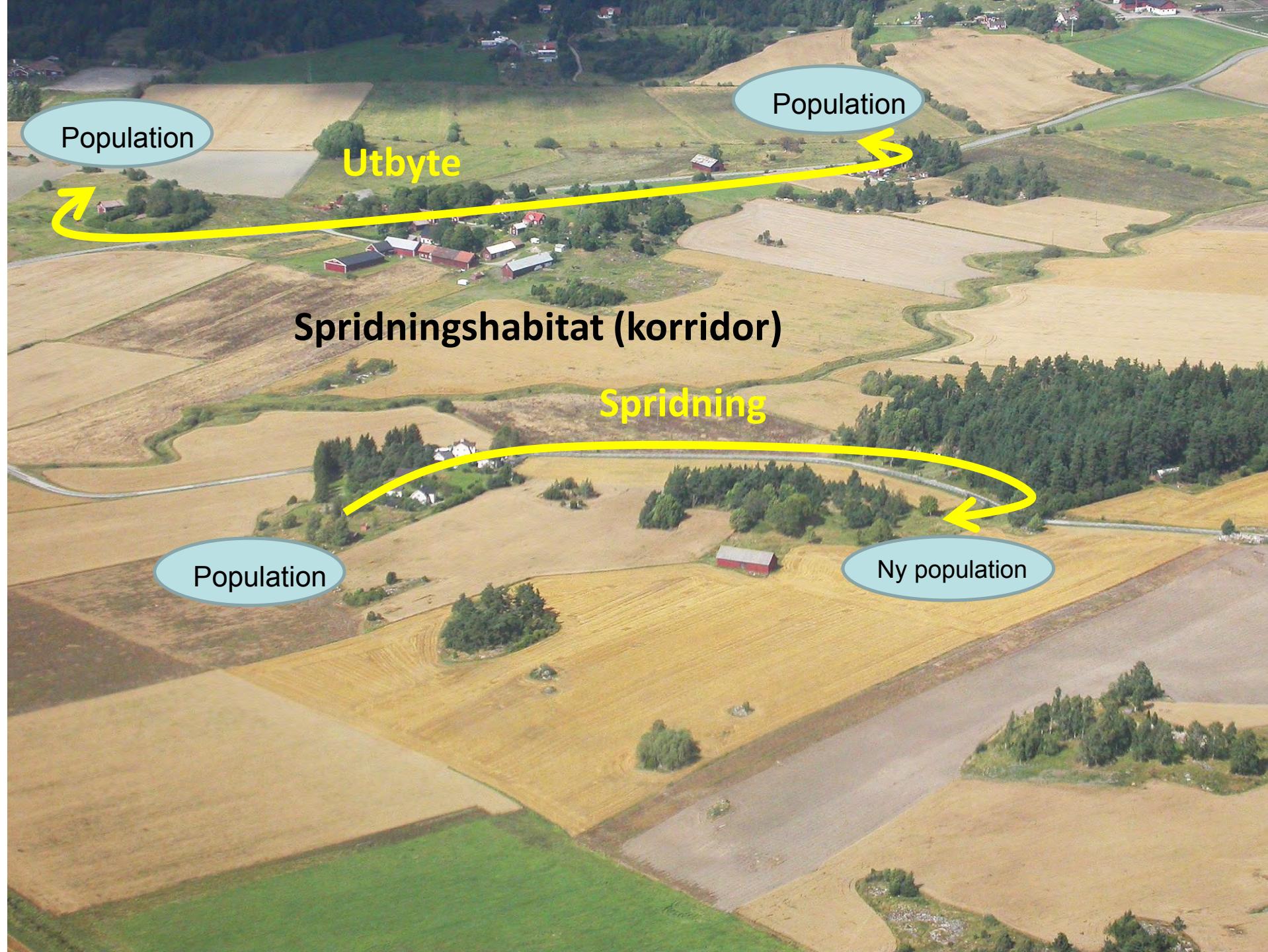


Vägkantsbiotoper kan  
gynna biologisk mångfald  
på flera sätt



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på flera sätt





Biologiskt rika  
miljöer kan skapas  
längs vägar.

Men de kommer  
inte automatiskt





Värdefull ny  
biotop

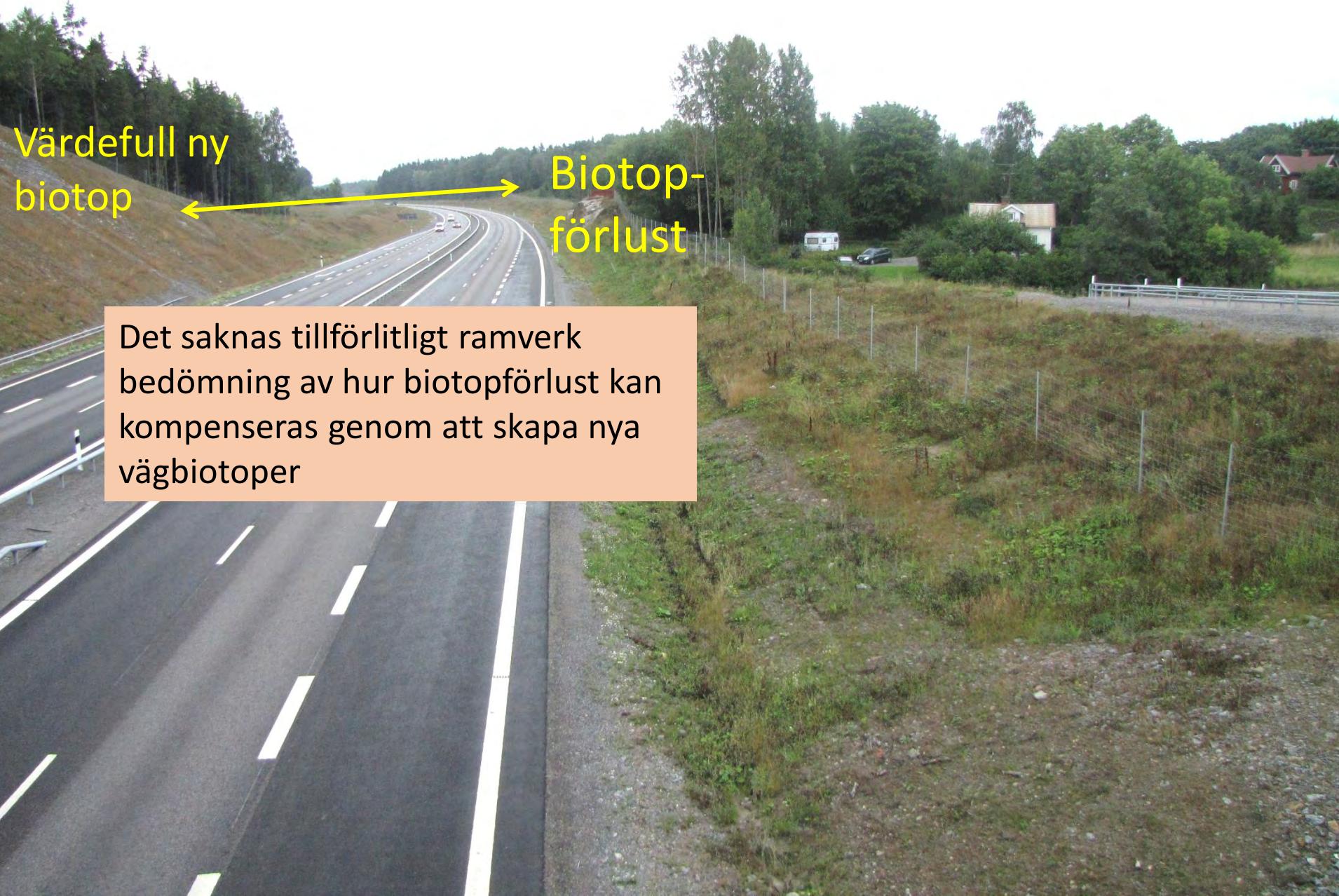
Biotop-  
förlust

Trafikmortalitet  
hos djur

Barriär

Bullerstörning  
Ljus-störning



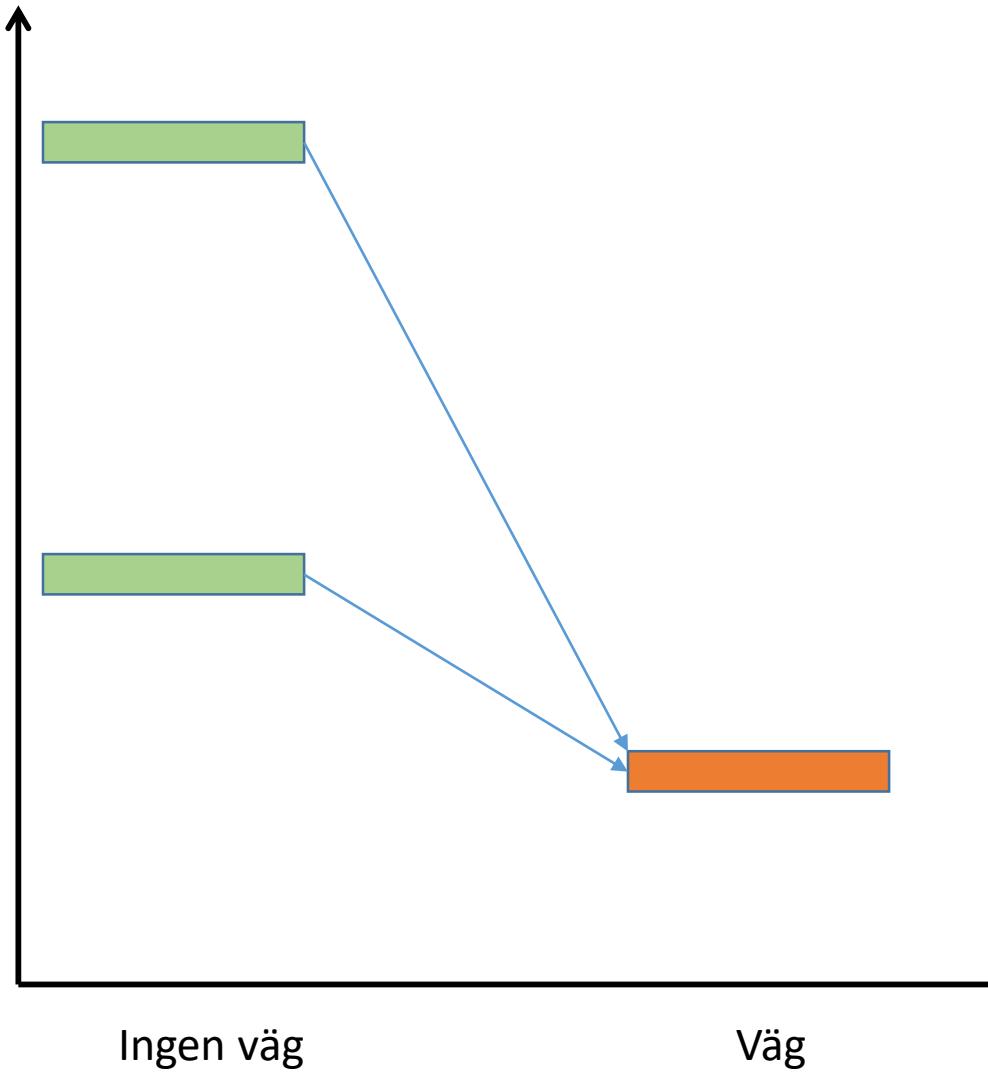


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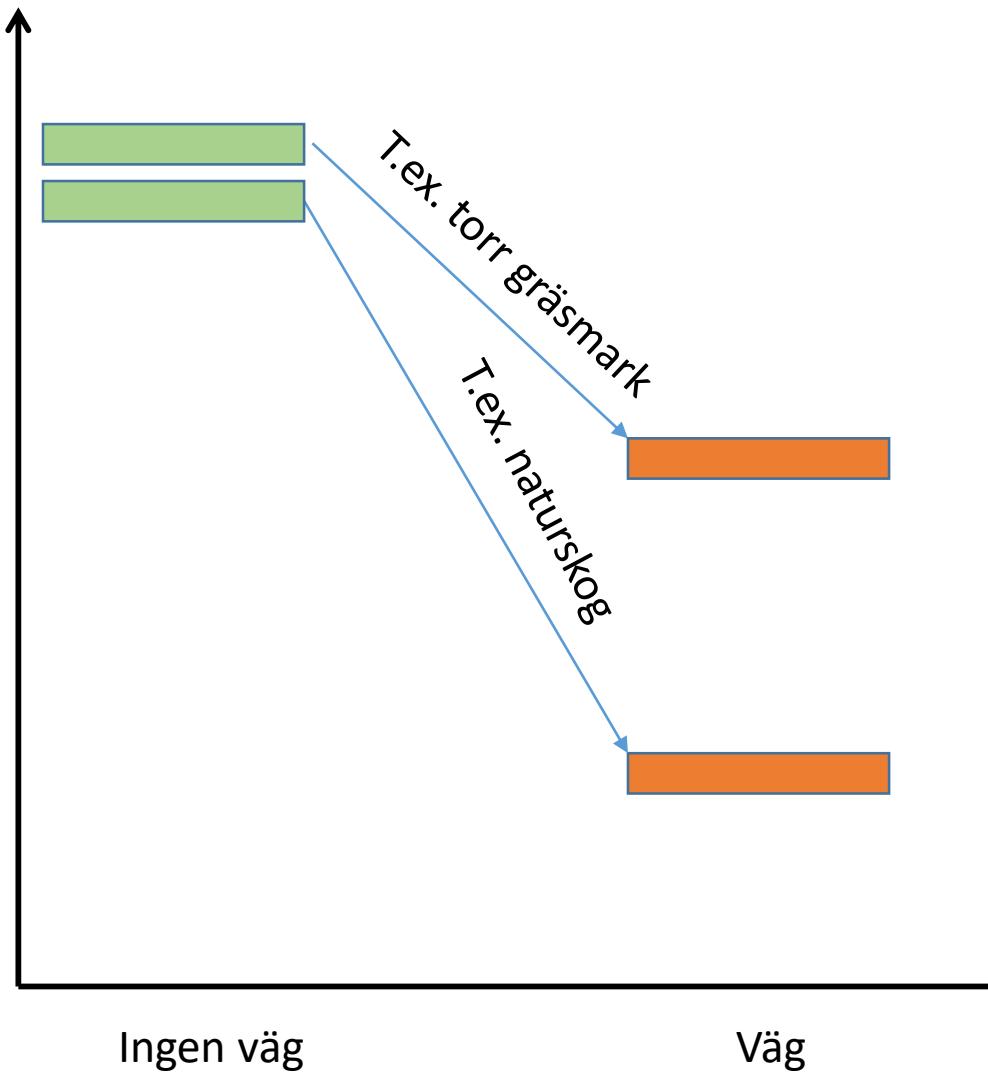
Biotop-  
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Det saknas tillförlitligt ramverk  
bedömning av hur biotopförlust kan  
kompenseras genom att skapa nya  
vägbiotoper

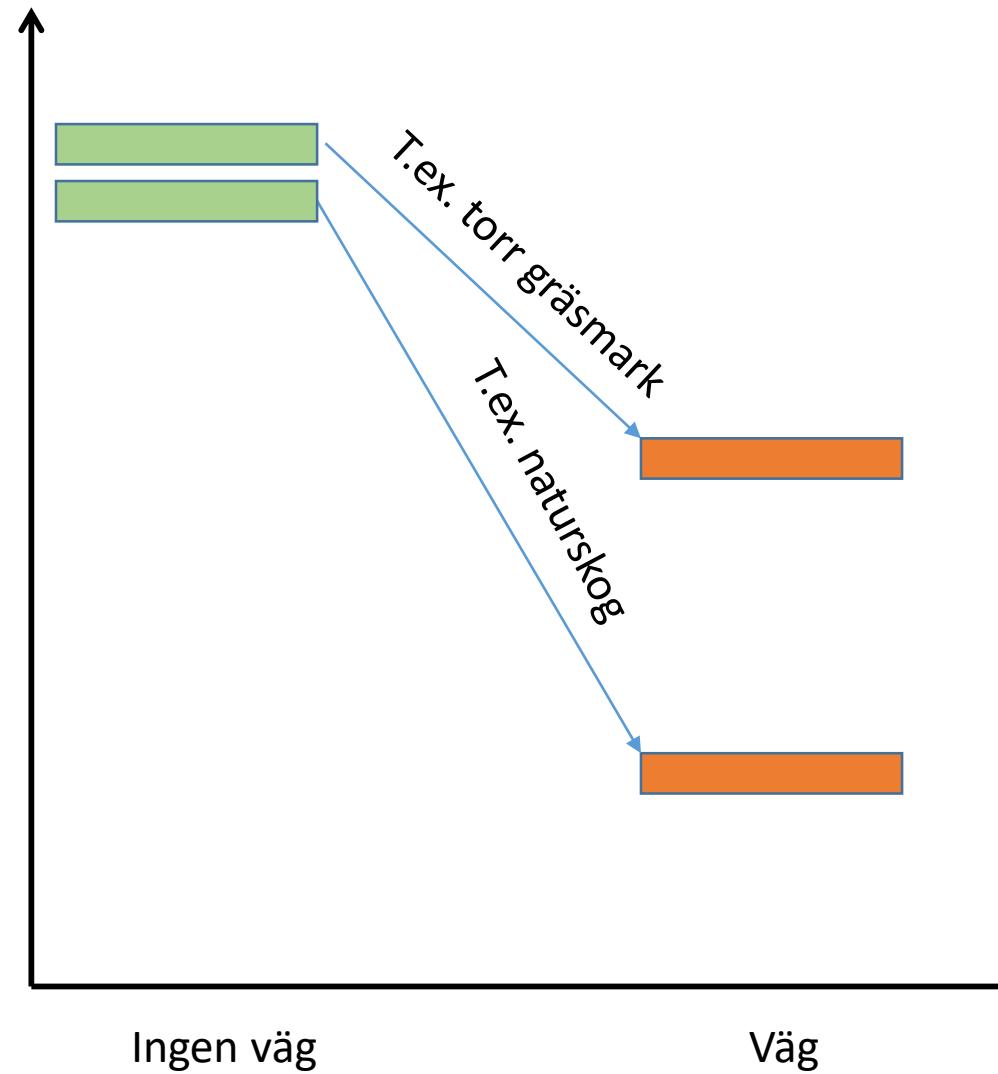
Naturvärde



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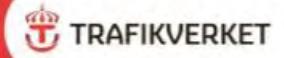


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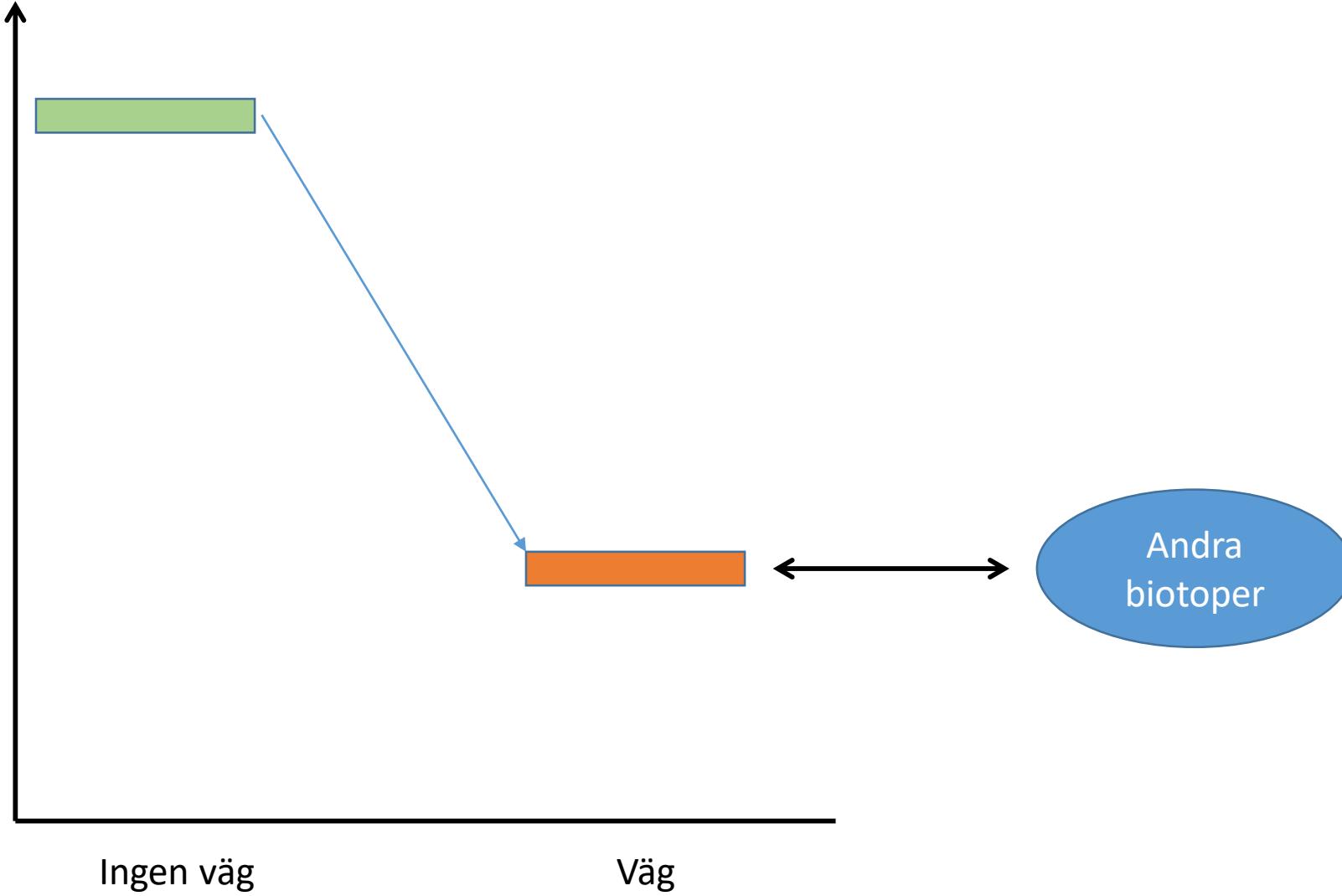


## "Icke-förhandlingsbara-biotoper"

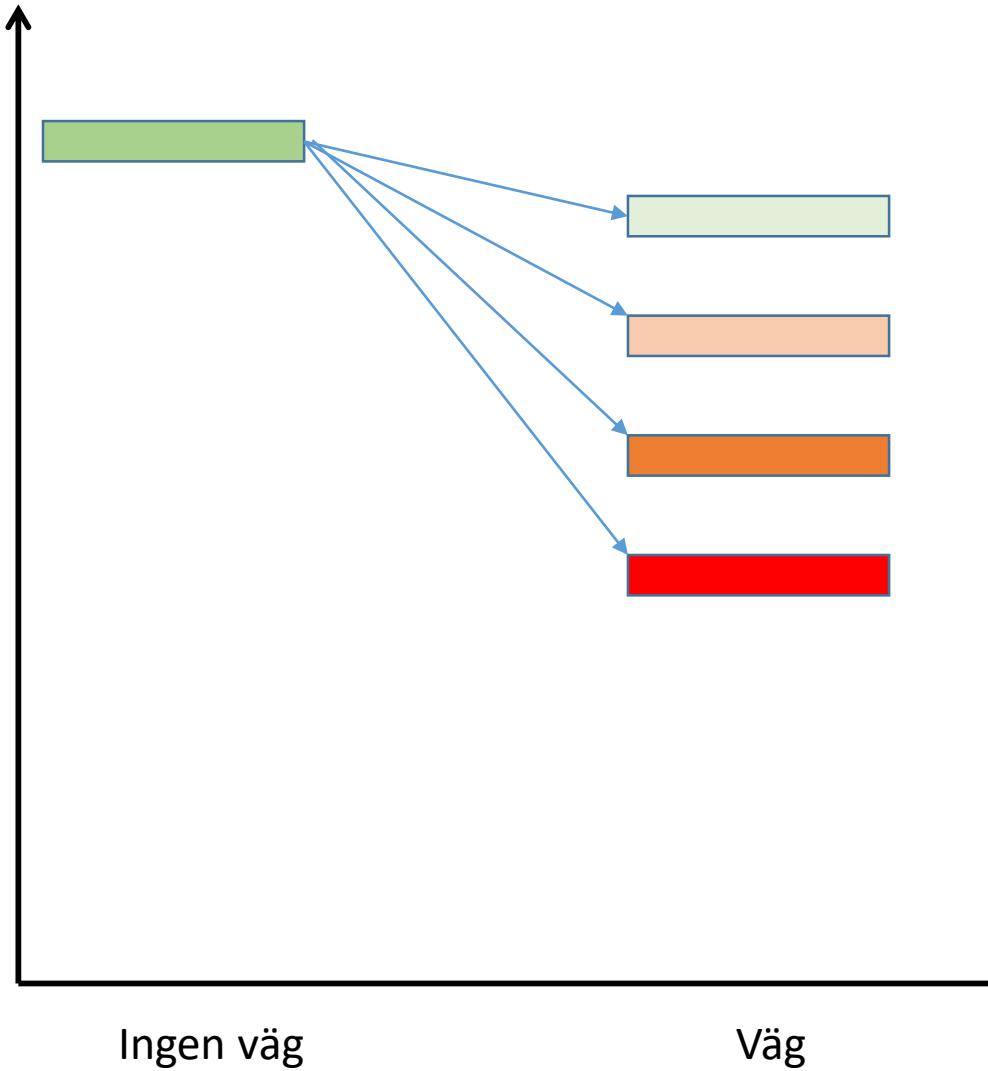
– ett koncept för att undvika exploatering av  
små biotoper med oersättliga naturvärden



Naturvärde



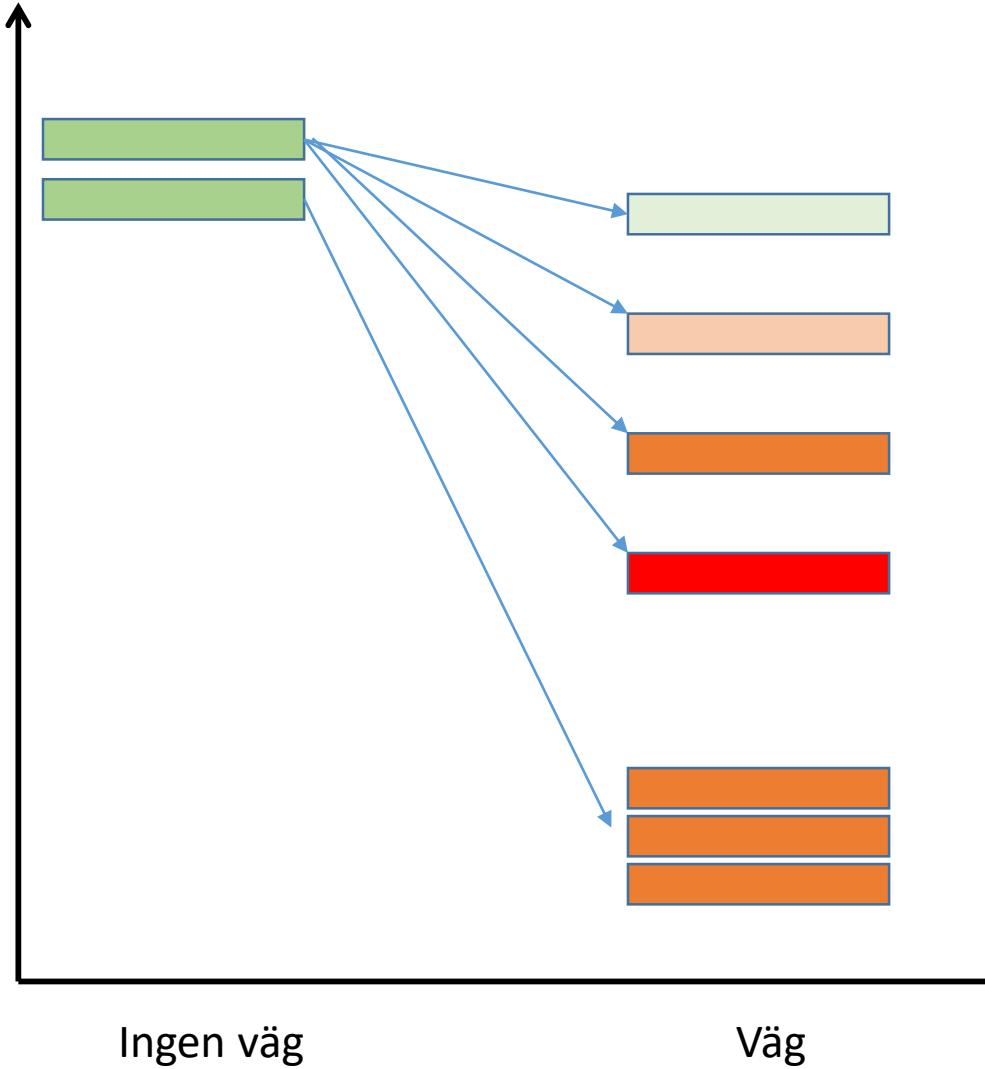
Naturvärde



Beroende på:

- Hur vägen byggs och sköts
- Lokala förutsättningar

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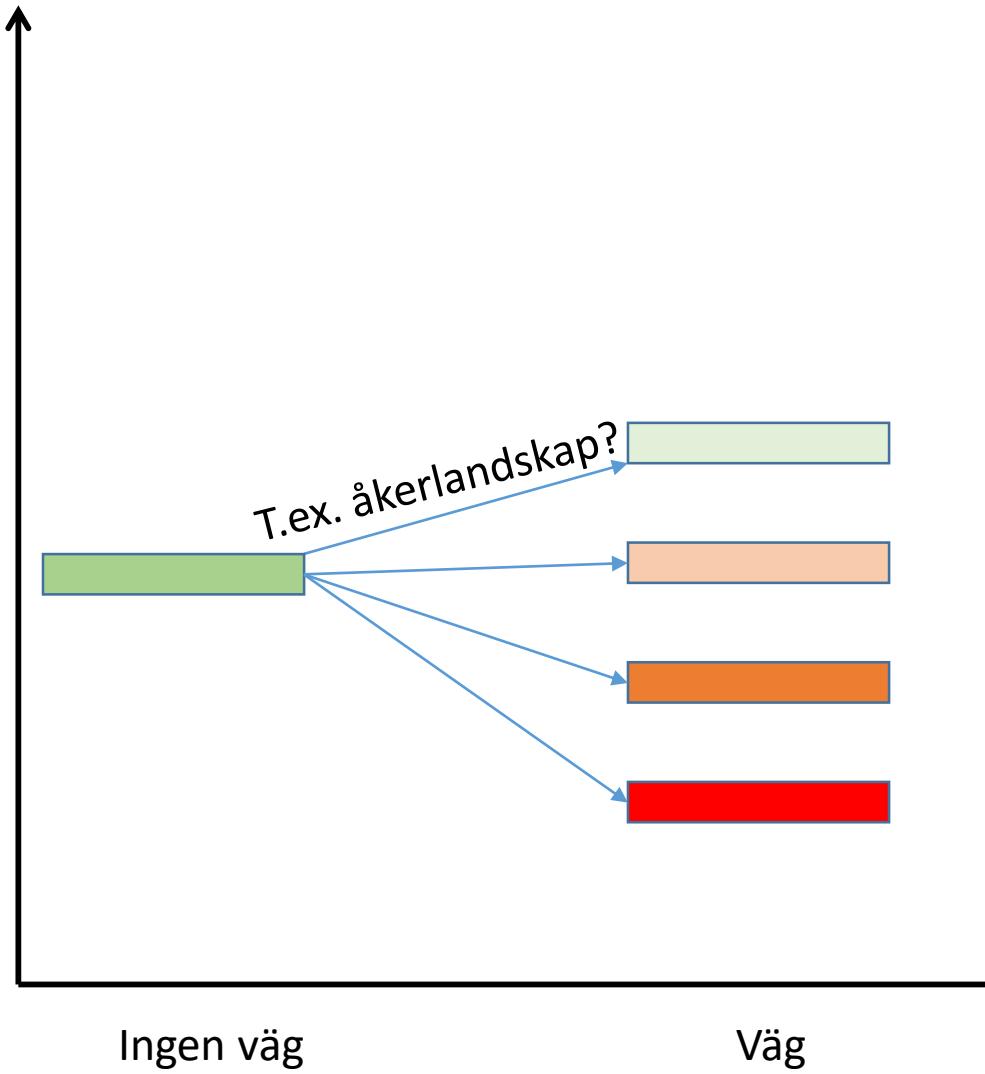


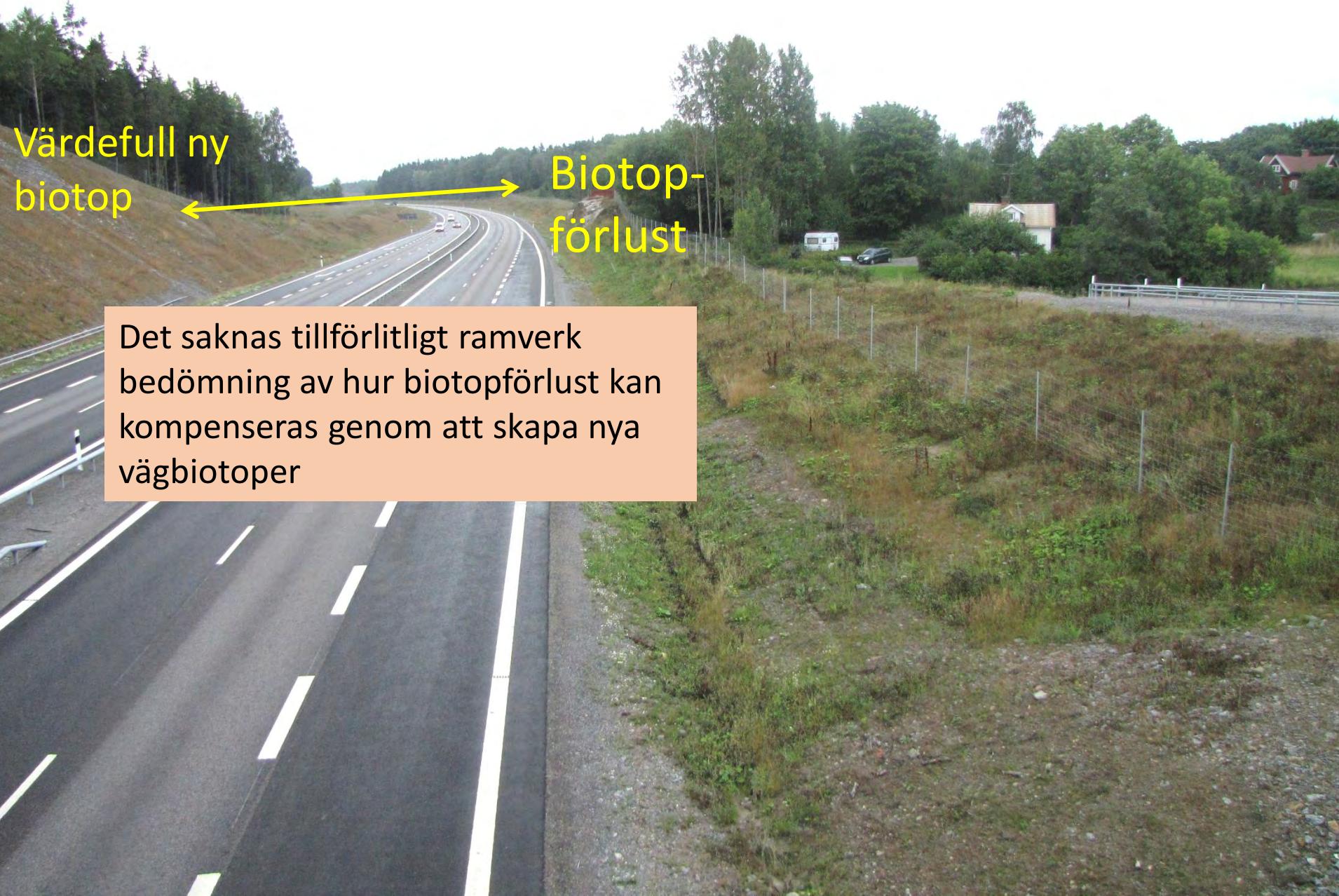
Beroende på:

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Små möjligheter till kompensation för vissa biotoper och i vissa landskap

# Naturvärde





Värdefull ny  
biotop

Biotop-  
förlust

Det saknas tillförlitligt ramverk  
bedömning av hur biotopförlust kan  
kompenseras genom att skapa nya  
vägbiotoper



Varför blir vissa vägkanter artrika...

...medan andra blir artfattiga?



## Habitat conditions and elements

### **Soil properties**

- Moisture
- Soil structure
- Nutrient level
- Calcium and pH
- Salt and other pollutants from the road

### **Light and temperature conditions**

- Light and temperature *per se*
- Edges (including hedgerows) and ecotones from open to forest
- Slope and aspect

### **Ground substrates for invertebrates**

### **Host plants for invertebrates**

### **Wood substrates for invertebrates and cryptogams**

- Sun-exposed old trees
- Shrubs and hedgerows

### **Road size**

- Roadside width
- Traffic volume

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## Habitat processes

### Disturbance of the ground and soil

- Disturbance through road management
- Erosion, frost and other natural disturbance

### Drought episodes that kills some of the vegetation

### Vegetation succession

- Natural succession after disturbance: colonisation and exclusion
- Seeding and planting

### Vegetation management

- Timing of cutting
- Frequency of cutting
- Removal of cut material
- Burning

### Dispersal along roads

- Spontaneous dispersal (uni- and multi-generational)
- Dispersal through traffic or road maintenance

### Traffic disturbance and mortality

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## Surrounding

### landscape including species pool

### Colonisation from the landscape

- Species pool of the current landscape
- Species pool of the historical landscape

### Direct impacts of surrounding landscapes

- Of forest, e.g. shade and leaf litter
- Of arable fields, e.g. fertilisers and herbicides

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Markstörning



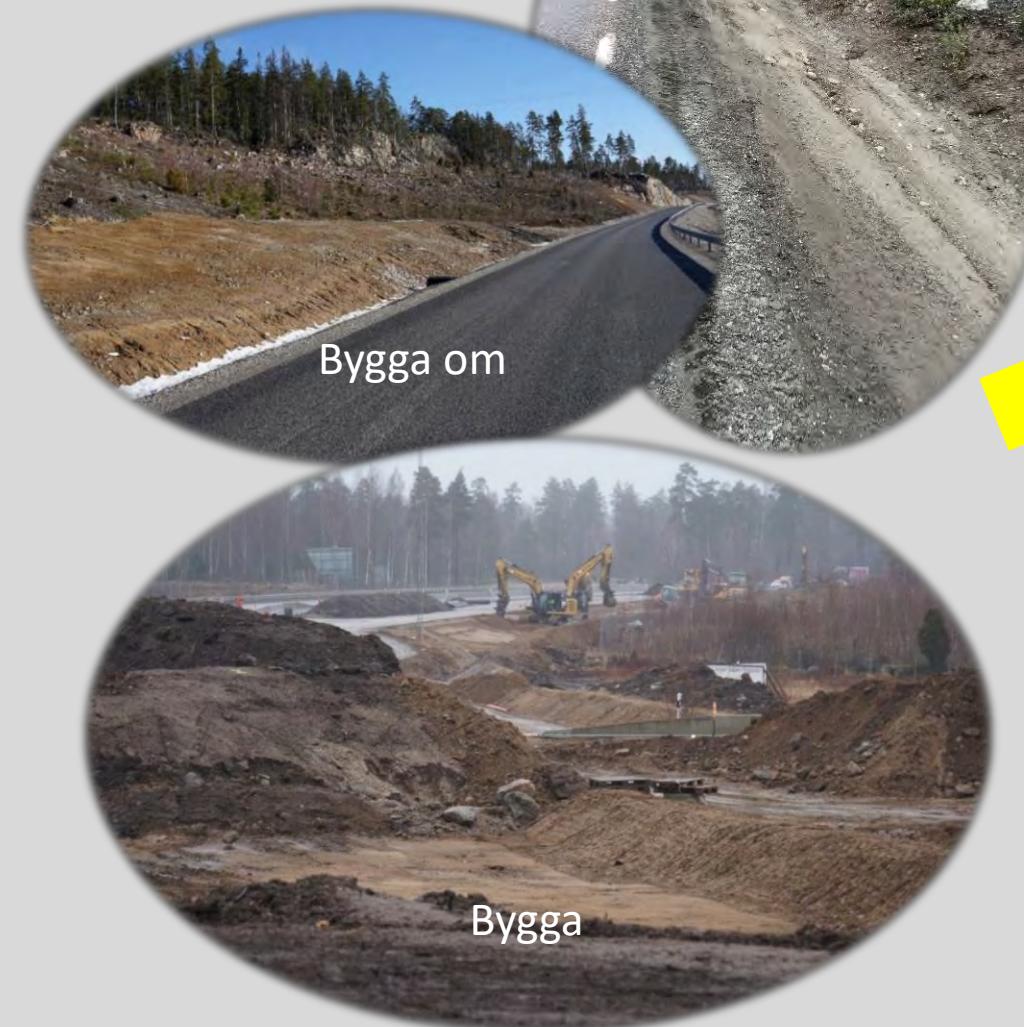
Tidig succession



Sen succession



Markstörning



Dika

Bygga om

Bygga

Tidig succession



Sen succession



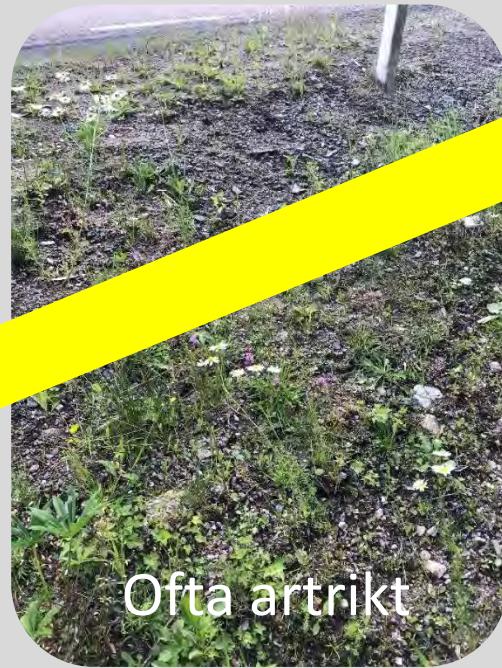
Artrikt

Artfattigt

## Markstörning



## Tidig succession



## Sen succession



## Habitat conditions and elements

### Soil properties

- Moisture
- Soil structure
- Nutrients and pH
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### Light and temperature

- Light and temperature
- Edges (between forest and fields, hedges, rows) and ecotones
- Shrubland and aspect

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- Anthropogenic (e.g. cutting, grazing)

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Tidig successionsfas

Kortvarig kortvarig, men många  
specialiserade arter, ofta blomrik



Intermediär successionsfas

Långvarig på näringfattig mark, artrik.



På torr mark kan värdefull torrbiotop troligen bli permanent



På närliggande mark går successionen snabbt  
mot högväxt gräsdominerad artfattig  
vegetation



Ytterslanten har ofta bra förutsättningar



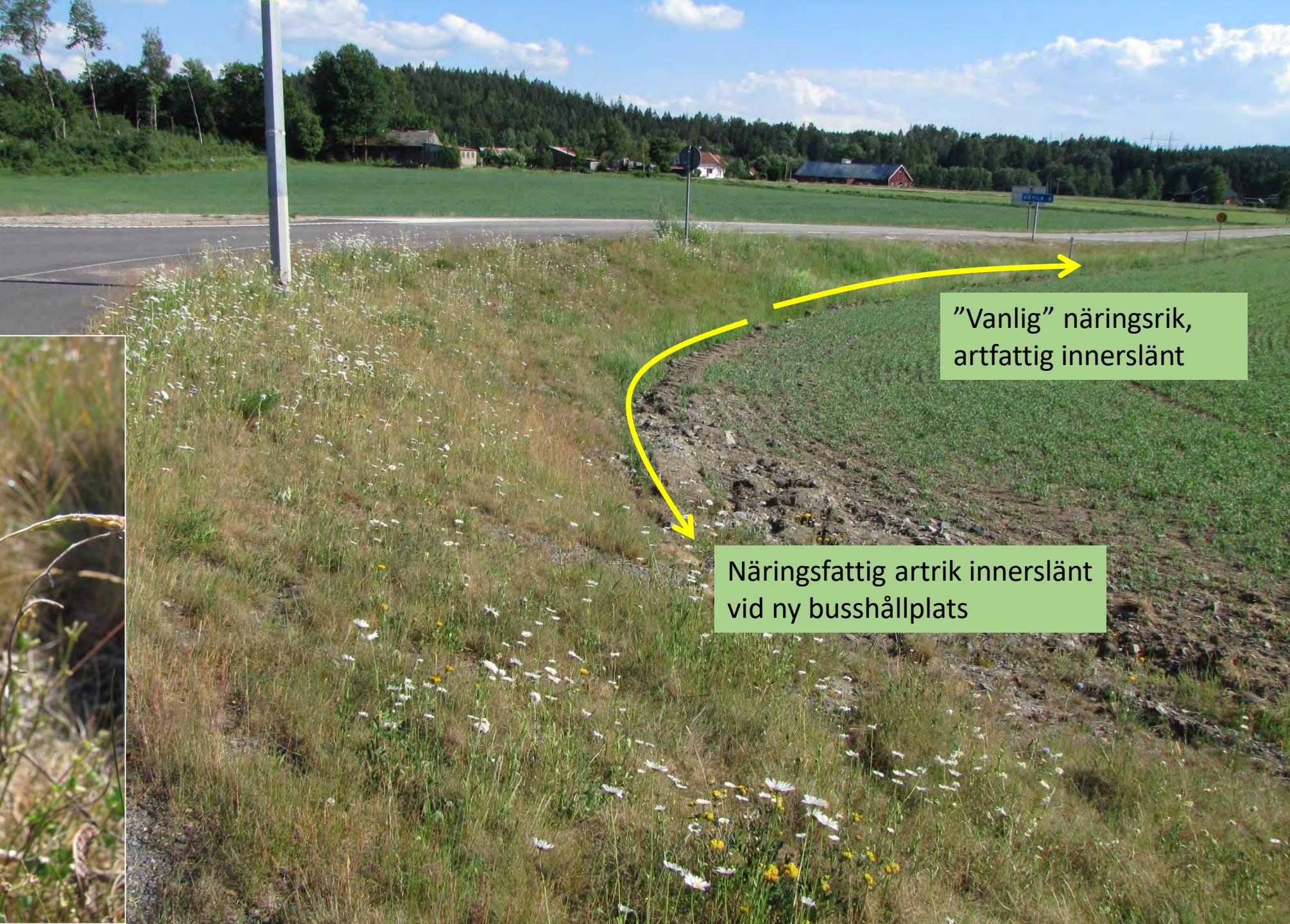


Men ytterslanten kan lätt  
förstöras av näringssrik ytjord

Även innerslänt  
kan bli fin om rätt  
massor används



Även innerslänt  
kan bli fin om rätt  
massor används



"Vanlig" näringssrik,  
artfattig innerslänt

Näringsfattig artrik innerslänt  
vid ny busshållplats

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Gärna stor slänt = stor biotopyta





...men stora sländer är  
inget måste





Utred noga vägsträckningens potential att skapa  
vägkantsbiotoper för biologisk mångfald

...men stora sländer är  
inget måste





Soliga slänter = torra = näringfattiga  
Nordvända slänter blir ofta dominerade av mossor

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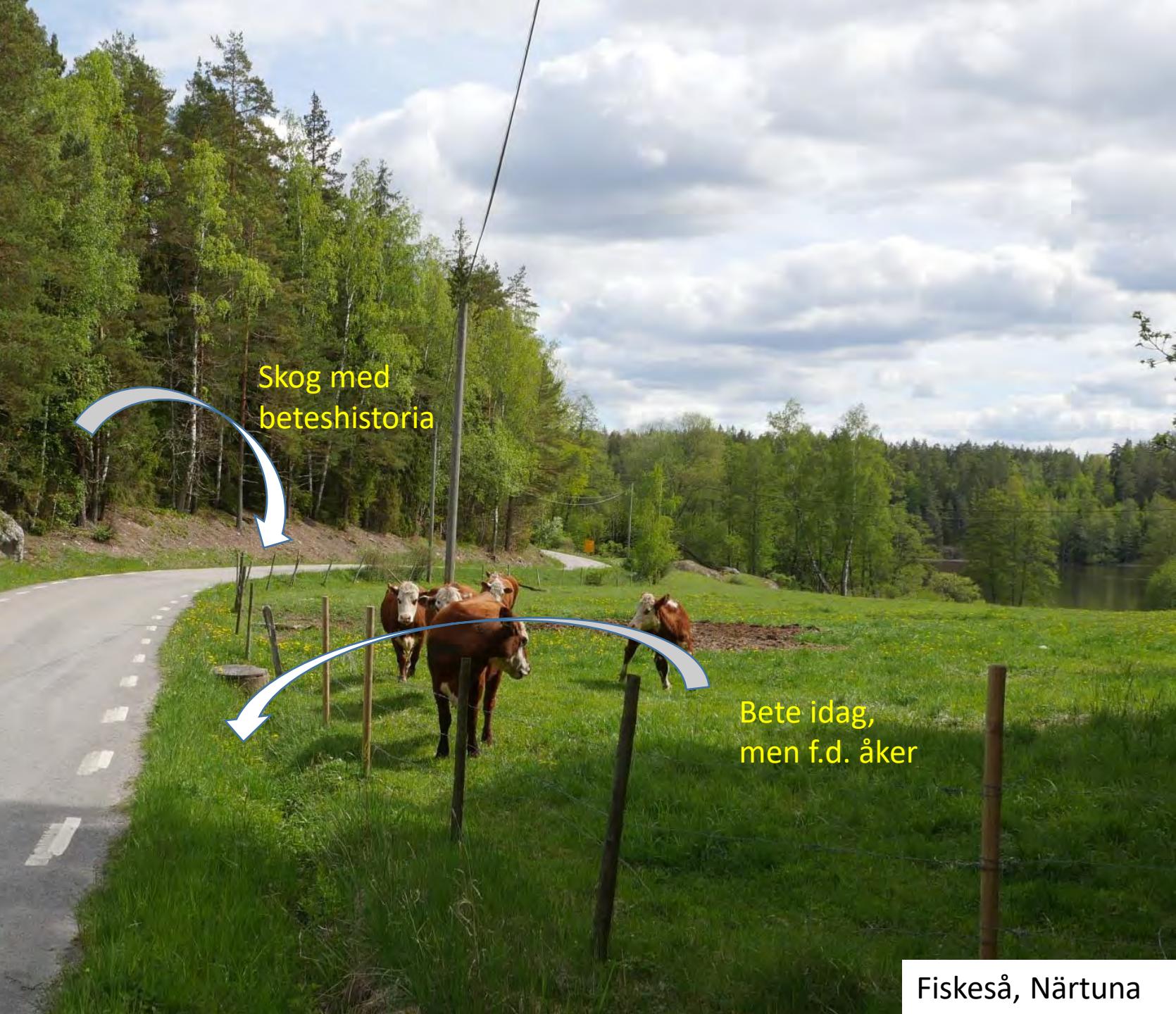
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Fiskeså, Närtuna

Var längs vägsträckningen finns arter som skulle kunna trivas i nya vägbiotoper?

- I vägkorridorens närområde
- I själva vägkorridoren (behöver flyttas och återinföras när vägen är klar)

Vilka slags vägbiotoper behövs för dessa arter?



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Utred landskapets artinnehåll längs vägen

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Kan arter själva sprida sig till vägbiotopen?

Aktiv spridning kan behövas

- Insamling/insådd av frö
- Höutlägg
- Var försiktig med återföring av avbaningsmassor – risk för näringssrik miljö!
- Undvik gräsfrö



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Utred noga vägsträckningens potential att skapa vägkantsbiotoper för biologisk mångfald

Matchning mellan vägens  
och landskapets potential



Utred landskapets artinnehåll längs vägen

Utred behov av aktiv spridning