



# Econet development using degraded lands: a case of Lugansk and Rostov Oblast

Final Conference - Eurasian steppe project,  
29<sup>th</sup> September 2009

**Theo van der Sluis, Conservation expert**

This project is funded by the  
EU

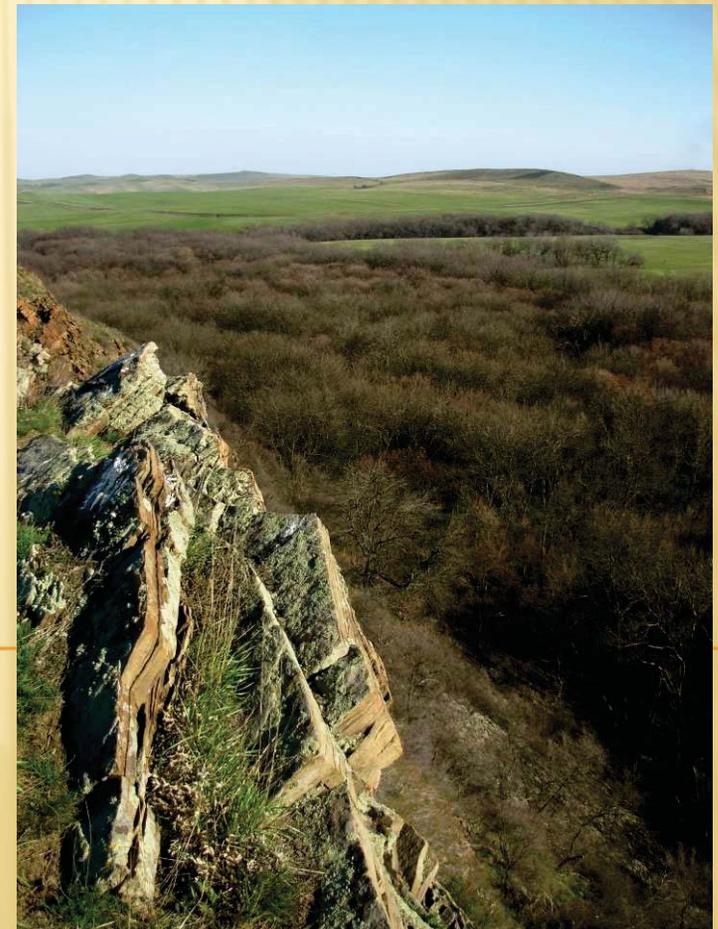
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# Overview

- Introduction Ecological Networks (ECONET)
- Approach: ECONET design
  - Lugansk Oblast
  - Rostov Oblast
  - Transboundary corridors
- Re-use of degraded lands
- Integrate Agriculture-Ecology:
  - Possible farm models
- Conclusions





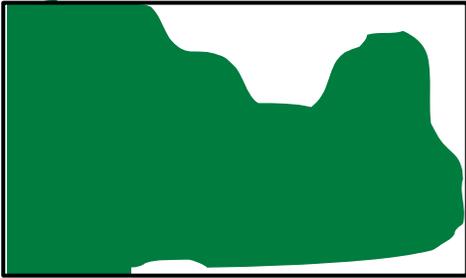
# Introduction

Globally, there is a rapid loss of biodiversity, due to factors like:

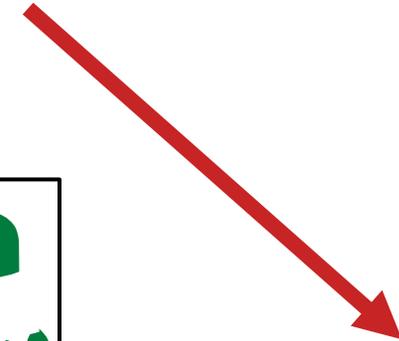
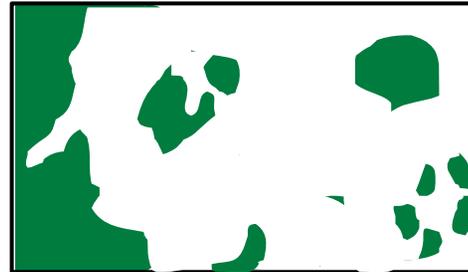
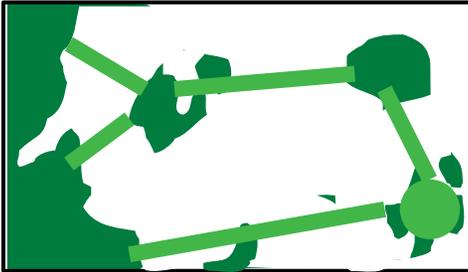
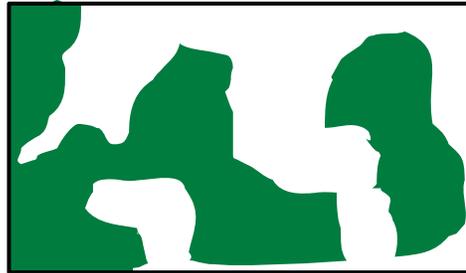
- habitat loss
- habitat fragmentation
- decrease in habitat quality
- hunting, poaching, etc.



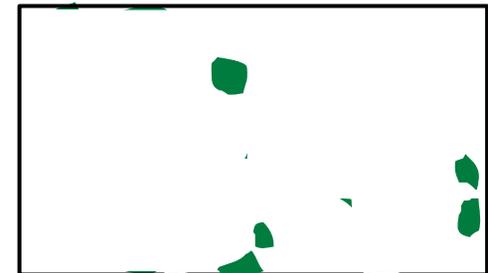
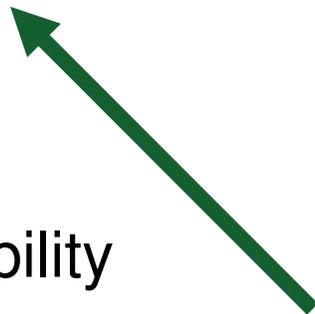
# Land use changes



Land use intensity:  
loss of biodiversity



Towards  
sustainability





# Introduction

*Ecological networks are important to:*

Maintain biodiversity (maintain larger territories)

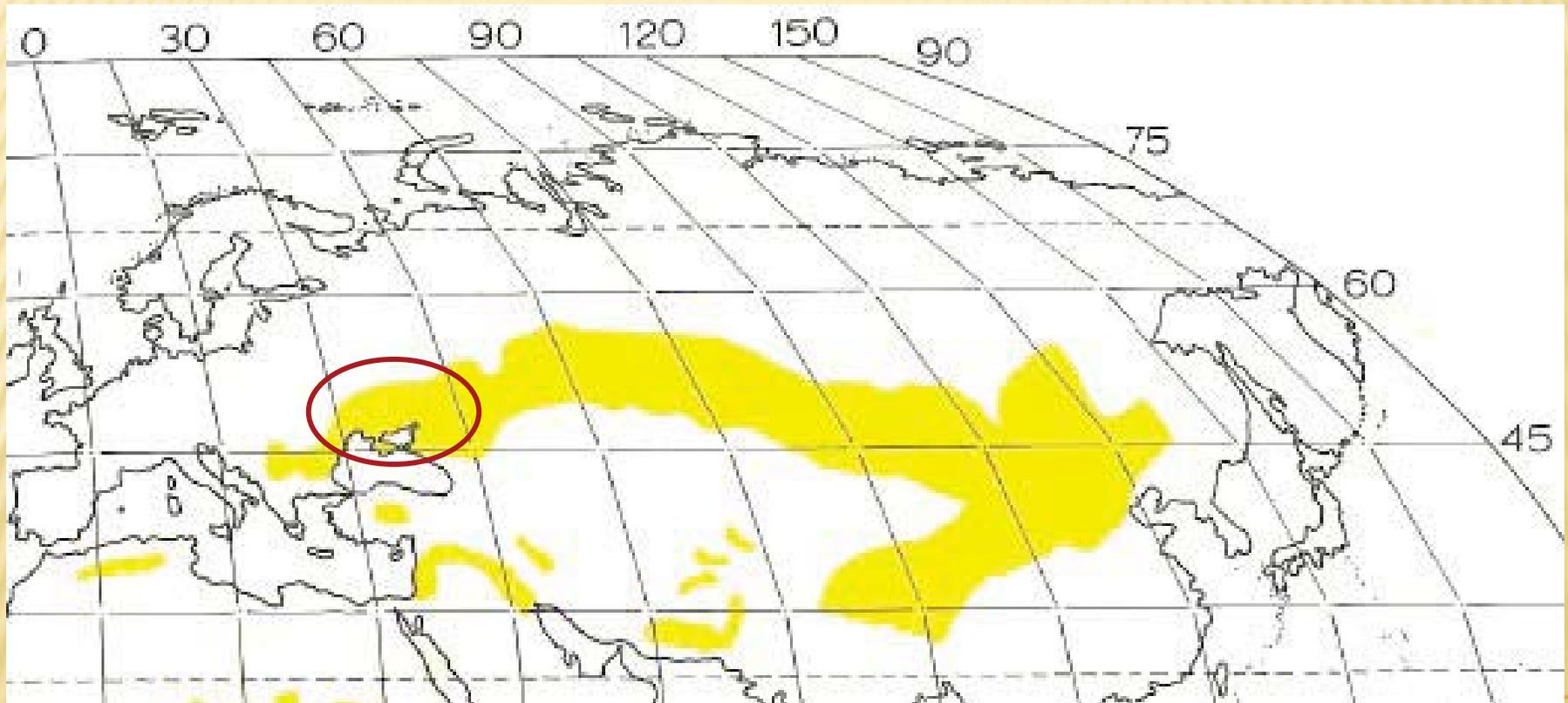
Allow for re-establishment of species (meta-population dynamics)

Prepare for climate change



Sustainable Integrated Land Use of the Eurasian  
Steppe

# Current steppe habitat



This project is funded by the  
EU

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# Ukrainian ecological network



## Регіональні біоцентри

- 1 Карпатська Гірська країна
- 2 Кримська Гірська країна

## Широтні екокоридори

- 1 Поліський
- 2 Галицько-Слобожанський
- 3 Степовий
- 4 Азово-Причорноморський
- 5 Морський

## Меридіанальні екокоридори

- 1 Дунайський
- 2 Дністровський
- 3 Бузький
- 4 Дніпровський
- 5 Сіверсько-Донецький



Sustainable Integrated Land Use of the Eurasian  
Steppe

# Steppe habitat Lugansk-Rostov



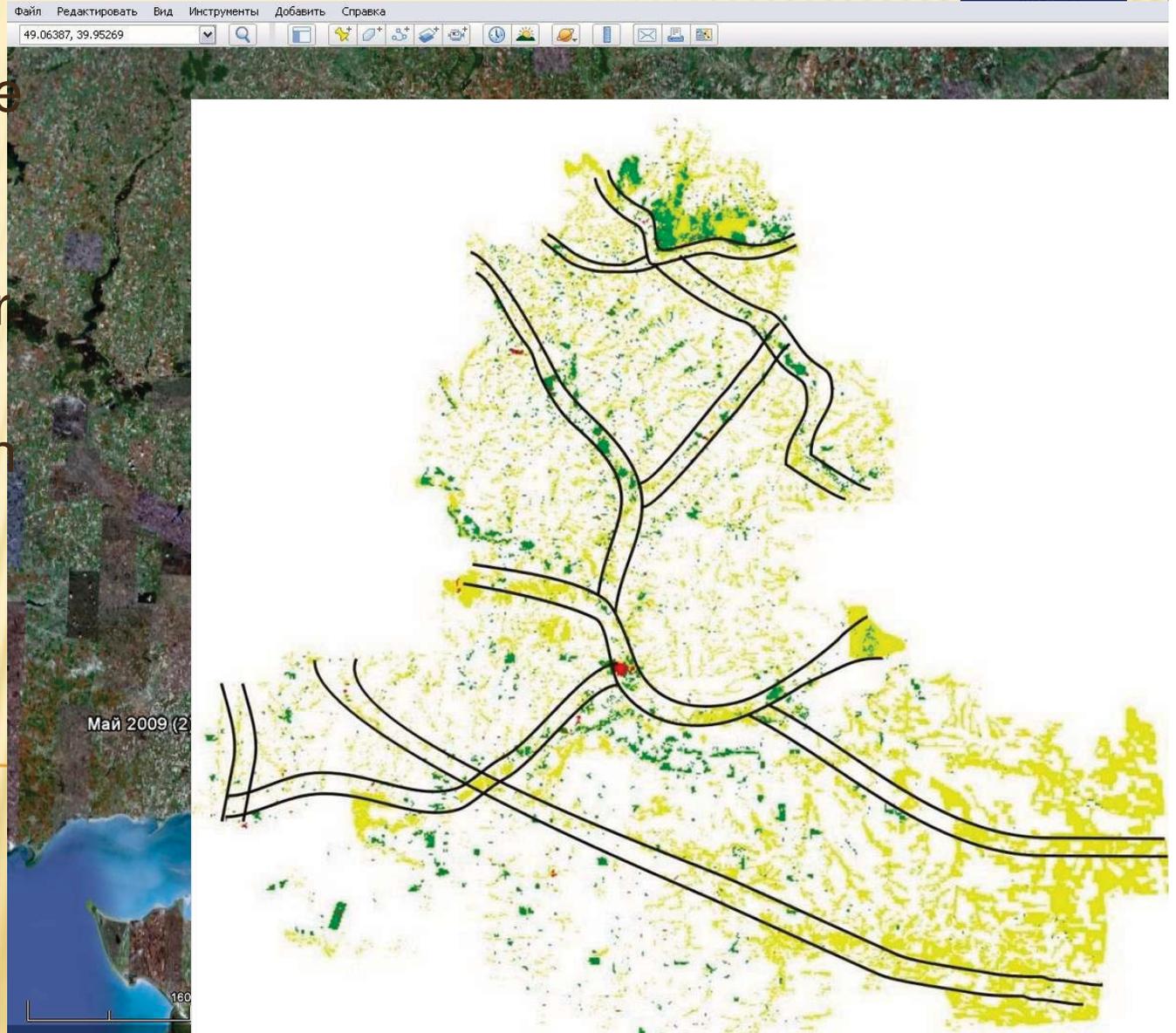
# ECONET Rostov



Detailed steppe  
network

Next stage:  
ECONET other  
ecosystems?

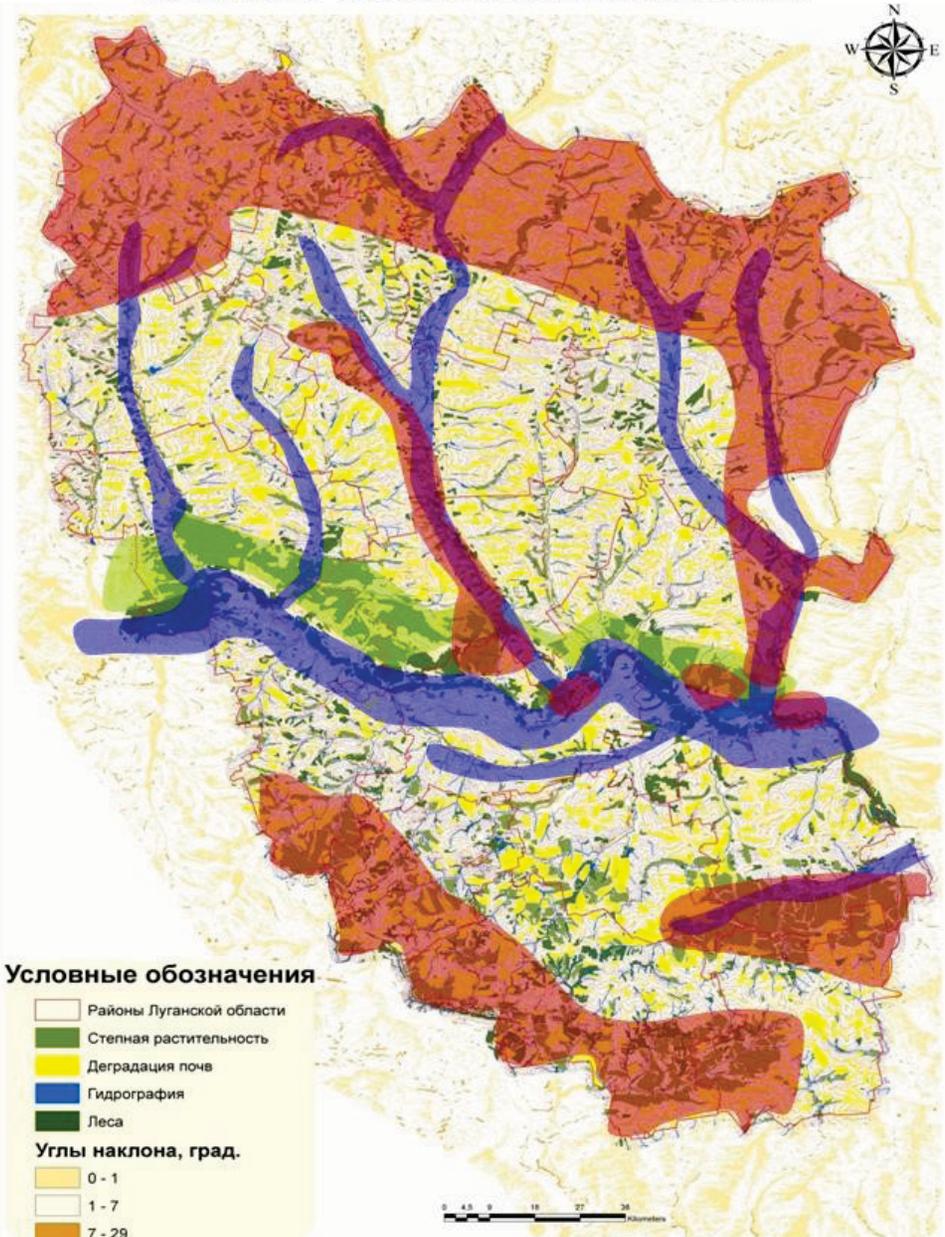
Implementation



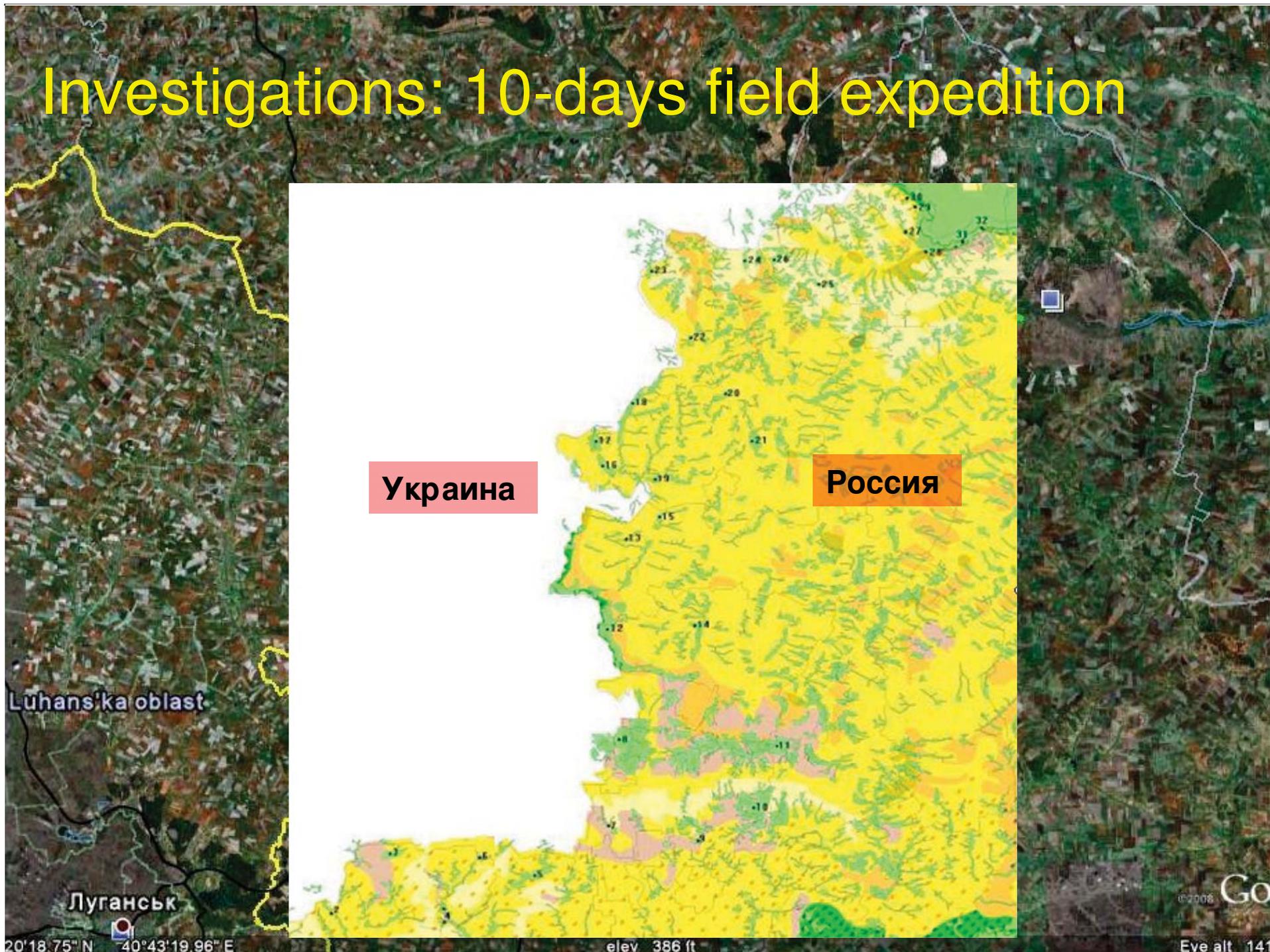
# ECONET Lugansk

Still a general outline  
Next stage detailed  
identification network

## Формирование региональной Экосети (Луганская обл.) Core areas for steppe, forest and river ecosystems



# Investigations: 10-days field expedition



Украина

Россия

Luhans'ka oblast

Луганськ

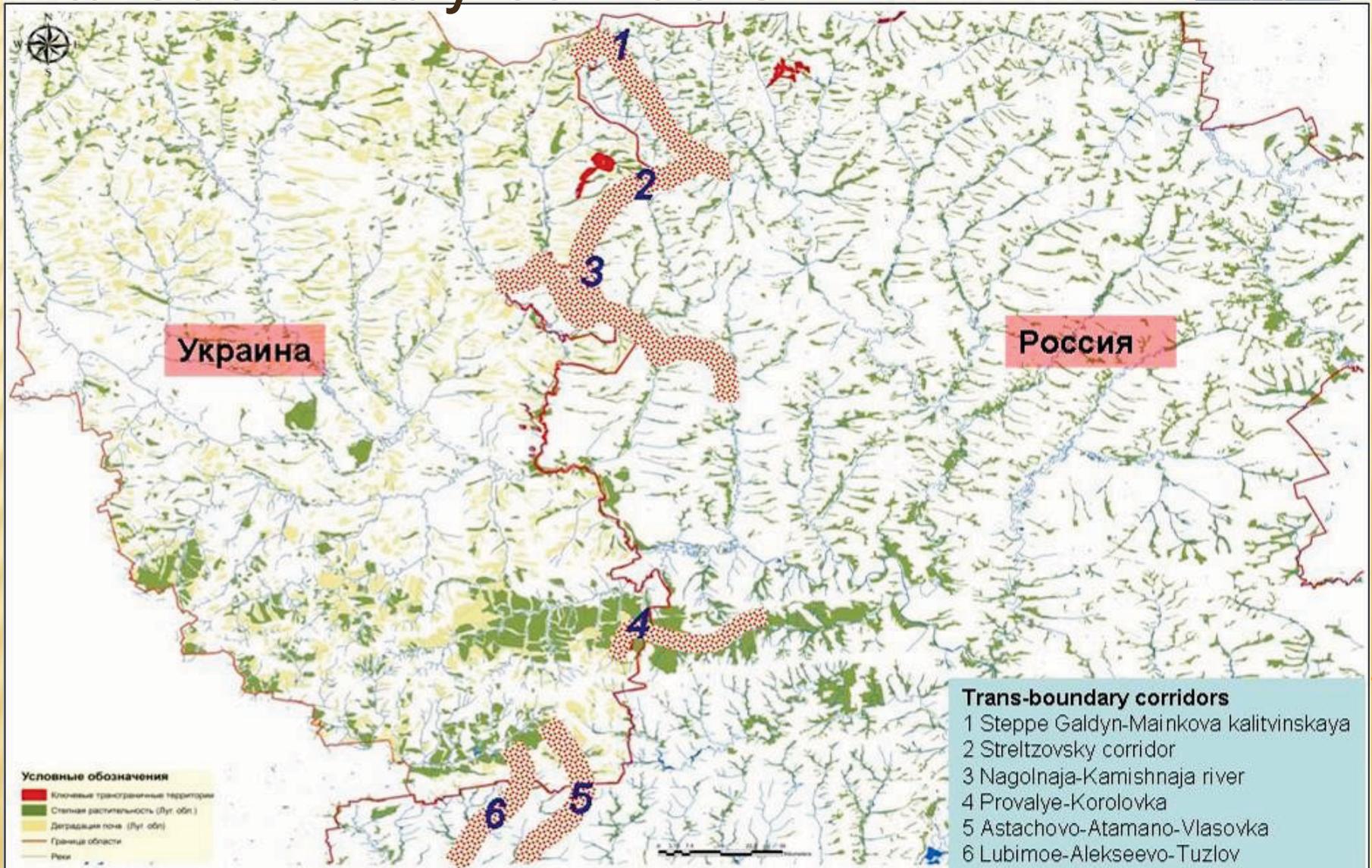
20°18.75' N 40°43'19.96' E

elev 386 ft

©2008 Go Eye alt 141



# Transboundary corridors



With contributions of: O. Demina, F. Forosjoek, T. van der Sluis, I. Zagorudnik, 2009

# Detailed regional approach Lugansk



**This general approach is still theoretical, on paper:  
next step is implementation!**



Sustainable Integrated Land Use of the Eurasian  
Steppe

# Re-use of degraded steppe ecosystems: combining Biodiversity conservation and Land use



Jules Gosselink, Herman van Keulen/Jan Verhagen

Pieter Slim, Theo van der Sluis

Project team Ukraine Steppe Restoration

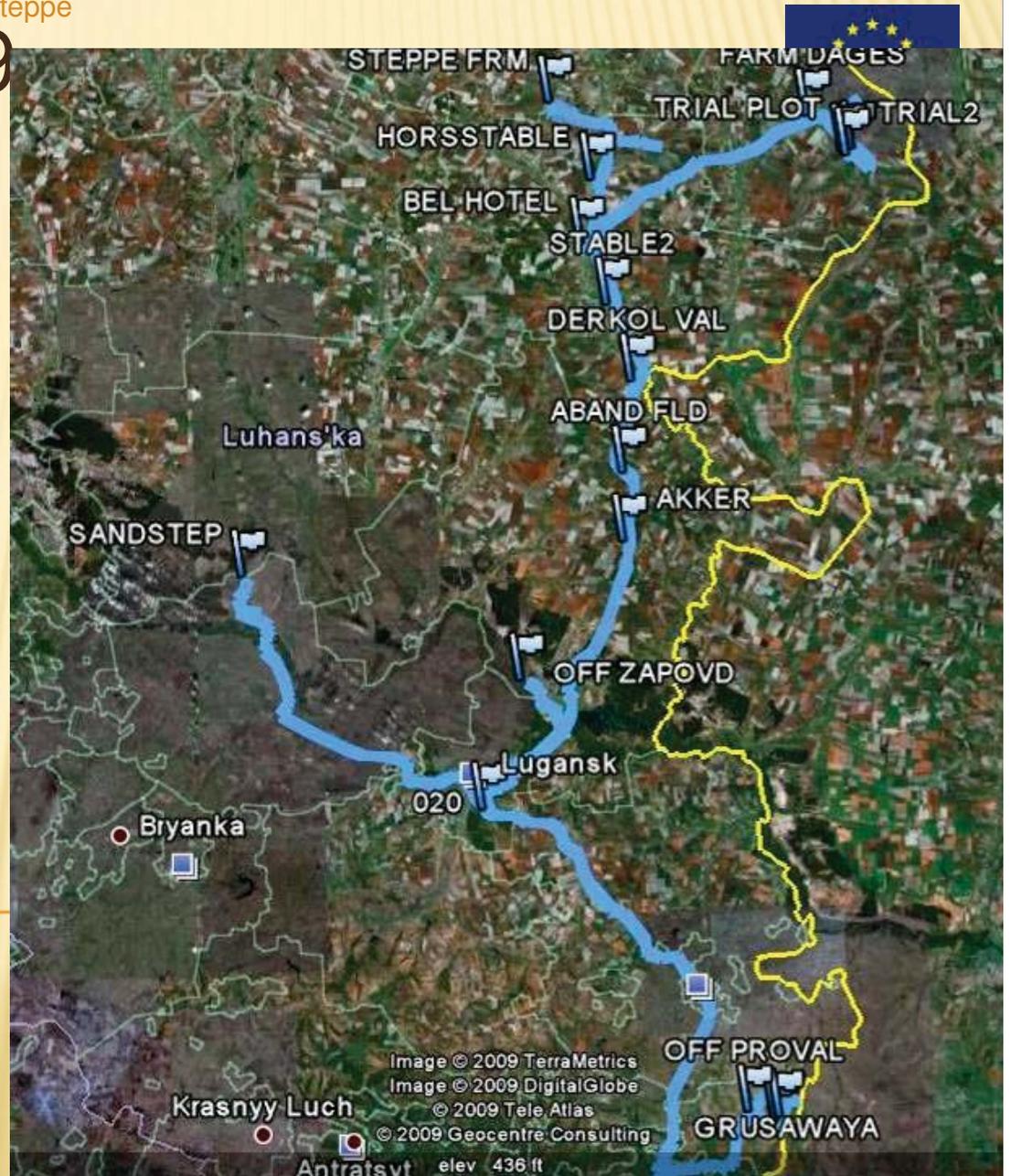
BeleidsOndersteunend Onderzoek, Cluster Internationaal BOCI  
Funding by the Dutch Ministry of Agriculture / Netherlands Embassy



# Field visit April 09



EU





# Observations Lugansk Oblast

## Farming opportunities

In some areas a lot of fallow land, in other areas is a dire need for grazing land

Steppe can be used for extensive grazing, hay making, produce concentrates (barley, maize); integrate this in farm plan

Steppe can provide grazing land at low costs

Farmland can compensate for lack of nutrients, by growing Sanfoin (onobrychis), Lucerne etcetera to supplement feed

Local livestock breeds are adapted to steppe

Extensive farming is excellent for steppe and buffer zones





# Observations Lugansk Oblast

## Restoration opportunities

Overgrazed land can 'easily' restore, if properly grazed and managed – but: it takes time....

Ploughed lands can be restored either by:

- Natural restoration, with extensive grazing

- Sometimes: technical measures, re-sowing of steppe.....

  - But: this may also result in disturbance, and increase in ruderals

Herding of livestock does improve biodiversity

  - But: only if extensive grazing

**Steppe diversity can be better maintained with livestock farming**

# Observations Lugansk Oblast (cont.)



Steppe restoration – recover of what was lost in area from abandoned land

Restore relation vegetation and ungulates

Restoration opportunities by connecting isolated steppe areas

Empower Zapovidnyki



# Case : farm with steppes at Bilovodsk



STEPPE FRM

Image © 2009 TerraMetrics

© 2009 TeleAtlas

© 2009 Geocentre Consulting

elev 466 ft

Google

©2008

Eye alt 10.28 mi

49°21'58.44"N 39°34'27.73"E

# Case: farm with steppes at Belovodsk



Existing farm with cropland, steppes + 300 ewes

Future plans: expand to 1000 beef cattle + 3000 sheep

Sheep: 300 ewes (2 lambs/ewe; breed: Romanov en  
Askania)

Start with 100 cows (Heifer int.)

Female calves kept for expansion

Male calves for beef (in 1 year 350 kg increment)

May-November: steppes + concentrates (home grown)

Farm steppes (between crop land) using summer camps:  
cows with calves

Steppes further away: sheep + older beef cattle

Advice: include dairy cows, because of existing summer  
camps + experience with milking in summer camps.



# General

Experience with summer camps and outdoor milking (mobile apparatus) exists

Which and when animals graze (sheep and cattle): depends on distance

From near the road/farm to far away (> 2.5 km): 1. dairy cows, 2. animals with young, 3. beef animals

Cases can be used as examples for “learning communities” with (new) farmers and Zapovidnik



# General: SWOT analyses Lugansk Oblast



## STRENGTHS

- Low costs land rent
- Low costs labour
- Good, productive soils
- Availability high-value nature
- Unique position steppe in Europe
- Agrarian knowledge system
- Good financial support programme

## WEAKNESSES

- Entrepreneurship
- Access to capital (bank loans)
- Marketing opportunities degradable pr.
- Market imperfections (beef, wheat, sunflower OK)
- Position Zapovidnyki within stakeholders
- Distance to markets
- Climate – water availability in summer
- Occurrence endemic diseases
- No drought-risk management

## OPPORTUNITIES

- Basis for infrastructure exists
- Opportunity for Green tourism
- Cultural Identity Steppe
- Combining animal husbandry with steppe
- Restoration steppe grasslands
- Access to West/East European markets
- Diversification
- Sheep farming on steppe
- Demand agro-products, milk, beef, honey
- Development Econet

## THREATS

- Migration and social changes (youth)
- Volatility of world markets
- Political stability
- Anticipated climate change & impact on steppe
- No tradition of crop insurance





# And....

Currently preparation of follow-up project ECONET  
Lugansk, funded by Netherlands Embassy/Ministry of  
Agriculture:

BOCI – Lugansk Econet, regional development

Develop strategy for implementation

Detailed designs for few pilot areas

Integration of economic functions in ECONET

Focus on Communication with stakeholders

UNDP – Steppe Conservation program, corridors and  
defragmentation

We hope to continue our activities, to develop this approach for  
implementation of ECONET at the local level

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**Thank You!**

