



MINISTRY OF  
AGRICULTURE



**n é b i h**

Termőföldtől az asztalig

# Soil Conservation in Hungary

**Katalin KUJÁNI, Ph.D**  
expert  
Ministry of Agriculture

**Judit BERÉNYI ÜVEGES, Ph.D**  
head of department  
National Food Chain Safety Office  
Department of Soil Conservation

Prague, 25-26th February 2016



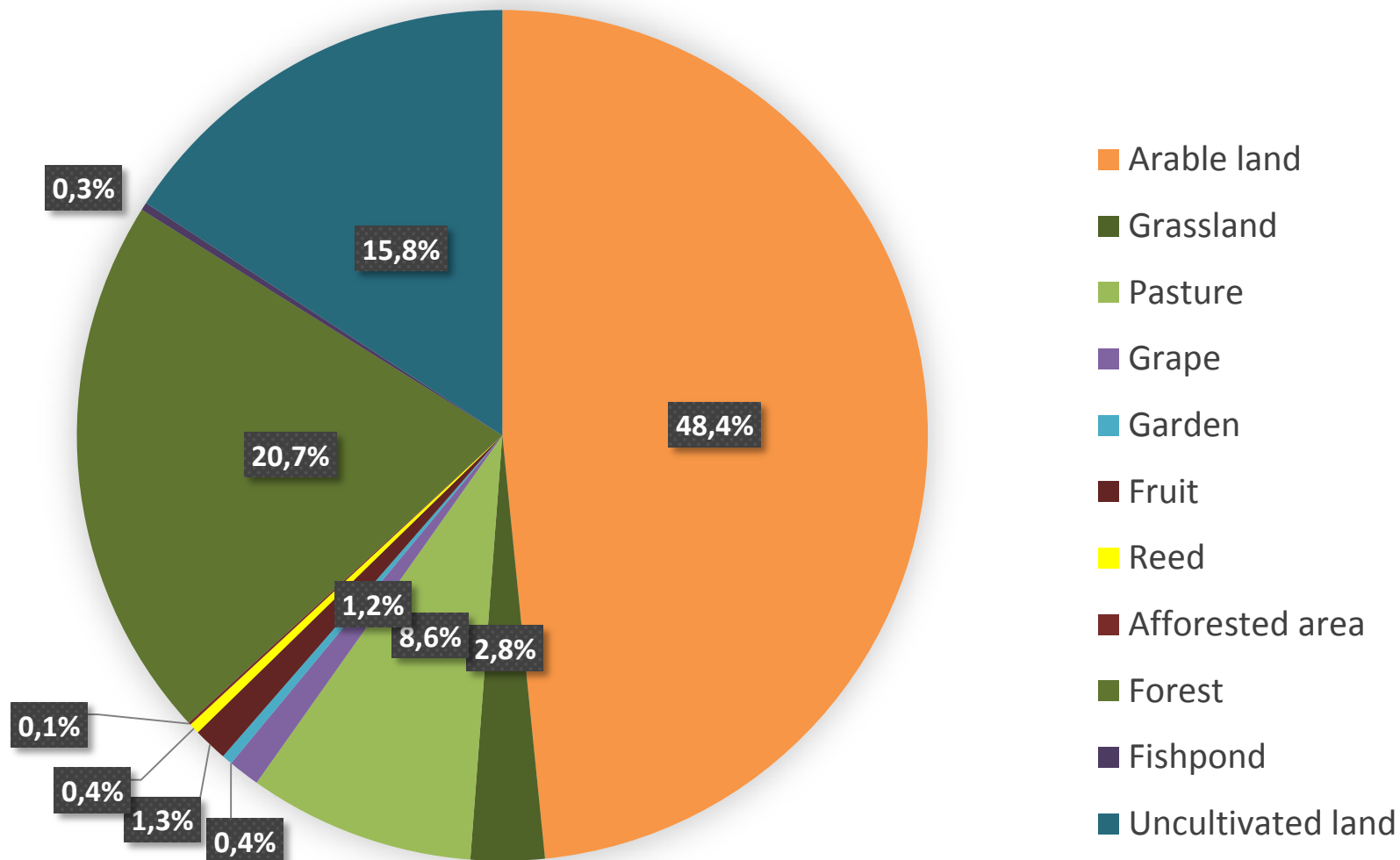
MINISTRY OF  
AGRICULTURE



**n é b i h**

Termőföldtől az asztalig

## Land usage in 2014 (9 302 432 ha)





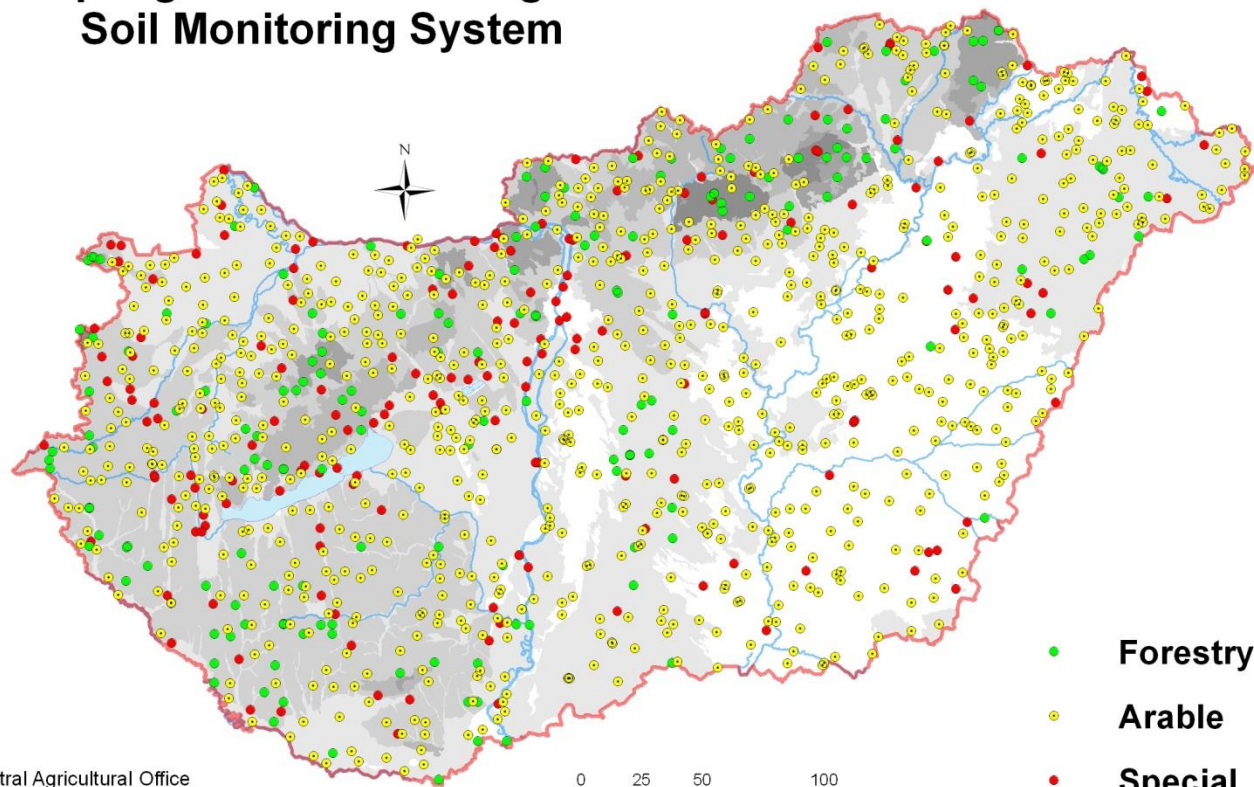
MINISTRY OF  
AGRICULTURE



**n é b i h**  
Termőföldtől az asztalig

# Soil Monitoring in Hungary

## Sampling sites of the Hungarian Soil Monitoring System



Central Agricultural Office  
1st March 2010

0 25 50 100  
Kilometers  
Talajok Nemzetközi Éve

- Forestry
- Arable
- Special



MINISTRY OF  
AGRICULTURE



**n é b i h**  
Termőföldtől az asztalig

## Toxic elements in soils

No of points: (mg/kg sz.a, 1228)	As	Zn	Cd	Co	Cr	Ni	Cu	Pb
<b>Mean</b>	<b>6,9</b>	<b>53</b>	<b>0,2</b>	<b>8,9</b>	<b>28,1</b>	<b>21,4</b>	<b>15,8</b>	<b>18,11</b>
Limit value*	15	200	1	30	75	40	75	100
Ratio of points below the limit value (%)	97	99,7	94,1	99,9	99,6	95,2	98,4	99,8

\*Decree 6/2009. KvVM-EüM-FVM



MINISTRY OF  
AGRICULTURE



**n é b i h**  
Termőföldtől az asztalig

# Soil and Land issue in Hungarian Government

- **Soil Conservation**
  - Priority task is conserving fertility and good quality of soils and protecting soils from physical, chemical and biological degradation
- **Land Administration**
  - Priority task is classification and protection of agricultural land, controlling its proper use and issuing permit for using land for other purpose, maintaining land use registration



MINISTRY OF  
AGRICULTURE



# Soil and land issue in Hungarian

- Soil Conservation **Government**
  - Ministry of Agriculture Division of Plant Protection and Soil conservation
  - Soil Conservation Authority (County Governmental offices dept. of Plant Protection and Soil conservation, National Food Chain Safety Office)
- Land Administration, Land Protection and Land
  - Ministry of Agriculture Division of Land Protection and Land Use
  - Land protection authority: county and district level land offices



MINISTRY OF  
AGRICULTURE



## Soil conservation legislative measures

- Act No 129 of 2007 on the Protection of Agricultural land
  - Measures on land protection and soil conservation
- Act No 37 of 2009 on forests, protection of forests and forestry
  - Measures on protection of soils covered by forests
  - Erosion control during management activities
  - Removal of humus and litter is forbidden
  - Application of sewage sludge, liquid manure or any material with contaminants is forbidden



MINISTRY OF  
AGRICULTURE



n é b i h  
Termőföldtől az asztalig

# Soil conservation farmers obligations

- Erosion control
- Control measures against inland inundation (soil compaction)
- Conserve soil organic matter
- Application of any material that cause harm for soil is forbidden



MINISTRY OF  
AGRICULTURE



## Soil conservation authority

Issuing permits for activities that may do harm to soils:

- Landscaping activities that connected to agriculture
- Application of
  - sewage sludge,
  - liquid manure,
  - any material that contains dangerous compound



MINISTRY OF  
AGRICULTURE



n é b i h  
Termőföldtől az asztalig

## Conserving organic material rich topsoil

- Organic matter as natural resource
- In case of any activity if the humous layer is removed (construction works), it have to be treated separately, use for recultivation on the same plot or pay a fee for the government



MINISTRY OF  
AGRICULTURE



## Contribution to other procedures concerning soil

- Mining,
- Construction,
- Transport,
- Land administration,
- Water management,
- Environmental protection,
- Telecommunication,
- Orchards and vineyards
- Wherever the organic matter rich topsoil can be affected



MINISTRY OF  
AGRICULTURE



**n é b i h**

Termőföldtől az asztalig

# Nitrates Directive

## **Hungarian legal background**

- Decree of Government 27/2006 (II. 7.) protection of waters against pollution caused by nitrates from agricultural sources
- Decree 59/2008. (IV. 29.) of FVM on detailed rules of the action programme concerning the protection of waters against pollution caused by nitrates from agricultural sources and on the order of data reporting and registering
- Problems for Hungarian farmers: manure storage facilities, closed periods for fertilizer application, maximum application limits



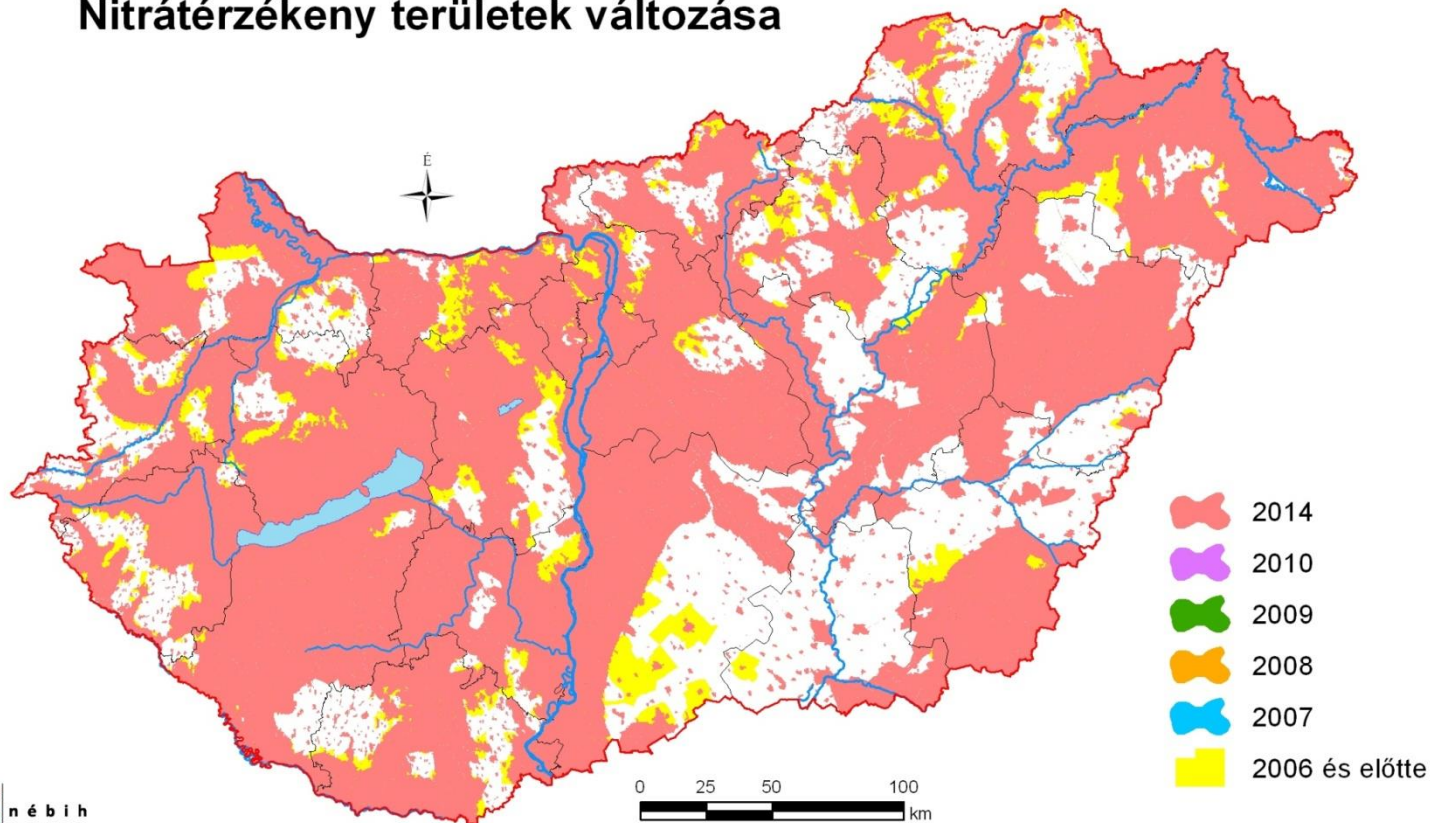
MINISTRY OF  
AGRICULTURE



**n é b i h**  
Termőföldtől az asztalig

# Nitrate vulnerable zones

## Nitrátérzékeny területek változása



NÉBIH NTAI  
2014. október 3.



MINISTRY OF  
AGRICULTURE



n é b i h  
Termőföldtől az asztalig

# Agri-Environmental Measures (2016-2020)

- 5 years period of engagement
- Voluntary measures grouped:
  - Arable
  - Grassland
  - Orchards
  - Reed
  - Nature protection zones (special measures)
  - Erosion, inland inundation (arable and grassland), drought control,



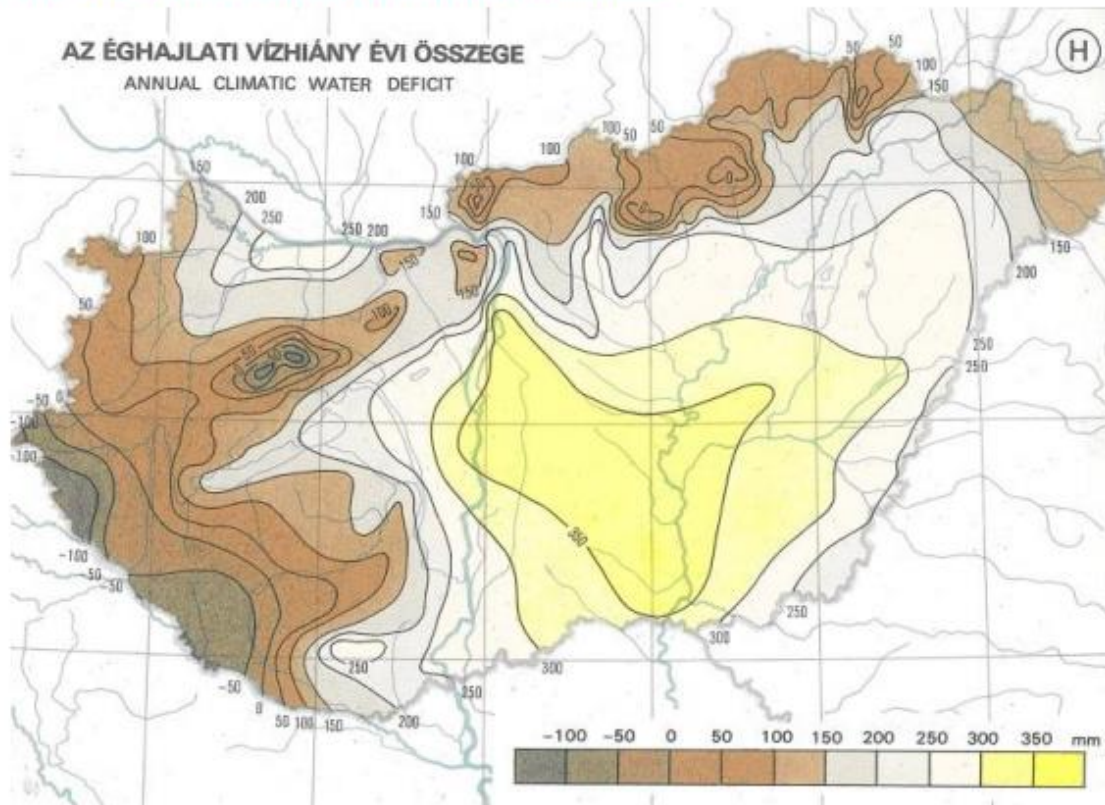
MINISTRY OF  
AGRICULTURE



**n é b i h**  
Termőföldtől az asztalig

# Challenges of climate change

## Regional distribution of climatic water deficit



*Forrás: Nemzeti Éghajlati Atlasz, 1998*



MINISTRY OF  
AGRICULTURE



**n é b i h**

Termőföldtől az asztalig

## Governmental tools

Cross-compliance – control

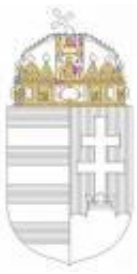
Greening

Rural Development Program 2014-2020

- Agri-environmental Measures

Regulations and strategies:

- The Act CXXII of 2013 on the Transfer of Land
- National Landscape Strategy (under preparing)
- Water Catchment Management Plan



MINISTRY OF  
AGRICULTURE

## Cross-compliance GAEC



n é b i h

Termőföldtől az asztalig

### **1. Protection against soil erosion**

#### **2. It is required to preserve terraces formed in the vineyards.**

3. Apart from certain exceptions, a plant can not be grown in the same area after itself.

#### **4. Minimum soil cover** must be provided by

- After harvesting protection of stubble till 31th of October or with stubble-cleaning,
- vegetative cover by all types of crop
- overwintered stubble from combinable crops

#### **5. Minimise soil erosion**

5. Water usage for irrigation is possible only with valid water-rights operating permit.

6. Standards for buffer strips along water courses

7. Preservation of permanent pasture



*Thank you for your attention!*

