



Web site Monitoring of Soil Erosion of Agricultural Land

<http://me.vumop.cz>



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The web site is accessible from internet environment. It is possible to get acquainted with the extent of water erosion in the Czech Republic. At the same time you can view relevant information of monitored erosion events.

MONITORING EROZE ZEMĚDĚLSKÉ PŮDY

ÚVOD MAPA PŘEHLED UDÁLOSTÍ KE STAŽENÍ

Přehled událostí: pouze 272

Okres	Katastrální území	Místní název	Datum vzniku	Typ	Heslo
Litvčovice	Vrtná	Kopanina	27.12.2016, 13:30 až 28.12.2016, 16:30	eroze vodní - rýhová	2.1.2017 Pavel Tkadlec
Jindřichův Hradec	Březina u Dešné		1.6.2016, 6:26	eroze vodní - plošná, rýhová, rýhová	30.12.2016 Petr Janda
Přerov nad Rokytnou	Vál u Dobrušky		1.6.2016, 14:24 až 30.9.2016, 16:24	eroze vodní - plošná	22.12.2016 Ing. Jiří Kapánek
Domažlice	Vlhanov u Nového Kramolína	K Vlhanovu	1.2.2016, 6:38 až 31.7.2016, 6:38	eroze vodní - plošná, rýhová	2.12.2016 Ing. Karolína Gáborčíková

Mapa: 27.12.2016, 13:30 až 28.12.2016, 16:30

Legenda:

- Nezabudeno
- Zabudováno
- Na vyšetření, vyšetření v rámci odbornosti
- Na vyšetření, vyšetření v rámci odbornosti
- Na vyšetření, vyšetření v rámci odbornosti

Mapa: 27.12.2016, 13:30 až 28.12.2016, 16:30

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Issued in 2017



MINISTRY OF AGRICULTURE
OF THE CZECH REPUBLIC

www.eagri.cz

Department of Strategy and Sustainable Development
State Land Office



www.spucr.cz

Department of Methodology of Land Consolidation



Research Institute for Soil
and Water Conservation



DEPARTMENT
OF SOIL SURVEY
Research Institute for
Soil and Water Conservation

www.vumop.cz

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MINISTRY OF AGRICULTURE
OF THE CZECH REPUBLIC

WATER EROSION ISSUES

Water erosion is one of the most widespread damaging and degrading process of agricultural land of the Czech Republic, followed by other processes reducing production and non-production soil capacity. According to the current analysis as a result of erosion events damage occurs:

- o on roads (more than 40% of cases)
- o at construction sites (more than 30% of cases)
- o on water bodies (more than 17% of cases)

REDUCTION OF THE EFFECTS OF WATER EROSION

To reduce a negative impact of the erosion on agricultural land a suitable agricultural practice should be applied. It is also necessary to have sufficient information about repeatedly affected locations. Consistent and well-targeted implementation of stricter soil protection management in problematic areas leads to eliminations of the damages caused by water erosion. These reasons required an innovative process named Monitoring of Soil Erosion of Agricultural Land followed by solution for repeated soil erosion events.

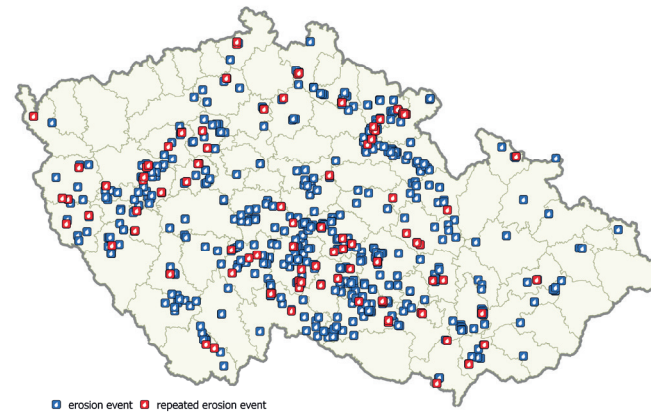
MONITORING OF SOIL EROSION OF AGRICULTURAL LAND

It is a new and unique tool for nationwide data collection of erosion events and for evaluation of effectiveness of soil erosion control measures defined by applicable legal norms.

- o Monitoring data provide Ministry of Agriculture with the feedback of the effectiveness of control measures.
- o Outputs are used to define measures for reduction of the negative effects of erosion events.

Erosion event is a process in which the impact of rainfall leads to loss of the most fertile part of soil. Together with the topsoil also seeds, fertilizers and other substances are often carried away from agricultural land which consequently cause damages to municipal and private property, together with siltation and pollution of waterways and water reservoirs. At the same time the process leads to damages on vegetation cover and the possible reduction of crop yield.

Monitored erosion events stat until 13. 1. 2017



HOW TO CONTRIBUTE TO DECREASE RISK OF DAMAGE?

Anyone can report erosion events and thereby contribute to an improvement of soil protection management and its better targeting. In case of finding soil erosional event one should refer to a locally relevant branch office of the State Land Office.

Authorized employee of the State Land Office consequently ensure a field reconnaissance and results are recorded via web site Monitoring of Soil Erosion of Agricultural Land to the database.

- o List of authorized employees together with contacts is provided on the web site Monitoring of Soil Erosion of Agricultural Land.

SOLUTION FOR REPEATED EVENTS OF SOIL EROSION

Repeated erosion event is an the event which involves repeated washing away of agricultural land (at least twice). The event is defined by the same place of transportation of soil particles and by the similar time period, though there could have been some corrective measures accepted or crop rotation changed.

Since 2017 an assessment and recovery of repeated erosion events has been conducted according to „**Methodical Procedure Addressing the Classification of Parts of Monitored Pieces of Soil Blocks with a Manifestation of Erosion into Slightly Endangered by Erosion and into Highly Endangered by Erosion Areas**“.

Full text of the Methodical procedure is available on <http://me.vumop.cz>.

The way of handling erosional events at particular location, where events occurs repeatedly and where those events cause material damages, is described in this document (Fig. 1-4).

In case of identifying such a location, the impact of soil erosion control management will be assessed. In case that a farm management ensuring an adequate erosion control has not yet been applied, the degree of erosion risk in LPIS will be increased and area expanded. Thus, the stricter conditions for growing in respect of soil erosion unfavourable crops and using agrotechnical soil erosion control measures and practices will have to be respected.

- o In order to address the solution for repeated soil erosion events technical soil erosion measures are not designed.
- o The changes will occur within the first possible sowing change.
- o Only erosion events recorded within Monitoring of Soil Erosion of Agricultural Land can be addressed.
- o Organizational and agrotechnical measures meeting the requirements of GAEC 5 can be applied in case of condition restrictions.



Fig. 1 Delimitation of erosion risk in LPIS - The Czech Land Parcel Information System (2017) covering 11% of the arable land in the Czech Republic.

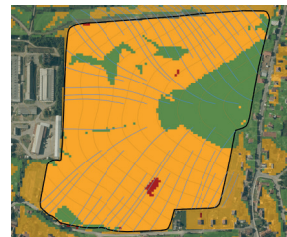


Fig. 2 Real layer of erosion risk covering 52% of arable land in the Czech Republic.



Fig. 3 Location of repeated erosion events

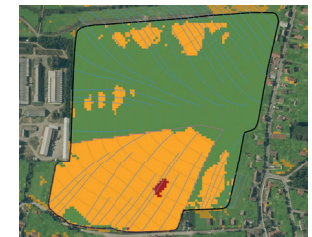


Fig. 4 Delimitation of erosion risk at a location of repeated erosion events after restriction