

Muddy floods phenomenon

Department: Department of Physical Geography and Geoecology, Faculty of Science,
Charles University in Prague

Supervisor: doc. RNDr. Zdeněk Kliment, CSc.

Abstract:

Muddy floods represent a movement of accumulated material from agriculture areas during floods triggered by heavy rainfall (with intensity that exceed 30 mm/hour). Areas where moody flows occur are typical with steep slopes, loess, thalweg cultivation and growing crops with erosion dangerous. The most intense moody floods occur particularly in central Belgium, France, Netherlands and Slovakia. The moody floods are caused by growing suburbanization, enlarging area of farmland, tamping during agricultural mechanization or transformation grassed areas into cultivated land. Great attention should be paid to measures against erosion because water erosion with heavy rainfalls increase amount of accumulated material, what amplify negative impact of moody flows. The most suitable solution is combination of agrotechnological, technical and organizational measures. The negative consequences of moody floods are e.g. soil degradation, flooding up nutrients, carrying topsoil or transportation of accumulated material into populated area, where high economical and emotional damage may be inflicted. It is necessary to take floods triggered by heavy rainfalls into consideration. With climate changing can't the increase of moody floods be ruled out.

Keywords: muddy floods, water erosion, erosion control measure

