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On the geoethical implications of wind erosion

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Human activities exerts an ever growing impact on our environment, and this is undeniably the responsibility of mankind. In spite of this fact there is almost no process in our environment that can be described exactly with complete exactness, and the working of which is known in full extent. Wind erosion is such a process.
Although water erosion is mentioned ever more often in scientific circles as a from of erosion, its effect is restrained to a certain region, although it may cause perceptibly damage of a greater extent in short time. Wind erosion, apart from the fact that it may have global impact, may play an important role in the warming of our climate according to recent studies. First of all, wind erosion may cause damage far from its origin in human health, nutrition, or in the environment in general. Today several surveys have proved, that erosion caused by wind significantly contributes to the air pollution of cities, the fine dust carried as drift by the wind may cause severe environmental damage in accumulation zones. Microbes, toxic material may attach themselves to the dust carried this way and carried on and by the wings of the wind they may cause health issues in humans animals and plants as well. In spite of these facts there are almost no measures against wind erosion employed in arable land, although our ever doughtier climate and changes would make these necessary. Reduction of organic matter content presents a great problem in a large part of cultivated land, so the risk of the production of high quality food raises questions of more and more ethical nature. Who is responsible? The fact, that the chemicals used in a growing extent by agriculture may reach many people causing considerable damage to the environment also raises serious ethical questions. More and more periods with extreme weather conditions are experienced in Hungary and Europe as the effect of climate change. Drought periods are longer and more frequent as the intensity of precipitation changes, this also increases the occurrence of bush-fires, and the growing extent of uncovered soil surface shall intensify wind erosion as well accelerating the negative effects described above. Who will be held responsible for this? Who should bear the larger cost of production in agriculture that is caused by the cost of research necessary to uncover the methods of prevention of irreversible damages caused in nature and environment? Because the field of research requires an interdisciplinary approach, research and innovation requires huge funds, the different approaches to the problem in every single field, and different reasoning methods represent a hurdle as well. In search for possible solutions it is necessary that political decision-makers adopt regulations which have solid scientific fundamentals, and also the cooperation of mankind active in science and economy is crucial. This is the only way of finding sustainable and long term solutions to the problem.