

# (Croatian, World) Soils - Between Food and Non-Food Functions and Ownership Relations

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## Editorial

Summarizing “global soil inventory” through published books of World Soil Book Series of A. Hartemink there are recognizable two tendencies in global Soil sciences. One of them, just respecting importance of environment - regulatory (“non - food”) functions of soil, like soil scientists of Europe and developed countries expect to see the future of Soil science within environmental sciences. They insist on soil monitoring and “green energy” and more or less accept soil (land) as essential resource of (environmentally, socially economically) sustainable production of biofuels. The other one, productive function of soil - (food) oriented, see Soil science within agriculture and forestry, insisting on ever-higher yields of growing crops and forest.

Croatian soil scientists are in transitional position, deep in traditional “food - oriented” but active in research of non-productive one. Awareness of decision-makers and public on importance of soil is far below of requirements necessary for remarkable changes. Both tendencies promised permanent increasing of anthropogenic pressure on soil, which means increasing of all processes of land degradation. These processes are additionally stimulated by recent chaotic climate changes. It is truth that always in history soil (land) was in the root of radical historical changes, from forming the first civilization, Moses coming back in Promised Holy land, following Slave-holder system, Feudalism, till Capitalism with market economy which recent “fruit” are “yellow colored European fields” from oil rape and/or sunflower for biofuels. Increasing of pressure on soil the mankind cut the branch on which seat. Very busy cutter is president Trump after decision to withdraw U.S. from Paris Climate Agreement.

Somebody can say; nothing new on “The blue Planet”! It is to expect one of consequences that the main occupation of Soil science in next generation will be Soil-protection - oriented! But, for difference with previous generation “maneuver space” for action is going to be more and more reduced. In this situation, we believe that International year of soil - 2015 was an opportunity for to start the new changes, at first in land tenure relation. It is truth that

private ownership of land is the base of recent society and market economy. But, there is already numerous interventions of society in this relation; from incentives in agriculture as absolutely “contra-market economy” intervention (similar interventions in financial system has catastrophic consequences for global economy) from global level (as declarations on protection of some sites, protection of biodiversity), continental level (directives and strategies of EU) and national level (acts and regulations on; protection of protected natural area, water protecting area, good agricultural practices, etc.). So, land owner have to accept all regulations in spite of the fact that it reduces his private property rights. Soil (land) is private but almost all practices on the land are regulated by society! Mechanism of incentives is compensation, or paying enjoyment of farmers - land owners, but at the same time disclaims market relation on global market of agricultural products. As we see, because of life-importance of soil functions it is unquestionable fact that land management is very responsible job, which needs an efficient use of complex of knowledge at first on soil.

The minimal demand of society is to look for a clear and from point of view of soil protection an efficient (sustainable) land management. For driving bicycle, it is necessary to have license but for land (soil) management not! The solution is to change land tenure relations - land property rights. Just as air and water as members of “ecological triad” soil need to be public good and property! Land management including of farming system - crop rotation for all soil (land) users have to be “soil friendly”, means responsible to society. But products of soil (land) - food, fuel, timber etc., are in every case private property - products for competition on free market. Precondition for correct land use would be some qualification, which includes clear defined minimum of knowledge on soil for land users. By other words: as a standard have to be the rule that every square meter of land (soil) - agricultural, forest, urban... has to be under professional supervision of owner (society). It includes obvious monitoring of soil and changes in land management practices according of its result.

