

Agriculture and Environment

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Agriculture is one of the oldest anthropogenic activities of mankind on the Mother Earth, therefore it has close relationship with natural as well as human environment. It has many significant positive and negative impacts on environment. The agriculture sector is a very important for the survival of the human environment because it fulfills the essential needs of food of world's population which is expected to grow to almost 10 billion by 2050. Besides providing food for the survival of human environment, it has many other positive impacts on the environment, for examples, it traps greenhouse gasses within soils and crops, reduces overland flow, mitigates flooding risk through practicing certain farming techniques, and rejuvenate the dead/dying and dwindling natural springs, streams and rivers by groundwater augmentation.

The negative impacts of agriculture on environment are serious which include massive deforestation for agricultural land demand adding immense pressure on natural environment accelerating the process of flooding coupled with alarming mass-wasting and soil erosion, reducing the process of infiltration and deep percolation in rocks for recharge of aquifers, degradation of soil, water, and air; over extraction of groundwater for irrigation, water logging and salinization, contamination of groundwater and surface water from fertilizers, pesticides and animal wastes, the risk of greater aridity and soil moisture deficits because of climate change, and anthropogenic emissions of greenhouse gases. According to the assessment report of the Intergovernmental Panel on Climate Change (IPCC), published in 2014, levels of anthropogenic emissions of greenhouse gases (GHGs) are now at their highest in history. Production of agricultural crops and their effect on land use and land cover are major sources of these emissions. In this way, agriculture imposes a serious burden on the natural environment in the process of providing humanity with food. Researches reveal agricultural sector is the largest consumer of water and the main source of nitrate pollution of groundwater and surface water, as well as the principal source of ammonia pollution. It is a major contributor to the phosphate pollution of waterways and to the release of the powerful greenhouse gases methane and nitrous oxide into the atmosphere.

Thus, agriculture and environment are very closely interrelated with each other. The most important challenge for the agriculture sector is to feed an increasing global population, while at the same time reducing the environmental impact and preserving natural environment for coming generations. There are many opportunities for placing agriculture on a more sustainable path over the next decades, with benefits for both farmers and consumers.

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