Natural resources management and food security in the context of sustainable development

Abstract

This paper elaborates on the inseparable link between sustainability of natural resources and food security. A strategic framework that envisages conservation, improvement and sustainable uses of natural resources is proposed which meets the essential requirements for food security. Sustainability has traditionally been accepted as encompassing three dimensions, namely environment, economics and society but it is necessary to widen this approach for a more complete understanding of this term. Environmental degradation curtails ecosystem services, leading to impoverishment of vulnerable communities and insecurity. Food, whether derived from land or sea, is a product of complex environmental linkages, and biodiversity has a pivotal role to play in producing it. Technology, production methods and management requirements are different for food derived from land and sea, but essentially all foodstuffs utilize environmental resources whose sustainability is crucial for food security. This analysis necessitates consideration of the basic concepts of sustainable development and food security, the strength of the link between these and differences in the patterns of sustainable management of agriculture, fisheries and aquaculture. The growing role of genetically engineered organisms has been included because of the immense possibilities these offer for maximizing food production despite the environmental and ethical concerns raised.