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Sommario/riassunto

This important addition to the technical literature of ecology is a storehouse of information on marginal soils and waters from around the world. Soil salinity is considered the most important component of land degradation in arid and semi-arid regions, it is dynamic, spreading globally in over 100 countries and covering more than one billion hectares. It is causing significant losses in irrigated agriculture due to poor understanding and management. There have been significant developments in technologies to assess, map and monitor soil salinization spatially and temporally using remote sensing, geographical information system, geophysical methods and modeling, from regional, national to farm levels. The papers assembled here cover topics such as technological advances in soil salinity mapping and monitoring, management and reclamation of salt-affected soils, use of marginal quality water for crop production, salt-tolerance mechanisms in plants, biosaline agriculture and agroforestry, microbiological interventions for marginal soils, opportunities and challenges in using marginal waters, and soil and water management in irrigated agriculture. Focusing on arid and semi-arid regions, the book details recent developments in soil salinity and reclamation aspects in an applied context. Once this information is properly assimilated and applied in the field by potential stakeholders the agriculture scientists and farmers, marginal soil productivity may be increased leading to improved livelihood for farmers.