Record Nr. UNINA9910768178603321 **Titolo** Sustainable Intensification to Advance Food Security and Enhance Climate Resilience in Africa [[electronic resource] /] / edited by Rattan Lal, Bal Ram Singh, Dismas L. Mwaseba, David Kraybill, David O. Hansen, Lars Olav Eik Pubbl/distr/stampa Cham:,: Springer International Publishing:,: Imprint: Springer,, 2015 **ISBN** 3-319-09360-6 Edizione [1st ed. 2015.] Descrizione fisica 1 online resource (657 p.) Disciplina 333.7 338.927 551.6 631.4 Soggetti Soil science Soil conservation Climate change Sustainable development **Environmental management** Soil Science & Conservation Climate Change/Climate Change Impacts Sustainable Development **Environmental Management** Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Nota di bibliografia Includes bibliographical references at the end of each chapters and index. Nota di contenuto Introduction -- 1 Sustainable Intensification for Adaptation and Mitigation of Climate Change and Advancement of Food Security in Africa -- Land Use and Farming System -- 2 Geopedological and Landscape Dynamic Controls on Productivity Potentials and Constraints in Selected Spatial Entities in Sub Saharan Africa -- 3 Land Degradation and Soil Carbon Pool in Different Land Uses and their Implication for Food Security in Southern Ethiopia -- 4 Land use Impact on Soil Organic Carbon and Total Nitrogen Storage in a typical Dry Land

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and elsewhere did not happen in Sub-Saharan Africa (SSA), several regions of SSA have experienced substantial improvements in crop yields and growth in agricultural production since the beginning of the 21st century. Yet, no drastic increase in per capita food grain production has occurred, primarily because of rapid rates of population growth. On the contrary, per capita food production has decreased in East Africa, Southern Africa and Central Africa. Thus, hunger, malnutrition and poverty remain endemic throughout SSA. Agriculture in SSA is vulnerable to harsh and uncertain climate variations. Resource-poor and small landholders are particularly susceptible to their negative impacts. SSA is one of the global hotspots for adverse effects of climate change on agricultural production and the environment. These include severe problems of soil degradation, nutrient and organic matter depletion, water contamination and eutrophication, and loss of biodiversity, especially the below-ground's diversity. Thus sustainable intensification (SI) can play an important role in enhancing agricultural production while restoring degraded/desertified soils, mitigating global warming by sequestering atmospheric CO2 in soils and vegetation (forests), adapting to climate change by using recommended management practices of the so called "climate-resilient" or "climate-strategic" agriculture, improving farm income, and empowering women and other under-privileged populations. The relevance of SI is more now than ever before because of decreasing per capita arable land area, competing uses of land for non-agricultural purposes, increasing risks of land/soil degradation, and changing and uncertain climate. Resource-poor and smallholder farmers of SSA neither have the capacity to adapt nor have the resilience to recover.