Soil and Water Conservation Technologies for Implementing Climate Change Adaptation Measures: Local Scale Proposal of Basal Project in Cuba

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Abstract

This paper presents an actions proposal for implementing adaptation measures to variability and climate change at local scale, based on integral diagnoses developed on the framework the international collaboration project Environmental Basis for Local Food Sustainable Production (Basal for its spanish abbreviation) in three intervention municipalities in Cuba. The crop systems diagnosed were related to: rice (Los Palacios municipality in east region of the country); beans, vegetables, fruits, roots and tubers (Güira de Melena municipality in central-east region) and pasture and forage for milk production in livestock (Jimaguayú municipality in west region). The measures adopted are related to soil and water management and also include actions for introduction of sustainable management practices for conservation and soil improvement, new irrigation technologies or improve those already in use, for increasing water use efficiency. Among the most important actions are the introduction of technologies for land leveling and maintenance and rectification of channels net for increasing water application and conduction efficiency in surface irrigation systems and the modernization in demonstrative areas with the introduction of pulse or non continues surface irrigation technologies and flexible pipes for third channels. Other remarkable the actions are linked to the implementation of Use and Quality Brigade (BUCA, for its spanish abbreviation) and the Advisory Irrigation Service (SAR, for its spanish abbreviation) for monitoring water availability, quality and use efficiency for irrigation and technical training for technicians and farmers involved in the exploitation of irrigation systems. The proposal of specifics and integral indicators for monitoring effectiveness of measures in the variability and climate change adaptation and support its performance in planning and management of agricultural sector.

Keywords: basin management, water use efficiency