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# Soil and water conservation strategies and impact on sustainable livelihood in Cape Verde – Case study of Ribeira Seca watershed

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Cape Verde, located off the coast of Senegal in western Africa, is a volcanic archipelago where a combination of human, climatic, geomorphologic and pedologic factors has led to extensive degradation of the soils. Like other Sahelian countries, Cape Verde has suffered the effects of desertification through the years, threatening the livelihood of the islands population and its fragile environment. In fact, the steep slopes in the ore agricultural islands, together with semi-arid and arid environments, characterized by an irregular and poorly distributed rainy season, with high intensity rainfall events, make dryland production a challenge. To survive in these fragile conditions, the stabilization of the farming systems and the maintenance of sustainable yields have become absolute priorities, making the islands an erosion control laboratory. Soil and water conservation strategies have been a centerpiece of the government′s agricultural policies for the last half century. Aiming to maintain the soil in place and the water inside the soil, the successive governments of Cape Verde have implemented a number of soil and water conservation techniques, the most common ones being terraces, half moons, live barriers, contour rock walls, contour furrows and microcatchments, check dams and reforestation with drought resistant species. The soil and water conservation techniques implemented have contributed to the improvement of the economical and environmental conditions of the treated landscape, making crop production possible, consequently, improving the livelihood of the people living on the islands. In this paper, we survey the existing soil and water conservation techniques, analyze their impact on the livelihood condition of the population through a thorough literature review and field monitoring using a semi-quantitative methodology and evaluate their effectiveness and impact on crop yield in the Ribeira Seca watershed. A brief discussion is given on the cost and effectiveness of the techniques to reduce soil erosion and to promote rainfall infiltration. Finally, we discuss the critical governance factors that lead to the successful implementation of such strategy in a country with scarce natural resources.