



Assessment and mapping of desertification sensitivity in an insular sahelian mountain region – case study of the Ribeira Seca Watershed, Cape Verde

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Abstract: The aim of this study is to present the assessment and mapping of the environmental areas sensitive to desertification in an insular sahelian mountain region, in the catchment area of Ribeira Seca, island of Santiago, Cape Verde. Desertification is a threat for the global environment and it represents a serious ecological problem in Cape Verde. To fight both successfully, it requires an evaluation of its consequences and the building of cartography of the sensitivity for arid and semi-arid ecosystems. The model MEDALUS was the basis for this study with the use of six indicators of quality: climate, soil, vegetation, management, water runoff and social. Several sub-indicators were assigned to each indicator with weights variable between 1 (low) and 2 (high) according to the DESIRE Project (WB2). The geometric mean of each of the six indicators of quality was employed to produce the map of environmental sensitivity areas to desertification. The results of this study show that more than 50% of the watershed present obvious evidence of becoming a desertification area.

Key words: Cape Verde, desertification, indicators, MEDALUS model, DESIRE project.