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Land use and landscape features and agricultural management in kirindi Oya and Badagiriya irrigated agricultural systems influence the ecology of the Bundala National

Park due to quantity and quality of drainage water entering its lagoon system. The objective of this work was to develop a systematic approach to improve our understanding in irrigated agriculture and its interactions with the ecology of the Bundala National Park using a Geographic Information System (GIS) .

Survey General Department's 1:10,000 maps, among with field measured data have been used. Major data layers included, land use, streams, roads and elevation. Data processing was done using ARC/INFO and ARCVIEW GIS systems. Drainage patterns in the study area were delineated using elevation data. Significant variations in landscape and land use patterns were observed between certain minor watersheds.

Drainage to Malala Lewaya, Embilikala Kalapuwa and Bundala Lewaya were studied in detail. Maps and data help us to better understand land use and landscape features that would determine the drainage characteristics to the lagoon system in the Bundala National Pak. Information derived is useful for policy markers and managers to divice better management practices to improve the efficiency of resource utilization and the environment in the area. Different cropping patterns in minor watersheds and their physical characteristics indicates the potential for planning and management at minor watershed level.