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**“It is not a paradox that shepherds and farmers do not work together”:
Power, trust and land degradation in two neighbouring areas of southern
Crete**

Thanasis Kizos, Theodoros Iosifides, Helen Briassoulis, Minas Metaksakis

Department of Geography, University of the Aegean, University Hill, Mytilini 81100,
akizos@aegean.gr

Abstract

Many Mediterranean semi-arid, hilly and mountainous areas face Land Degradation and Desertification (LDD). The intensification of crop cultivation and grazing in the last decades has been considered as a major contributor to LDD. The island of Crete has supported diverse agricultural systems and large populations of grazing animals for many centuries. Many communities around the island have relied on mixed systems of cultivation and grazing for their livelihood. The resilience of many areas on the island has been recently challenged by the simultaneous intensification of crop cultivation and grazing and the separation between animal husbandry and crop cultivation. The neighbouring areas of the Messara plain, where a variety of crops were grown for many centuries, and the mountains of Asteroussia, where sheep husbandry has been the major livelihood option for centuries, constitute linked socio-ecological systems (SES), with transhumance from the mountains to the plain. In the last 30 years, the ‘complementarity’ of land management between the two areas has been ruptured and a gap has grown between the shepherds on the mountains and the olive and vine growers in the plain. Each area faces its own LDD problems: salinisation, water and soil pollution in the plain, overgrazing leading to soil erosion on the mountains. This paper examines contemporary responses to LDD along with the evolution of the two socio-ecological systems based on 20 in-depth qualitative interviews with local stakeholders – shepherds, farmers, representatives of local authorities, and environmental NGOs. Informed by the complex adaptive systems (CAS) paradigm, the paper shows how the multi-level interplay between environmental, social and institutional factors in the two neighbouring areas have generated a vicious circle of loss of socio-ecological resilience. The role of culture, power relations, social and institutional capital, state policies and market mechanisms in shaping contemporary responses to LDD are particularly highlighted. The discussion of the pathways of the gradual loss of socio-ecological resilience in these areas resolves to a great extent the ‘paradox’ of non-cooperation – and, in many cases, open hostility - between farmers and shepherds along with the mutual avoidance of ‘obvious solutions’ to socio-economic and LDD problems.

Key words: socio-ecological resilience; socio-ecological system; land degradation and desertification; Crete; Greece

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