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### **Management of range resources in mountain areas of Middle Atlas - Morocco and in North Portugal**

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Rangelands cover 69% of the world's agricultural land (FAO Stats 2009) and around 40% of all global land surface. They occupy 32% of the land surface in Portugal (ICNF 2013) and 42% in Morocco. Most of these rangelands are managed by nomads and transhumant pastoralists in Morocco, and by semi-sedentary in the North of Portugal. Pastoral systems have undergone profound changes. Among the trends and perturbations faced by pastoralists across the world, we can enumerate demography changes and breakdown of the traditional local institutions and systems for managing natural resources. Recently, since ecological integrity of pastoral systems that sustained natural resources for a long time depended on the mobility of people and herds, the United Nations Environment Programme (UNEP) considered transhumant feeding systems for livestock as one of the most sustainable. As consequence, productivity of rangelands became highly variable and hardly sustain livestock requirements, especially, in mountain regions where the winter cold is an additional limiting factor for vegetal production. Therefore, livestock producers developed specific strategies to cope with the changes. The aim of this study is to document the changes livestock farming systems are going through and compare the strategies developed by livestock owners in mountainous regions in Morocco and Portugal. Our results show that in the Middle Atlas, farmers opt for diversification of agricultural activities with an intensification of livestock systems. The cost of production for livestock is increasing as consequences of rangeland degradation due to overstocking. In Portugal, pastoralism based on daily grazing routes, has constantly decreased over the years. As a result, rangelands are often under-grazed and wildfires have and are continuously increasing.