



## **Soil erosion and degradation in the Mediterranean: the current state-of-affairs**

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Wittgenstein argued that our own limited experience and knowledge meant that deeper understanding of things was prevented by the importance of things beyond our consideration. Everything in the world is connected. Before about 1965, information about Mediterranean soil erosion and land degradation was available in the writings of historians, archaeologists, ecologists, geomorphologists and soil scientists. In each case the information is limited in its usefulness by the state-of-affairs within which it was linked to other knowledge. After 1965, geomorphologists and soil conservation scientists began to use the techniques and concepts of hydrology and climatology to measure and model soil erosion. Statistics and GIS were used to make estimations of soil erosion. They provide a limited representation of erosion and land degradation processes and enable risk to be evaluated within a hydrological and statistical paradigm. Another state-of-affairs is that of eco-geohydrology. This resulted in concepts that explain the hierarchy of processes at different scales and which considered resilience and change. State-and-transition and adaptive management methodologies resulted. They have been used to explain spatial and temporal dynamics of erosion. They have been applied in combination with hydrological models in expert systems that help authorities evaluate land use change impacts. This approach, just like the hydrological one ignores the main drivers and reasons for desertification which are outside of its states-of-affairs. Recently another state-of-affairs is emerging in which erosion and land degradation are considered within the states-of-affairs of soil functions and ecosystem goods and services. An interesting concept is that of the soil as a habitat for all life on earth, including man. Land use and land management are driven mainly by profit in a system that values land as real estate. A state-of-affairs must emerge in

which the ethics of protecting our habitat function is our first priority and the benefits of ownership secondary.