

Desertification in the Sahel : climatic or human driven crisis?

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Over the last decades, the Sahel of West Africa has suffered two dramatic contiguous droughts. Currently, and since the early 1990, rainfalls record an amelioration that tends towards the average of precipitation previous to the 1970s. However, this improvement may be due to increasing rainfall intensity and it seems that the length of the rainy season did not show any extension when compared to the 1970s and 1980s. On the other hand, the Sahelian population has been multiplied by 3 since 1950 and is foreseen to be multiplied by 10 by the second half of the 21st century. Increasing urban population levels are much more impressive and conduct important environmental distresses every day. Such increasing human pressure leads to uncontrolled deforestation in order to satisfy the needs in fuel wood, wood for construction and shifting cultivation. In addition, always larger herds for contracting range conditions lead to overgrazing and trampling. All these processes provoke the degradation of the vegetation cover, a constant diminution of crop yields, as well as a strong reduction of the biodiversity. One of the numerous consequences is the reactivation of previously fixed dunes that were formed during the last interpluvial phase (18000 BP). Our research provides a state of the art of recent findings and controversy that surround the desertification processes and concludes that if the droughts of the 1970s and 1980s have had dramatic consequences for the population of the Sahel, current and coming increasing human pressure will very likely enhance desertification processes of the southern fringe of the Sahara.