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Recent trends of temperature change under hot and cold desert climates: Comparing the Sahara (Libya) and Central Asia (Xinjiang, China)

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According to trend computations at three stations each in Sahara desert (Libya), characterized by a "hot" desert type ("BWh", according to the Koeppen climate classification), and in Central Asia (Xinjiang, China) identified as a "cold" desert type ("BWk", after Koeppen), increasing annual temperatures were detected over the period 1955-2005 corresponding with global temperature warming.

From 1955-1978, negative (decreasing) temperature trends were, however, observed at all three hot desert stations and at two of the three cold desert stations. From 1979-2005, strikingly positive temperature trends were seen at all six stations.

In seasonal respects, winter (December to February) and summer (June to August) show different temperature trends over the period 1955-2005: the hot desert experienced an increasing temperature trend at a greater extent in summer than in winter; vice-versa, in the cold desert positive trends were computed for winter and negative for summer. It can also be observed that mostly hot desert warming occurred in summer, opposite to cold desert warming in winter.