

EVOLUTION PASSEE ET FUTURE DES DESERTS



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THE ELEMENTS, NOT PEOPLE, CAUSE DESERT BUT
WORK IN SPACE CAN MAKE THE DESERT BLOOM

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Many experts would have us believe that the people involved in drought disasters bear responsibility for their misfortune. We are repeatedly told that it is the nomads in these parched lands who ruin the environment, chopping down the trees and allowing their animals to overgraze. This suggests that the people who live in the dry parts of the world ruin their environment because they do not understand it.

In reality, deserts form in any segment of the land masses of the Earth for one reason alone: scarcity of rain. The deserts are where they are not because of some accident of misuse, but because of the rhythmic patterns of global circulation of air masses in the Earth's atmosphere, which are fueled by energy from the sun. The changes in the amount of energy received, which are related to the 11 year sunspot cycle and the corresponding magnetic activity, constantly shift desert boundaries. These changes cause floods as well as droughts. The records of water levels of Lake Nasser behind the Aswan High Dam depict a complete picture: The levels of water were dangerously low in 1973 and 1984 after periods of African droughts in 1968-1971 and 1980-1983; this corresponds with the period of highest sunspot activity. Furthermore, both periods were followed by dangerous floods in 1975 and 1985, at the point of lowest sunspot activity. This cycle is superimposed on a rhythm whose phases last for thousands of years, that of alternating wet and dry climates in the desert which are related to global changes in the Earth's atmosphere and perhaps to the ice ages.

Knowing this, what is it that we should do about African famines? The answer is not "aid projects" that result in setting nomads around overcrowded towns, as has happened in the Sahel. Take the people out of their element and they will be unable to fully use their skills. Force them to settle in a place other than that of their own choice, and they will sit waiting for you to solve their problems. Grain will only feed the people today. We must also illuminate a way for them to feed themselves tomorrow.

First, we should learn that the desert is not the enemy. No matter how harsh, it contains the seeds of survival of its people. Rain in the geologic past left behind vast areas of arable land that may be hidden by sheets of sand. Some of that water seeped through the rock to be stored in giant underground aquifers. Today we have the means for locating such hidden resources thanks to teledetection.

For example, NASA's space shuttle unraveled the terrain beneath the sands in the southern reaches of the western desert of Egypt and the large-format camera developed for NASA obtained high-resolution photographs of Ethiopia, Somalia and Sudan which showed the areas with potential ground-water resources. This kind of information may make a difference in the long-term resolution of drought in Africa.

Second, we should study the ways of desert nomads and try to reinstale, as much as possible, their age-old practices and desert-born wisdom. Acquired from thousands of years of experience of living in an environment where the only constant is the scarcity of resources.

Third, we should accept the cyclic pattern of the moods of nature. Remember the dream of a biblical pharaoh of Egypt: "Seven years of grain, fat and healthy, growing on a single stalk. Behind them sprouted seven ears of grain, shriveled and thin and blasted by the east wind". The story's moral is as relevant today as then and part of the harvest in years of abundance should be stored for lean years.

There is one more important human lesson to be learned in coping with drought and famine. We must require the harsh but fruitful policy of making the afflicted people work rather than sit and wait. When human beings are sick and without hope, they quietly become resigned to their fate and await death. However, they are rarely in the mood to argue and are easily influenced to assume a more positive attitude. To the contrary, work re-instills human dignity.

Living with the desert and its changing moods was done for thousands of years. It can be done again but we should not embark on projects of questionable value and should save our aid funds.