



charged by the Nile, provides accessible groundwater for several kilometres on either side of the river (Bristow 1996).

Farmers used traditional means of irrigation or residual moisture from the floods to cultivate their crops. In recent years lower rainfall in the Nile's catchment areas and control of the river by dams have limited seasonal flooding and most present-day agriculture relies on diesel-pump technology. Private farmers install small pumpsets on river banks or in shallow wells, and much larger schemes are operated by businessmen, co-operatives, or the government. Crops include broad beans, sorghum, wheat, alfalfa, onions, dates, and citrus.

FARMERS USE TRADITIONAL MEANS OF IRRIGATION TO CULTIVATE THEIR CROPS AFTER NILE FLOODS DEPOSIT FERTILE SILT ON THE RIVER TERRACES.

“ WE PREFER THE TERM SAND ENCROACHMENT, AS IT SIMPLY MEANS THE PHYSICAL MOVEMENT OF SAND INTO VILLAGES AND FARMS IN THE FORM OF DUNES OR SHEET DEPOSITION. ”

Threats to Sustainability

Many of the farming communities in the Nile Valley of Northern Sudan face the threat of gradual burial by sand. It is important to recognise that this is only one among several threats to the sustainability of the communities. Closely related is the problem of erosion; the Nile is constantly destroying old agricultural land and creating new sites by processes of erosion and deposition.

There has been a long-term trend of migration away from the area. This part of Sudan suffers from poor accessibility and communications. Employment opportunities are very limited. Many younger people attempt to find work elsewhere in the Arabic speaking world, and their remittances are important to the local economy. Many lost their jobs in Kuwait and Iraq at the time of the Gulf War. Increasing reliance on diesel-pump technology itself raises problems of sustainability, since imported fuel and spare parts are desperately difficult to obtain. The international isolation of Sudan, the closure of almost all externally funded development projects, its economic woes, and hyperinflation are perhaps the greatest threats to the northern Nile communities. Sustainability depends upon the continued attractiveness of the way of life and continued confidence for investment in farming.

Sand Encroachment

There is little that the communities can do about these external threats, but the problem of sand encroachment is one that they have played a part in causing, and will have to deal with themselves. The much abused word “desertification” sometimes appears in this context but we prefer the term “sand encroachment”, as it simply means the physical movement of sand into villages and farms in the form of dunes or sheet deposition. These processes have been occurring for many decades, but they have accelerated over the last forty years. Lower rainfall in the Nile’s catchment areas and control of the river by dams have reduced