

tions develop. Sand gathers around trees and houses. Incoming *barchans* and sheet sand merge with earlier accumulations. The size and form of the resulting complex dunes relate to the quantity of incoming sand and the angle of the main dune front to the prevailing wind. Fortunately, these large complex formations close to agricultural land are less mobile than the individual dunes of the open desert (Ibrahim 1994).

The sites most exposed to the prevailing northerly winds - and thus to sand encroachment - are those on the “right” or north bank of the Nile where it flows in its great east-to-west loops. Here, dune movement towards the river can exceed 15 metres per year, and in some places the sand has covered the river terraces, broken through the

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date palm groves, and now pours into the river. Neighbouring sheltered sites may pass almost unaffected.

The river is constantly creating new land by deposition as well as destroying old sites by erosion. There is always great scope for expansion of irrigation and cultivation in the desert, but the harsher conditions make this less economically attractive. The significance of sand encroachment is best measured, therefore, by estimating economic damage to villages and farms where investments and commitments have already been made, rather than notional figures of land lost per year.

### **The Community Forestry Project at Ed Debba**

SOS Sahel has been working with villages around Shendi since 1985, and a women's forestry project is based at Ed Damer. SOS Sahel's Northern Province Community Forestry Project has been working with farming villages in the Ed Debba area since 1988. Its primary aim is to help these communities protect their land and homes from sand encroachment. Tree nurseries have been set up; hundreds of women, men, and children have raised seedlings on their farms or at home and farmers have planted kilometres of shelterbelts. The villagers themselves carry out most of the hard work of digging wells and irrigation channels, making sand-fixation fences and planting and protecting trees.

The project aims to raise awareness of the causes and effects of sand encroachment, develop technology, provide training, inform people of the opportunities for effective action, and motivate them to participate. Training and technology development are both based on a learning process with farmers. Top-down technical training by external "experts" would be inappropriate. The farmers have their own expertise based on long experience of living with sand and their own trial-and-error experiments. Sustainability implies local self reliance, so it is important to use locally available technology rather than undermining self reliance by the introduction of inappropriate methods.