This was the sobering message I received last week as part of a delegation to Senegal from the American Jewish World Service.

Senegal is in the Sahel, a 1,000 kilometer-wide African region between the Sahara on the north and the sub-tropics to the south. It is relatively well-watered, but is nevertheless a poster child for desertification that is chewing up millions of square miles across the globe. We think of places like Darfur as a desert, but it has not always been that way: instead, it has become a desert only in recent decades.

Climate change has accelerated the pace and severity of desertification, but the root causes appear to be social and political. Fragile environments like the Sahel need constant tending and maintenance, which was actually not too difficult under traditional circumstances: small landholders would grow crops and raise livestock there. But as economic changes pushed farmers off the land, and made traditional methods uneconomical, there was no one to tend it, leading to topsoil erosion and clearcutting of timber. US and EU policies make matters worse because they heavily subsidize uneconomical crops at home, push hundreds of thousands of small farmers off the land.

This is not to say that it’s just about Big Bad Westerners: even traditional methods could wreak havoc on the land as livestock and population density became greater with no concomitant improvement in environmental sensitivity. Overgrazing and poor farming methods also contribute substantially to desertification, and then they multiply: traditional farmers flee regions to get away from the desert, but their practices only wind up bringing the desert with them.

What to do? AJWS helps to sponsor the “TIPA” project, which when sounded out is the Hebrew word for “drop” but stands for Techno-Agriculture for Poverty Alleviation. The poverty alleviation piece comes in the relatively small size of plots — around 50 acres. the “techno” part comes from Israeli-style drip agriculture with a twist. Drip agriculture, naturally, significantly reduces the amount of water necessary to maintain crops, leaving more water available for all and maintaining appropriate ground cover. But for poor farmers in the global south, it might still be too expensive, because the water needs to be pumped to to drip mechanisms in the fields: they’ll save water, but drip agriculture is still too energy-intensive.

TIPA alleviates this problem by running the water totally through gravity, vastly reducing the amount of energy necessary to maintain the system. It thus also promises a more sustainable path because poor farmers might actually be able to afford it. And so far, it appears to have been spectacularly successful: the 60 families participating in the TIPA

project, run by Green Senegal, a local NGO, have doubled their income in the last two years.

The question, of course, is whether the Green Senegal TIPA project can be scaled up for the rest of the country or the rest of the Sahel. Africa is the graveyard of promising ventures. But TIPA has a huge advantage in that it is spearheaded by a local NGO, not a top-down concept from northern capitals. American Jewish World Service looks for projects that promise scalability because of strong local commitment, which is why it has been so successful in finding strong projects (such as Tostan, the West African community empowerment NGO profiled by Nick Kristof and Sheryl WuDunn in their recent outstanding book Half The Sky).

So can TIPA become a model for the rest of the Sahel? You can help by donating here. Reward good behavior!