Reversing the “Silent Earthquake of the Century”

By Gary Lewis

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Mr. Lewis recently visited Shahid Nasseri Refugee Camp near the city of Saveh in Markazi Province. He contributed this story based on what he observed.

According to climate change predictions, the Middle East faces a hotter, drier future.

Iran sits at the very centre of the Middle East. About 80 per cent of its surface is already arid or semi-arid. The country’s water scarcity problems are immense. But another mega-threat to the future of Iran’s environment is the often-overlooked problem of desertification.

Because much of this problem is man-made, it can be fixed. This, at least, is the belief that has driven the many of the dedicated individuals involved in the response – especially during the past decade.

The challenge of desertification is literally creeping up on us. Some have called it “The Silent Earthquake of the Century”.

In many parts of Iran this has been caused when sheep herders let their flocks of goats and sheep overgraze the land. Sometimes it is caused by villagers breaking off rangeland shrubs for firewood.

According to Iran’s own official estimates through the “Desert Potential Assessment,” when compared with other arid and semi-arid countries, Iran’s level of desertification is “high”.

But solutions exist. And they are being implemented.
To re-green the desertified rangelands, essentially, what you need to do is grow more vegetation. This is the start for everything to turn around. In order to have more green, you need to replant the area with shrubs. But in order for them not to be overgrazed again or used for fuel-wood you need the ‘buy-in’ of the community to preserve and protect the newly-greened areas.

I have seen this process at work in Iran. It is being successfully implemented and it is being replicated in some of the country’s most vulnerable areas.

What is currently the most successful effort to re-green Iran’s deserts goes by the euphemistic title of the “Carbon Project” (formally the Carbon Sequestration Project). It is essentially a community-development-plus-environmental initiative supported by UNDP – the United Nations’ development agency. The Carbon Project gets its name from the fact that one of its side effects is the ability of the newly-re-greened areas to capture and sequester carbon dioxide.

But the UN has been supporting efforts to reverse desertification since 1989. Starting that year, in the Birjand area of South Khorasan province, UNHCR (the UN refugee agency), the Forest Range and Watershed Management Organization (FRWO), and the International Fund for Agricultural Development (IFAD) launched the Rangeland Rehabilitation and Refugee Income Generating Project. The project ran for six years and tried to stop desertification and the destruction of natural resources through re-afforestation covering 24,000 hectares.

Then, 10 years ago, UNDP began the Carbon Sequestration Project in that very same province – South Khorasan. Since then an additional 30,000 hectares of parched lands have been greened.

Recognizing the potential social and economic benefits from a re-greening of its deserts, the government then entered into a partnership with UNDP to expand the project to six more provinces – Tehran, Markazi, Kerman, Semnan, Bushehr and Alborz – during 2012 and 2013.
Recently, on 3 September 2014, UNDP and FRWO signed an agreement to expand this to a further 10 provinces – West Azarbaijan, Fars, Golestan, Ilam, Isfahan, North Khorasan, Khorasan Razavi, Qom, Sistan & Baluchistan, and Yazd.

More is planned. In all, when implemented, these initiatives will cover over half of Iran’s provinces – concentrating on the 18 driest.

The process of re-greening is remarkably simple. It starts with a framework agreement between the authorities and local communities. Initial investment comes from the project funds (Government and UNDP) and is supported by in-kind inputs from the Government. If the shrubs and trees are planted with community engagement, it has been demonstrated that the cost of tree-planting drops to one-fifth of what it would cost the government if they hired private contractors. More than this, it comes with the all-important element of community buy-in and ownership. It thus immediately becomes ‘Our’ project, not ‘Their’ project.

The shrubbery is grown in a nursery. The saplings are incubated till they are ready to be re-planted in the open. The young shrubs are then transplanted into holes dug by the community. They require watering five times during the first year of their lives. After that, the saplings will grow into bushes normally reaching between 1-2 metres.

When hundreds of thousands of these shrubs grow in areas covering thousands of hectares, this creates a small biosphere which then allows other vegetation and wildlife to return. Such newly-greened biospheres sustain people’s livelihoods in a number of ways.

The first is that vegetation in the microclimate helps to retain more moisture on the ground. This in turn produces more vegetation. When the small trees disperse their seeds, the vegetation thickens. Farmers can then bring in livestock to eat leaves from the shrubs without damaging the plants themselves. The overall ecological carrying capacity of the land increases. This generates income for farmers and rangers. People can sell produce from the trees and shrubs – be it resin or fruit.
The Carbon Project has addressed the fuel-wood problem by supplying residents with simple stoves fuelled by paraffin supported by the project.

But the real benefit in terms of sustainability is that the communities – once the source of the problem, through their overgrazing and fuel-wood “predation” – develop a strong sense of ownership and become the guardians of the land.

In Markazi province, there are two environmental rehabilitation projects underway.

Starting in 2013, UNHCR with the Bureau for Aliens and Foreign Immigrants’ Affairs (BAFIA) and FRWO, launched the Community Based Natural Resources Rehabilitation (CBNRR) in Taraz Nahid with engagement of the Afghan refugees. In the Shahid Nasseri settlement, the CBNRR is addressing the specific needs of Afghan refugees who have been residing in this location for over two decades. Over a period of several years, the rangelands had been destroyed by the refugees search for fuel and overgrazing by their herds. However, in less than two years time, this project has helped to rehabilitate about 665 hectares of land.

Also starting in 2013, a more traditional ‘development’ desertification project got underway to re-green 50,000 hectares in Mahalat with support from UNDP’s Carbon project. We are already seeing benefits in vegetation cover and income to residents in both areas.

In South Khorassan, where the legacy of the UNHCR project is remembered and where the UNDP Carbon Sequestration Project has been in place for a decade, the momentum is much further forward.

Moreover, we have now started to see another benefit as local and refugee communities have become more motivated and seek out other alternative businesses. It sets up a whole development process – producing businesses, cooperatives and the deepening of social capital.
All of this has been accomplished through a deliberate man-made effort to re-green the deserts and to compensate in a small way for the damage done by mankind.

I believe we are truly beginning to reverse the “Silent Earthquake”