



Technology transfer between India and Malawi

Supporting Development beyond Intellectual Property Rights

The year 2015 may well go down as a landmark year, with the adoption of the [Sustainable Development Goals \(SDGs\)](#) and some agreements at the [Conference of Parties \(COP\) 21](#). Expectations from both are huge.

Knowledge exchange and transfer will be key for achieving the expectations of both. For this, partnerships within and between countries as mentioned in [Goal 17](#) of the SDGs will be imperative. Learning from past experiences and partnerships will help.

While the goals are inextricably linked to each other, so are the solutions, as the technology transfer initiative from India to Malawi revealed.



Towards arresting deforestation, and more

What started out as a pilot experiment in technology transfer for [green brick technology transfer from India to Malawi](#) has resulted in outcomes that showcase green and good quality construction, [entrepreneurship development opportunities](#), improvement in wages and most important of all...

... dignified [employment opportunities](#) for women

Under the project, a [VSBK](#) or Vertical Shaft Green Brick Kiln was commissioned. The kiln was [inaugurated](#) in January 2015.

The pilot kiln has reached the one million mark bricks in production and women now comprise of a significant percentage of the work force: a whopping 35 per cent.



Malawi has one of the highest urbanisation rates in the world. This has increased the demand for housing - and construction material, especially bricks. *Estimates indicate that 1.7 billion units of burnt clay bricks will be annually required for walling alone*

Cost of Brick Making

These bricks come at the cost of forests

Traditional brick making in Malawi uses fuel-wood. To make enough bricks for a small family house, wood from three large mango trees or the equivalent would be required.

This volume will be produced at the cost of **850,000 MT** of wood.

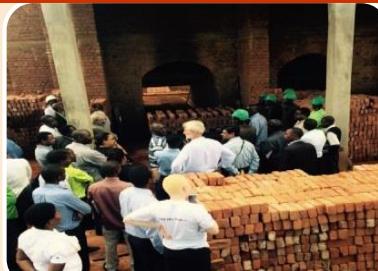
At this rate, Malawi is staring at complete deforestation within 30 years.

Alternate brick making technologies are thus imperative and given the demand for bricks, the market is primed.



A traditional brick kiln

VSBK bricks compared to traditional bricks



Quality & Environment

- Bricks are twice as strong
- Reduces deforestation

Efficiency

- Bricks use half the energy
- Potential to cut greenhouse gas emissions
- Saves 20-30% construction cost (less mortar)

Social Indicators

- More jobs (A third of pilot employees were women)
- Three times the salary (1,500 MK instead of 600 MK traditionally)

Moreover,

- Built business of the entrepreneur: As on August 2015, business generates was worth MK 33 million or USD 67,000
- Malawi has undertaken several initiatives for the economic empowerment of women this option fits in with their policies.
- Reduce deforestation, avoiding the use of 30 tonnes of fuel-wood per 100,000 bricks (use 5 tonnes coal instead)
- Save 20-30% on construction costs (per housing unit) due to lower volume of expensive mortar needed by higher quality bricks

Uptake and Outreach

Demand is exceeding supply even in absence of marketing. The local housing companies (e.g. 0.5 million bricks in one order) are absorbing the bricks.

An [awareness workshop](#) conducted in February 2015 by the Minister of Land, Housing and Urban Development certainly helped. Since then, the Minister has visited the kiln several times. There have also been expression of interest from neighbouring countries such as Kenya, Mozambique, South Africa and Tanzania.



Shaping Policy

The government of Malawi is committed to upscale the pilot kiln to many more districts and using a scientific approach, develop appropriate policies that reduce deforestation and GHG, promote entrepreneurship, enable quality housing and employ women. This is work that has just begun.

How did we reach here?

A step wise approach was adopted that included the involvement of all stakeholders, technology demonstration. Capacity building, key to success was through structured [trainings](#) supported through the [development of manuals](#).

Conclusions

Implemented by [Development Alternatives](#) and [TARA](#) under the DFID-supported Knowledge Partnership Programme, this project neatly fits in with [Goal No 8](#) and [Goal No 17](#) of the SDGs.

The SDG goals may be ambitious, and some of the language is new. Come October the focus is going to shift to nationalising implementation and hopefully to developing strategies for implementation and the monitoring indicators.

Some of the anxiety over implementation can be set aside. After all, it's not that development will always have to start afresh. There are some good examples for practises, policies, programmes and experiments that can feed into implementation. The [Knowledge Partnership Programme](#) is one such example, supported by [DFID India](#) and implemented in partnership [with IPE Global](#).

And the Malawi experience has shown us just how.

For further information:

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