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## **Towards Triple Impact: Sustainable Ventures in Developing Countries**

Harish Hande, Selco Solar Light; Carlos Wills, DW Tech; Crispin Pemberton-Pigott, New Dawn Engineering. Moderator: Sahba Sobhani, UNDP

# Purpose

From sustainable energy solutions in India, to water purification plants in Colombia, or human-powered technology equipments in Swaziland, the imagination and dedication of entrepreneurs around the world to serve the needs of the poor and the environment in a profitable way has no limit. We will hear their inspiring stories, and look at their business models, the constraints they face, the strategies they have used, and the economic, social and environmental results they have achieved.

Design/methodology/approach: Reports and expert opinions from panelists

#### **Findings**

As the Colombian effort is a startup, the speaker's remarks centered on what they would like to do, not findings of what they have already done. Harish Hande from India, revealed broad principles of production and investment over a 20-year period. The practicality and stability of their approach comes from providing value first to the people who use their technology, then to the workers who produce it, and only last to the shareholders of the investment capital. While most goods are large scale responses to what people want, their work in India is based on what people need. Because the expression of basic human needs of poor populations is conditioned by local environments, the products must be customized to the locale, and cannot necessarily be brought "to scale" to serve other markets. This defines the parameters of return on investment. In needs-based production, some of what they produced lacked a market, since needs are finite. Western marketing and production based around "planned obsolescence" tends to work best for fulfilling endless "wants."

In the Swaziland case, they use only appropriate technology that is operated by human energy, which also tends to be confined to meeting needs and is highly localized. New Dawn Engineering has produced a foot-power water pump that will draw water from a well sufficient to water a hectare of crops. New Dawn has also produced an ultra-efficient pellet stove. Refinements are based on creating more effective machines, not on style changes or non-functional upgrades. The company even encourages poor people to "steal" their inventions for local use. An unfortunate byproduct of this is that some rival manufacturers have stolen the New Dawn designs and produced inferior machines, thus tainting the brand. This leads to intellectual property battles that would be unfamiliar to most investors.

One of New Dawn's machines can be powered by turning a hand crank by a worker in a wheel chair. Non-standard practices like that also make it harder to convince investors. Crispin Pemberton-Pigott of New Dawn elaborated on the practice in former British colonies of issuing permits to set up shop rather than monitoring of businesses. The former represents a barrier to entry, especially for the poorest workers; the latter can pose threats to health and safety of both workers and consumers.

The question was raised as to whether these new entrepreneurs at the "base of the pyramid" constituted a new asset class for investors. It was not answered.

The moderator asked about the perceived role of Government, which ranged from the inept in India, where they have both a subsidy for solar power and a tax on it, to Swasiland, where the permitting process is quite counterproductive and oversight non-existent, to Colombia, where corruption prevents 12 million people from getting drinkable water. The dual role of governments and NGO's to achieve "technology transfer" was seen as non-productive, since technology developed in the West was too expensive, energy intensive, or relying on proprietary parts or systems, to be applicable.

Appropriate technology is confined, labor intensive and small-scale. It is more about meeting fundamental needs to feed one's family than it is about a career option.

In both Africa and India, the need was great for management of the enterprises. Both presenters felt that traditional MBA's didn't "get it," so they were looking for other options. A member of the audience commented that a new breed of "green" or "sustainable enterprise" MBA's was arising, some of whom come at business from a perspective similar to theirs.

All speakers stressed the need for equity investment, not loans.

Practical Implications, Originality/value: the session re-affirmed the notion that investments in Base of Pyramid technology are likely to yield real benefits to local people, and small financial returns. The value of technology transfer from the developed countries, of government assistance, and the scalability of technology serving BOP people were all challenged.

### Keywords:

BOP, appropriate technology, technology transfer, social return on investment, India, Swaziland

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