

Attaining Millennium Development Goals through Innovation: Understanding A Social Enterprise in Rural Rajasthan

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Abstract

The Millennium Development Goals (MDGs), which are meant to address a variety of issues ranging from extreme poverty to environmental sustainability, have offered assistance to the most deprived sections of humanity to combat their exclusion from society. The use of innovative technologies is given utmost priority in many parts of the world to acquire resources to tackle the issues featured under the MDGs approach. Pioneering individuals across the globe have used their entrepreneurial capabilities to strengthen the possibility of achieving the objectives outlined by the MDGs. The innovative use of social entrepreneurial ventures has become the most vibrant option in showcasing how MDGs play a role in rebuilding modern societies. A social entrepreneurial venture, Barefoot College, located in rural Rajasthan is studied in order to gain a deeper understanding of a successful social entrepreneurial venture and whether or not the model can be replicated in other areas to achieve the MDGs.

Key Words: social entrepreneurship, innovation, MDGs, barefoot approach

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“We must not fail the billions who look to the international community to fulfill the promise of the Millennium Declaration for a better world. Let us keep the promise.”

- Ban Ki-moon, UN Secretary General²

Introduction

Today, starting from European Countries where the notion of social exclusion/inclusion was born, to the United States where outer/inner class play a predominant role in disclosing the excluded, to African countries where people lack the minimum means to sustain themselves, and to India where caste and economic factors play significant roles in indentifying the affected, the exclusion of the underprivileged or less-fortunate within communities and their inability to climb new heights still exists as increased stratification of society appears to follow patterns of growth. On the one hand, the failure of various welfare states/governments to address the needs of the people is one of the biggest causes for this predicament. Yet, population growth, especially in the developing countries, can also be accredited to elevating the problem. In the early 20th century there were only 1800 million people whereas by the end of the century it had reached 6400 million; a sixfold increase. Further, the United Nations estimates that the population is projected to be 9000 million by end of 21st Century which would again be a significant increase (United Nations, 2004).

When we look at the actions of the state it does not seem that they have any other role to offer except to ignore the poor or depend on charities to support the growing tide of the poor and excluded. This is especially quite clear in the third world countries. Sometimes people may get re-excluded (Krishna Reddy, 2008) as they are not in a position to articulate their problems to the outer society, as and when the state behaves against the interests of the excluded. This has been proven in case of the tribal peoples of India who were displaced by various developmental projects. These indigenous groups, in the first instance, fell under the realm of exclusion and later they were displaced without proper rehabilitation and once again their voices were ignored. Altogether this static situation amounts to social re-exclusion through the exclusion of the excluded that were in the process of inclusion. Several decades of work by various civil society organizations to sort out different social problems seem to have been in vain as the areas of exclusion have been widening.

It is also believed that the 20th century technologies although making life very easier in certain aspects, have also attributed to the economic and environmental collapse. Terrible diseases such as swine flu (H1N1), HIV, over-population, wars, terrorism, to name a few, are spread through avenues of increase ease of travel and the widening influence of the social media. So, parallel to the exclusive development³ that the globe has experienced, there is a series of social drawbacks that has been warring against the sustenance of human life in this millennium. Subsequently the freedoms and choices of poor are minimalised against what neo-liberalism promised. In general, the 'state' has failed to address the social inequalities, ignored the interests of the poor and instead have further elevated levels of exclusion. This situation is not limited to any region or

² United Nations.,u.d. Mullenium Development Goals must be Met, UN Secretary General Says Ahead of September Sumit - Press release. Retrieved from http://www.un.org/millenniumgoals/pdf/mdg_pressrel_sept2010.pdf on 13th November 2013.

³ It holds exclusive nature as it failed to attribute for the inclusive growth.

community, the problem of 'exclusion' has spread across the continents. To eliminate the same, there is an emerging need of adopting policies beyond national and continental boundaries to achieve equality on a broader scale. Identifying the lacuna in the social structures, the United Nations, which was institutionalised to promote certain mechanisms in order to solve international economic, social, cultural and humanitarian problems, proposed Eight Millennium Development Goals (MDGs) to be achieved before 2015 in order to ensure 'inclusion' of the excluded in the mainstream. The MDGs outlook ranges from end of extreme poverty, universal education, gender equality, child health, maternal health, combat HIV/AIDS, environmental sustainability and global partnerships.

Service Delivery to achieve Millennium Development Goals: Strengths and Failures of Current Approaches:

MDGs are aimed to attain social and economic inclusion with the notions of international cooperation. These objectives are considered as a blueprint and agreed upon by all the countries and the leading institutions in the world in order to sustain human dignity and freedom through equal distribution of resources. All the MDGs are interdependent and each one has greater implications for the other. The Open Method of Cooperation (OMC) of the European Society towards eradication of social exclusion is also reflected under the broad realm of MDGs⁴. Very significantly 189 countries have signed on to the MDGs initiative with the aspiration of achieving them before the due date.

The MDGs approach so far has achieved mixed results. The 2010 update illustrates that the first MDG implies that Sub Saharan Africa, Southern Asia, Commonwealth of Independent States in Asia are experiencing high poverty and might not be possible to eradicate it if the prevailing trends persists. The reduction of poverty by half has been not possible even in a single region. The progress in the Western Asia region has deteriorated. Both Eastern and South-Eastern regions of Asia, though still affected by high poverty, see greater possibilities for eradication. Northern Africa and Europe are highly motivated towards the eradication of poverty. Both the creation of decent employment and the reduction of hunger also hold the same ratio in terms of progress that has been achieved since the beginning of MDGs.

Considering poverty as one of the vital reasons for all other related human deprivations, other MDGs have not been achieved as was expected. These approaches have failed to utilize the resources available locally in order to achieve the MDGs. Altogether, the present approaches to achieve MDGs have not been able to negotiate for the resources available locally and services needed to provide for the deprived. As a result the growth in achieving MDGs is frighteningly slow. With the poor growth rate in the MDGs status, it is seems quite impossible to achieve these goals by end of the expected time duration (i.e. 2015) unless there is a strong commitment from not only the national governments and NGOs but also from all other civic organizations (United Nations, 2010).

With these issues in mind I would like to present social entrepreneurship as an innovative developmental approach which can negotiate between the local resources and services needed for the deprived. In contemporary world, social entrepreneurship is acquiring a significant momentum both in academia and society. Social entrepreneurs are rapidly transforming the social

⁴ OMC is a strategy that the European Union adopted in order to overcome the issues of exclusion across all the European countries irrespective of their financial stability. OMC allows the poorer countries to seek resources from other countries with in EU in order to attain social inclusion at an equal line par compare with any other European country.

settings in which they live. Schools like Public Policy, Management and Social Sciences are trying to conceptualise the magnitude, impact of social entrepreneurs. In general, social entrepreneurs are social change makers, who possess certain behaviours to act innovatively and entrepreneurially in order to address social problems. Their presence in social issues make the debate about 'reaching the poor' much easier. These hybrid leaders, who have borrowed working breed from entrepreneurship and NGOs equally, have been active in terms of realizing the MDGs in the fastest possible mode. This paper attempts to see how the actions of one such social enterprise located in the State of Rajasthan, India translate into the achievement of the MDGs. Before the analysis on one such social entrepreneurial venture, a small discussion on the magnitude of the notion of social entrepreneurship is necessary.

Social Entrepreneurship

Dees (2001) comments social entrepreneurship as a concept describes innovative approaches individual or groups adopt to address social issues, often uses the mixed methods of business philanthropy and non-profit organizations. Drayton (n.d) while explaining the capabilities of an entrepreneur emphasizes that "social entrepreneurs are not content just to give fish or to teach how to fish. They will not rest until they have revolutionized the fishing industry" (www.ashoka.org)⁵. In general, social entrepreneurs are the practical dreamers, having the skills and vision to solve today's practical problems of society and create projects to better tomorrow.

The uniqueness being a social entrepreneur allows him/her to conduct different experiments in order to locate better ways of service delivery (Dees, 2005). During the legacy of State withdrawal from its welfarist approach, the welfare of the excluded can be better attained through social innovations proposed by social entrepreneurs. According to international social entrepreneurship of non-profit organization, Ashoka,

The job of a social entrepreneur is to recognize when a part of society is stuck and to provide new ways to get it unstuck. He or she finds what is not working and solves the problem by changing the system, spreading the solution and persuading entire society to take new leaps (Grenier 2006, p 2).

Dees (2001) argues that social entrepreneurs are motivated by the strong aspiration to create sustainable value that encompasses an economic, social and environmental touch. Further, he envisages that social entrepreneurs can work in any sector and use earned income strategies to pursue their social objective. They differ from traditional entrepreneurs in two significant ways such as their earned income strategies are tied directly to their mission and they abide by a triple bottom line, which encompasses the social, financial and environmental returns.

Social entrepreneurs across the globe highlight their activities constantly and use their existing skills where activities are linked with earned incomes and self-sustenance. NGOs in order to deliver the services, approach various charities for accumulation of finance in the form of donations or the business sector seek their contributions under corporate social responsibility. Somehow, NGOs have failed to achieve what they are meant for due to the funding agencies fixed terms and conditions (Seelos and Mair, 2005). In general NGOs dependency on funding agencies would not allow them to go for experiments with innovations in the social domain. And without innovation it is impossible to achieve MDGs. Thus NGOs which opt to use innovative ways can obtain funding through Govt. programmes or with social entrepreneurship. Social

⁵Retrieved on 11th December, 2013 from Ashoka's webpage <http://usa.ashoka.org/social-entrepreneurs-are-not-content-just-give-fish-or-teach-how-fish>.

enterprises can accumulate finances on their own with the help from their ventures. Adding to the trauma that the NGO sector faces, they have difficult times ahead due to the increase in their number. A study commissioned by the Indian Govt. notes that India alone has 33 million NGOs, one for less than 400 people, which is a several fold increase over last two decades (Indian Express, 2010). So, funding becomes a very critical issue.

The salient features of social entrepreneurship are using innovation and acting entrepreneurially. Earning through their social ventures is the core for the social entrepreneurial venture, and it distinguishes them from any other nongovernmental organization. Employment generation to the needy, mobilizing resources from the communities for whom they work and providing goods to the deprived sections at cheaper rates are some of the activities that are undertaken in order to pursue the goals of a social entrepreneur. In fact, across the globe social enterprises have gained importance due to the social entrepreneur who is believed to have unique characteristics, which can be used to scale up the ventures. Barefoot College in rural Rajasthan is a social entrepreneurial venture that has been working to uplift the poor and reduce the magnitude of the poverty for almost four decades. The following section scrutinises how the Barefoot College innovative attempts prompt attainment of MDGs.

Methodology

This paper is based on both secondary and primary sources of data. For secondary data, books, articles in refereed journals, reports prepared by different organisations on social entrepreneurship and MDGs have been used. The data for present paper has been derived from a larger study that was conducted between 2008 and 2011. The data was collected in four phases during the period.

The respondents of the study include Barefoot College employees, community members and second level social entrepreneurs who have been heading various sub divisions of Barefoot College. A semi structured questionnaire was used while collecting the data from Barefoot employees and second level social entrepreneurs whereas group discussions were carried out with the villagers, where several men and women in the villages have participated. On an average each group discussion had about 8-10 people participating in it with equal representation from both men and women. The semi structured interviews and group discussions were intended to understand the usage and impact of the services that are being delivered by the Barefoot College. All the interviews were held at the work places, and their respective houses. All the interviews were recorded and then noted in the field notebook. Further the data was coded and later analysed.

Social Entrepreneurship and MDGs: A Case of the Barefoot Approach

The Barefoot College was formally registered in 1971 in Tilonia, Silora Block of Ajmer District, Rajasthan, India. The Barefoot College empowers the poor and marginalized in terms of building their capabilities to demonstrate their own inclusion. Though it is a College, there are no class rooms or lectures by experts or teachers. Everyone present in the College is an expert. The philosophy is learning by doing. They are the teachers and they are the students. Significantly, no one has a degree and they even lack ten years of formal schooling.

The Barefoot College activities are pro MDGs, and the College's active participation in achieving the goals has been high since the inception of MDGs. Almost all the issues that the MDGs talk about are areas of concern for the Barefoot College even before the inception MDGs. In order to achieve MDGs the Barefoot approach has opted a unique way which has feasible options to prepare the poor to face poverty. The American proverb 'pulling yourself up by your bootstraps' has been the Barefoot core method in training and educating the rural poor as a way of inclusion.

This ultimately brings employment; thus generating income (lack of which one of the first reasons for social exclusion).

Barefoot College emerged due to the failure of traditional ways to empower people. Here traditional ways include, top-down, insensitive and expensive ways that, disempower the marginalized, the exploited and the very poor (Elkington, 2008). Traditional approaches failed to build the capabilities of the poor in the area in order to empower themselves; however, Barefoot College has succeeded for decades. Traditional organizations including various NGOs and Governments have failed to prepare the poor to stand on their own. This is due to their option of providing the goods at free of cost and thus making them dependent upon these organizations. Hence, the poor and marginalised have been excluded from right to choose 'what they want?' and decide 'how they want to live?'

In order to achieve the drafted objectives in MDGs various innovative ways and appropriate training programs must be taken up for the target group to face deprivation with their enhanced capabilities. Barefoot College offers the poor right to choose however they wish to live. Most of the activities/projects that Barefoot College undertakes are self-sustaining. They mobilise resources from within the communities, and communities are clear that, there should not be any service given free of cost. The College, after deliberate discussions with the communities came to the conclusion that there should be no charity in the name of development. And communities have clearly stated that they do not want to live as beggars through dependence upon charity. The underlying proclamation is that they are to provide employment that offers freedom to lead a dignified life (Roy, 1997). This is the reason the Barefoot College has believed in a bottom-up approach in order to provide space to the very poor in the decision making process on agendas that affect their lives. The concept might look too simplistic but it has worked well and has been replicated in several states of India and also abroad.

The target group of the Barefoot Approach is the poor, the impoverished, the economically and socially marginalized and the physically challenged living on less than \$1 US per day. The Barefoot approach offers empowerment by acquiring skills through which they can demonstrate their own capabilities to stand on their own and to earn two square meals a day. All activities are made poor friendly. For example, everyone sits, eats and works on the floor. In regards to wage preferences, College has encouraged a clear differentiation between market wage and working wage and prefers a working wage⁶. Such wage calculations allow each and every one to contribute to the reserve fund of the organization. The reserve fund has been extremely useful to the College in order to promote itself towards being a sustainable venture. Taking risks, opportunity to fail, and then succeed are the unique experiences that the people on College campuses are trained within and the reserve fund provides security against failure. This training and knowledge acquired over a period of time creates new avenues for the disadvantaged.

Altogether the College strives to render sustainable solutions to the unsolvable problems of the rural areas such as migration, lack of education, technological ignorance, and water problems. The issue of rural to urban migration is an area that occupies a predominant role in the Barefoot approach. Reverse migration is made possible with the Barefoot initiatives. Reverse migration reflects people coming back from urban areas to their villages. Barefoot College believes a notion that the problem of migration can be easily tackled by promoting rural employment. This underlying principle aims at maximizing the rural capabilities to increase employment in the rural areas.

⁶ Market wage is always high based on the demand whereas the wage that is provided at Barefoot College is constant that is acceptable to all who work in Barefoot and based on the principles of state minimum wage laws.

Let us observe the kind of self-confidence that the Barefoot brought to the illiterates who have nowhere known about the technologies that today's world accelerating,

Nobody in our family knows how to read and write. We are three brothers, all farmers. We have 15 acres of agricultural land. Now all our children go to school. This is the first time such a step has been taken and I am glad. I joined BarefootCollege twenty years ago in 1977. I used to take water to the houses with Kanaram and his donkey. Because I was a farmer I was asked to work on the field to grow food for the centre. At that time I was working on the poultry farm, looking after chicks for one year with Vasu. It was also my job to take people from the Centre on a tractor to the night schools. In 1986 I was asked to build the New Centre. I was – and still am- illiterate. But that did not worry me. I had already done so many jobs at the Centre. This was just one more. It took one year to dig the foundation. I was asked to supervise the work of about 50 rural masons and over 100 daily laborers. It took two years to build everything. As architect tried to draft blueprints but they were changed so often that they were useless in the end. The project was a joint effort; everyone who was going to live there was consulted. Everyone's views had to be respected. So the location of doors, windows, and roads changed every day. Rafiq, the Muslim blacksmith, made the doors and windows in his rural workshop in Tilonia (Roy and Hartigan, 2008).

Almost all MDGs have been fulfilled with the initiations of the Barefoot approach. And in fact the Barefoot approach must be seen as an obligation which has been working beyond the expectations of MDGs. This is because the Barefoot approach strives to uplift the individual's capabilities to empower them without depending upon any external factors; whereas, MDGs simply asks in order to empower the individual the services are to be provided. Barefoot College, throughout its history, strove to solve most of the unsolvable issues as pointed by MDGs. How the Barefoot approach addressed the issues mentioned in the MDGs is covered below.

MDG 1

'Eradication of extreme poverty' is made possible through the provision of training on various issues to the illiterate and semi-literate rural people through which employment is generated. Since inception the Barefoot approach encourages dependence on their own financial ventures which today has changed several hundred thousand people's lives through the education/training of the rural masses in various skills. Generated employment is being used to promote various services at cheaper rates to the rural areas in a no-profit and no-loss mode. As a whole it has been working as a circle through empowering people in the first instance followed by the reconstruction of the rural areas with the technologies that the people themselves own. Rekha one of the employees in the College states,

Barefoot experiments are great, because uneducated people get employment. More than that, they get opportunities to learn and speak with others, we discuss several things with educated people who come here to interact with us. My lifestyle has been drastically transformed. When I was in my village, I didn't know anything. At the same time, when I was a housewife, whatever my husband earned, it was not sufficient to sustain the family. But now, we both earn and share the family expenditure. More than that, it is all about learning and sharing the knowledge with others, and it is about freedoms that we acquire to lead our life with dignity.

The interviews with the respondents illustrate that eradication of poverty doesnot need any great things to be done.It is about identifying the knowledge and skills that the poor own and train them or provide resources to become masters. It all will help them to climb out of the poverty trap.

MDG 2

While efforts are undertaken as prescribed in MDG 2 for ensuring children both boys and girls will be able to complete a full course of primary education through the night schools for those who need to address family needs during the day time. The Barefoot approach started in the initial stage with the experiment of educating a community on the issues related to lifestyle concerns of a community. Barefoot stresses that without providing education it is impossible to enhance the capabilities of the rural masses in order to empower them to stand against the deprivations that they have faced since their childhood. Here Barefoot differentiates between education and literacy and follows Mark Twain's quote, 'never let school interfere with your education'⁷. The College has succeeded in terms of providing space for the rural illiterate poor to do wonders using their extraordinary capabilities which were miscalculated and dismissed.

The College runs pre-primary and night schools to educate the children. The youth selected as teachers must undergo a residential training camp for 30 days. The curriculum, unlike formal schools, is decided by the teachers based on practical learning that primarily fits the local environment. The curriculum, for example, includes information related to common civil needs such as how does a post office or a bank or a police station function. Barefoot teachers are selected by the rural communities wherever the night schools are operated. The target population to recruit as teachers in most of the cases are unemployed rural youth. Thus the main intention under the Barefoot approach is to initiate an education system according to the needs of the learners. The schools are reoriented in terms of mutual learning, where teacher learns from the children and vis-à-vis.

The night schools are one of the dynamic approaches to eradicate illiteracy. They are the solutions for the unsolved problem of child labour. So far the governments and NGOs working on child labour issues have failed to address the lacuna between family needs and child rights. Hence, the whole approach 'abolition of child labour' has been criticised by the poor. But with the Barefoot approach, the night schools are entirely to provide education for the rural children who cannot afford the day time education due to the family's financial situation. Thus, the Barefoot approach addresses well the need and creed of child labour and a child's education at the same time.

The Barefoot night schools are scattered in six states i.e. Assam, Bihar, Madhya Pradesh, Orissa, Uttaranchal and Rajasthan. These schools have been maintained and employ 714 Barefoot teachers of which around 200 are women. In several cases Barefoot prefers to recruit the night school graduates as their employees. A few respondents have said that, they studied at the night schools for four years and later attended day school for four years. After that, their studies came to an end due to lack of availability of a school in nearby towns. In view of difficult family conditions, they approached Barefoot College and were provided jobs almost immediately. They believe that they are given an opportunity to give back to the organisation that has nurtured them and to the community by working in the organisation.

More than 3000 children attend these various night schools of which 2000 are girls. As a whole the Barefoot approach (including pre-primary as well night schools) reaches 8000 children including 6000 young female students. Community based committees in the areas where the night schools are located coordinates the activities of these schools with Barefoot College. So far in the 673 villages 235,000 children (among 170,000 are girls) are attending 714 night schools.

MDG 3

⁷Retrieved from <http://quoteinvestigator.com/2010/09/25/schooling-vs-education/> on 10th October, 2013.

As prescribed in MDG 3, 'Promote gender equality and empower women' (<http://www.un.org/millenniumgoals/gender.shtml>) is respected in the functioning and activities of Barefoot College. About 60 per cent of the children who attain education through night schools are girls. Issues mentioned in the MDGs such as a) *Women are largely relegated to more vulnerable forms of employment; b) Women are over-represented in informal employment, with its lack of benefits and security; c) Top-level jobs still go to men - to an overwhelming degree; d) Women are slowly rising to political power, but mainly when boosted by quotas and other special measures* - are addressed through preferring women in most of the training and propelling them towards empowerment. The three non-negotiable objectives of Barefoot are:

- i) Provide vocational training to semi-literate and illiterate men and women through the process of learning-by-doing;
- ii) Reduce drudgery of rural women and girls by providing them access to education, vocational training, health care etc.;
- iii) Empower rural women socially, economically and politically, bestows the attitude of the approach towards equalizing the gap between the genders.

Women have been made aware about rights and privileges in order to fight against the social evils in society. They have been trained to fight against the social evils such as child marriages, dowry, minimum wages etc. Women groups have been formed and several social movements were carried out by the women in order to address the goal of social equity. Barefoot approach uplifts women and asks them to stand on their own even once the Barefoot structure is no more.

Most of the activities of the Barefoot College have been owned and controlled by poor women. Women have been empowered to work as solar engineers to work with their capabilities as equals to their male counterparts. An illiterate woman's doorway in the area of solar technology itself is an unexpected development. This approach gained a lot of public attention in the communities which were never previously encouraged women in this area. Women showed enormous confidence in rendering their services to their communities/regions, which, in turn, also helped them to gain a respect in the communities. Barefoot so far has trained women to become solar engineers, water engineers, school teachers, computer trainers, hand-pump mechanics, masons, architects and last but not least, fabricators of solar cookers. Women who were earlier never out of their houses are now empowered through providing employment under the Barefoot approach. One of the respondents says that before joining the College she was just looking after her family needs as a house maker and after she became more independent. Earlier, she was only restricted to the kitchen, but now her sphere has been widened from that of family to society.

The College has been working with various Government initiatives, including the recent ventures like self-help groups. So far the College has reached 62,500 women in their 3095 rural women self-help groups helping them to fight against exclusions of poverty, dowry rights, domestic violence, minimum wage, bride burning and land ownership. The status of women, with the help of the College, has been elevated to a predominant position in society thus making their lives brighter. So far the Barefoot approach has created employment opportunities for 331 women Barefoot solar engineers, 39 Barefoot hand pump mechanics, 665 Barefoot doctors/midwives, 20 Barefoot veterinarians, and 2300 Barefoot artisans. Earning incomes raised the living standards for the women. This employment has also resulted in raising levels of respect in not only their families but also in societies where they live. Earlier those who have seen women as incapable now realized that women are as equal as men provided equal the opportunities.



MDG 4, 5 and 6

The goals of *reducing child mortality, improving maternal health and combating HIV Aids, Malaria and other diseases* have been addressed through community health centres and Barefoot midwives. So far the child mortality has fallen sharply. All the workers of the College are given free medical access through the campus health centre. This has also certainly helped to avoid maternal deaths. The sixth MDG promotes awareness within the communities around the causes and consequences related to HIV, The awareness is attained through the village level programmes like puppet shows, health camps etc.

MDG 7

To *ensure environmental sustainability*, several appropriate technological advances have been made in the villages/rural areas by urban experts. However, villagers have to depend on the urban experts for repairs and maintenance of technical equipments. So, on the one hand the technology has made the life of the rural people easier and on the other hand, it also makes them dependent on urban experts. Hence, the Barefoot approach provides education that helps rural community members to understand the technologies in order to adopt them in their communities. That discourse asks the communities to manage, own and control the technology. Just providing the technology to the rural people will not help them to overcome their problems. The College identified that it should increase certain capabilities among the masses to install the technology. This approach enables the poor to commit mistakes under the learning-by-doing phenomenon.

Barefoot Solar Engineering is the most remarkable area that the Barefoot is touched upon. In 1984, this initiative was created by the College with a small experiment to provide solar power generation to a community health centre. Barefoot believes that Illiteracy must not be a problem to become an engineer. Further it envisages that nothing is impossible, provided that skill training is undertaken. Trust is needed. Hence, the most excluded in the communities like women and illiterates were given training to become solar engineers. As of now Barefoot Solar Engineers (BSE) have created or fixed solar power systems that equals the power output of a large centralized solar power plant in India. It has benefited over 90,000 of the poorest households in India alone. The College has chosen to focus on installing solar power in the Himalayan areas where -40o Fahrenheit weather prevails. Altogether, BSEs have electrified around 458 villages. Monthly contributions from each family for repair and maintenance are collected in order to sustain the venture. The solar power project has also resulted in decreased health problems and elevated the living standards.

The use of solar energy has decreased the consumption of wood which reflects the decision not to cut the trees wherever the College operates. This initiative has also resulted in reducing CO₂ emissions and related greenhouse gases which cause the greenhouse effect. Solar energy has substituted cutting of the trees and shrubs for cooking, heating and lighting. Diesel and kerosene consumption has also been minimized. The massive installation of solar systems has influenced global warming by reducing the consumption of several thousand litres of diesel and kerosene fuel. As a result it is estimated that 1.2 million tons of carbon emission has been stopped from entering the atmosphere. To combat respiratory diseases due to toxic smoke emitted while burning kerosene, coal and wood for cooking and lighting indoors solar way has been a prominent model to eradicate the said problems.

As of now two hundred thousand people are benefiting from solar electrification. This includes solar lightening to 9347 houses, 274 night schools and the distribution of 4736 lanterns. A further 599 villages utilise solar power, generating a total of 550 kwp electricity per day reaching 11,900 families in 14 Indian states. Together this action has prevented 1.86 million tons of carbon emission every year thus helping communities not to contribute to the pollution.

MDG 8

Global partnerships are made possible through cross cultural and cross national as well regional representation in the College in order to learn from each other and to understand the problems of the poor also belongs to the other regions. This regional representation allows them to share and improve their practical, traditional knowledge and skills. There are people from across 36 least developed nations, who go to the College and learn how to become solar engineers. They have gone back to their respective communities and installed solar power in their respective villages. Local people also get to know about other cultures; thus, creating a cross cultural experiences for those who work in the College.

Through the global networks they train and empower women from various other nations. In the last 13 years the College has trained women from other countries in Asia, Africa and Latin America to assemble, install, repair and maintain the solar photovoltaic systems in their own villages. The College offers not just training but also promote the confidence levels of the illiterate women encouraging them to emerge as leaders. Many women educated in Tilonia have made history through installing solar power in their own villages in their respective regions.

Implications for Policy Making

The concept of social entrepreneurship and Barefoot approach have larger implications for the greater social change. In order to do it so, some policy implications are needed on a broader scale.

1. Barefoot initiatives such as night schools, solar technology and rain water harvesting need to be replicated in other disadvantaged communities across the globe in order to attain MDGs on a sustainable basis.
2. In order to replicate innovations across the nations, global partnerships need to be encouraged. Policies to ease the process must be introduced.
3. Local resources need to be used while addressing local problems.
4. Social enterprise research needs to be encouraged on a global scale. So that innovations practiced in remote areas will come into light and there is a greater scope of scaling the innovation elsewhere in order to achieve greater social change. Except in very few reputable universities and institutions across the globe, social enterprise research is given the support it needs for true social change to occur.

Conclusion

The Barefoot approach offers a deeper understanding of the capabilities of the most deprived, illiterate rural masses, whose capabilities so underestimated. It is not about an initiative that is practiced in different corners of the globe. It is about approaching communities innovatively and elevating their capabilities. Using their own capabilities to empower themselves is a unique experience, altogether it uplifts courage in the rural masses and poses various questions to the urban based intellectuals and governments across the globe. Community participation in the whole initiative has also promoted principles of good governance. Altogether, the Barefoot approach has shown the impossible is possible and that there are innovative methods for achieving the MDGs. Due to the success of the approach it has been replicated in 15 diverse Indian states as well 36 other poor countries in Latin America, Africa and Asia. The Barefoot approach is an approach which is suitable for any environment, region in the world. Replication of the Barefoot approach with the help from various governments would definitely make the difference in achieving the MDGs on time and perhaps sooner.

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