



Sustainable Environment: Using Microfinance and People's Own Initiatives to Propel Investment in Renewable Energy, Water and Sanitation

In the morning of Wednesday, April 8, **Rose Wanjohi**, CEO of Kenya ECLOF, chaired the workshop on “Sustainable Environment: Using Microfinance and People’s Own Initiatives to Propel Investment in Renewable Energy, Water and Sanitation.” This workshop featured four of the leading experts in the growing field of environmentally sustainable microfinance, which take a triple-bottom line approach to microfinance. **Ziad Al Refai**, Executive Director of the Jordan Micro Credit Company (Tamweelcom); **Tamim Islam**, Director of Development at Grameen Trust in Bangladesh; **David Kuria**, CEO of Ecotact Limited in Kenya; and **Patrick Lumumba**, the East Africa Water Credit Program Officer for Water.org, each shared comprehensive accounts of their innovative programs which are taking microfinance to the next level, illustrating the vast opportunities for the sector to serve not only the poor, but to support the planet through renewable energy, and socially and environmentally sound practices as well.

The most prevalent recurring theme throughout this incredibly rich discussion was the great need for awareness building activities in regard to the importance of sanitation, clean water and personal hygiene as well as renewable energy products and environmental sustainability. Other issues that were highlighted throughout the panelists’ remarks were infrastructure challenges; the importance of training and education, the need for partnerships and collaborations with key stakeholders, the lack of existing microfinance products for water- or energy-related products and the enormous untapped market for such products, and the ability for renewable energy products to scale up in densely populated communities.

Rose Wanjohi, CEO of Kenya ECLOF, launched the panel discussion on “environmentally sustainable microfinance” by outlining three key focus areas for the panelists to address. First was the identification of potential opportunities for microfinance institutions in renewable energy, water and sanitation. The second area was identification of possible challenges that hinder MFIs from rolling out products in renewable energy, water and sanitation. And third was determining the roles and responsibilities of the various stakeholders in facilitating the successful delivery of renewable energy, water and sanitation products.

The first panelist was **Ziad Al Refai**, Executive Director of the Jordan Micro Credit Company (Tamweelcom), who was also a winner of the 2009 Social Entrepreneurship Award at the World Economic Forum. “Over the last two years...at Tamweelcom, we started to think about how we can serve the segment through providing environmental products that would help micro-entrepreneurs and the productive poor gain access to clean hot water or to use free energy resources in their daily life,” Mr. Al Refai remarked.

Wednesday, April 8, 2010

10:45 AM – 12:15 PM

Lenana Hall

Panel:

*Chair: Ms. Rose Wanjohi,
CEO, Kenya ECLOF,
Kenya*

*Mr. Ziad Al Refai,
Executive Director,
Jordan Micro Credit
Company
(Tamweelcom), Jordan*

*Mr. Tamim Islam, Director
of Development,
Grameen Trust,
Bangladesh*

*Mr. David Kuria, CEO,
Ecotact Limited, Kenya*

*Mr. Patrick Lumumba, East
Africa Water Credit
Program Officer,
Water.org, Kenya*

“In December 2008, we decided that we should develop something that would help the poor and micro- entrepreneurs use the sun’s energy to improve access to hot water at lower costs than usual. So we partnered with a local manufacturer in Jordan that produces solar panels, and at the start we got special prices because we are talking about quantities. ... The solar panels heat water for home use, shops or micro-entrepreneurs that use hot water in their daily work. ... [Also] these panels generate water that could be used in their heating system, which will ... reduce their usage of fuel,” Mr. Al Refai explained

Tamweelcom faced a number of challenges at the client and institutional level in launching this new program. “In our targeted market, they don’t believe in using solar because in Jordan, 99.9% of people in households are wired for electricity. ... So awareness itself is very important because they [clients] don’t believe that they can save the earth if they use solar energy,” Mr. Al Refai shared.

“Internally,” he added, “one of the biggest challenges that we faced ... was regarding our staff, which was used to promoting an intangible service, not selling a fixed asset.” So Tamweelcom had to address the culture and role of their loan officers. “We invested a lot on training them and it’s very important. In the beginning we did a very small training, and we thought that it would be enough, but then we discovered that we have to do [more] in-depth training to explain ... how they can sell solar products.”

The second panelist was **David Kuria**, CEO of Ecotact Limited in Kenya, who also received the Social Entrepreneurship Award from the World Economic Forum in 2009. The outspoken Mr. Kuria captured the attention of the room with his opening comments, “I will tell you the story of a passion in what we call the ‘eco toilet’, which we started around 12 years ago here in Kenya, and ... [we will be going to] Tanzania and ... Uganda. The passion lies in the challenges ahead in terms of urban development and the issues of increasing urban poverty and housing, especially in Sub-Saharan Africa, where we have large global slums that are not serviced.”

“So there are several challenges that we want to address with this story of the eco toilet. With great inspiration from Mahatma Gandhi, and my very simple question (especially when I address a crowd): ‘Anybody who is a user of a toilet? Do I have a client? Perfect’.”

“Currently we are talking about nearly three billion people without access to sanitation globally. I think that’s a major challenge – when through ICT we are revolutionizing the whole world—yet three billion people have no access to sanitation. Very basic. ... So the biggest challenge is: Who is supposed to provide sanitation to these three billion people?”

Mr. Kuria continued with an overview of his transformational plan to address sanitation challenges in Sub-Saharan Africa, “Sanitation, for us, is the most complex of the pillars of transformation. When you talk about sanitation, it’s a very private affair. ... It’s not something we are going to discuss and debate [in the open] to find a solution.”

“So there are issues that we really need to transform,” he outlined. “One is the urban landscape. What is the position of a toilet in our cities? Is it visible? Is it fair? Another is social transformation. What’s the position of toilets in our society? In some of our communities in Kenya, they don’t even have a word for “toilet.” So, how can it exist if you don’t even have a word for it? The third is technology. I think we also need to catch up with the pace of technology, and with the growing demand for water in our cities; we need to look at really sustainable sanitation systems”

“We [also] need to make sanitation *sexy* and address it from different perspectives,” Mr. Kuria emphasized. “[For example,] we have engaged the top comedian in Kenya and we are now looking for the top comedian in Tanzania—purely for sanitation marketing. We have engaged beauty pageants to start talking about the relationship between beauty and hygiene. We have used the churches—religious leaders—to discuss the] ... relationship between religion, Godliness and hygiene.”

“At the technology level,” he explained, “we are looking at exploring all options, such as UV water treatment especially in the slums, where there is potentially high water contamination; ... [conserving rainwater]; [capturing] biogas ... using biodigesters; exploration of a completely dry toilet; and [using] ... solar heating to ensure that ... waste breaks down effectively. ... We are hoping in the next three months to release the first of our urine fertilizer here in Kenya So we are looking at all kinds of technological innovations that can help us transform, and again, looking at all ... these businesses, whether you are talking about UV, biogas, etc.—that’s purely a potential revenue.” From human waste collection, to transportation to treatment facilities, to the treatment itself, Mr. Kuria emphasized that it is all “potentially a big business.”

Mr. Kuria concluded that to highlight these issues effectively and drive such sweeping change, community based organizations and MFIs have roles to play; however, he also asserted that partnerships with government, the private sector and the media are essential to achieve the large-scale success they seek.

The panel discussion continued with remarks from **Tamim Islam**, Director of Development at Grameen Trust, who shared insights on the outstanding work of Grameen Shakti in Bangladesh, where only 40% of the country is wired for electricity. “To challenge this, we have come up with a mechanism where microfinance and renewable energy comes together to serve the rural poor,” he declared. Grameen Shakti, started in 1996, is now the largest renewable energy company in the world serving the entire country with four core products: solar energy, biogas, organic fertilizer, and improved cook stoves.

“We have [sold] about 8,000 biogas plants, and 45,000 improved cook stoves,” he added. “One of the things about biogas plants is that a lot of these plants generate sufficient gas ... [to create] a business opportunity for some of the homeowners. They have pipes to neighbors and sell them gas from their biogas plant....”

“Improved cooking stoves are very important in Bangladesh because we do not have natural gas and other mechanisms to provide cooking, so we have invented these cooking stoves that generate greater heat and use less wood,” Mr. Islam highlighted.

“In terms of the solar panel, it is very expensive, so to get to the poor we have created a mechanism where they can buy the solar panel through microfinance.” ... [They repay through various installment schemes, depending on their cash flow.] “It has a one-year guarantee and a 25-year service contract. There are more than 350,000 solar panels installed in Bangladesh by Grameen Shakti. ... One way to impress people about solar panels is [to show them] that it is a business opportunity. You can use it to recharge mobile phones, or you can use it to add longer hours to your stove in the evening. It pretty much pays for itself, and this has made them more popular in Bangladesh and has essentially helped us grow really fast.”

“We should have more than 220,000 panels installed in this year alone. ... It is much easier in a densely populated country like Bangladesh [to get momentum going], but in a lot of places in Africa, where population density is a challenge ... [that can be more difficult],” explained Mr. Islam

Mr. Islam also took the opportunity to share some background on the Grameen Foundation Technology Centers and the important role that they play in the Grameen Shakti program, as well as their communities. “We have trained more than 3,000 women to make small parts for solar panels, lights, and connections so that we don’t have to import them. ... These women end up being the local service providers for the solar panels and the home electricity systems. ... It works out really well because a lot of times, women ... [are more comfortable] welcoming other women to come to their homes and fix these things.”

The final speaker on the panel was **Patrick Lumumba**, East Africa Water Credit Program Officer of Water.org in Kenya, who shared his global perspective on the water and sanitation sector, providing examples of current programs, in addition to analyzing current opportunities and challenges for MFIs in the sector. Water.org, is a non-profit organization based in Kansas City, which is very active in South Asia, East and West Africa and Central America. “WaterCredit is an interesting model that ... enables households to gain access to credit; it began in 2004, and it has operations in Bangladesh, India, Kenya, and hopefully we intend to scale up in greater parts of Africa,” Mr. Lumumba mentioned in his opening.

“Microcredit for water sanitation is an innovative application of microcredit or a microfinance tool that enables people to access clean water and sanitation products. Some of the works and products that are being implemented worldwide are toilet septic tanks and latrines ... for sanitation; water connection and water harvesting packages (we are talking about tanks); water asset financing ... for pumps, sprinklers, and that kind of thing,” he explained.

“Then, [there are also] SME loans for ... [projects such as those] implemented by K-REP Group, with the support of the World Bank and the support of community based organizations, to implement large scale water borehole products. And there are a lot of water value-addition products; ... for example, irrigation ... and fish rearing as a result of getting access to water. ... [And] it is becoming a more and more lucrative product,” he observed.

“In terms of opportunities for MFIs,” he reported, “we focus so much on direct income revenue for activities, but there are opportunities, if proper interventions are done in water and renewable energy, whereby we could save our clients from

incurring a lot of direct expenditures, such as going to look for water for long distances, or medical expenses [for waterborne diseases]... [Additionally, there are] opportunities to retain our clients by giving them a more diversified range of products, and there are also opportunities in terms of scaling-up existing successful donor [or government] initiatives. ... [For example,] there is an MFI in Kenya ... that began its operations from a government irrigation initiative.”

“Moving onto to the challenges,” Mr. Lumumba recounted, “we have done a market assessment for Kenya and Uganda in partnership with Micro-Sil and ... we noted in most financial institutions including banks, MFIs and SACCOs [that] there are no clear renewable energy, water and sanitation products. So you can’t implement a credit initiative in this area if you don’t have a specific product for to meet those needs.”

“There is a lack of expertise in this area. ... And there is also perceived risk ... associated with this sector of products,” he added. “MFIs ... are used to analyzing or appraising entrepreneurs based on direct income. ... But when you are assessing renewable energy, water and sanitation loan products, there is a lot of indirect income generation [that needs to be taken into account as well].”

Other challenges that Mr. Lumumba identified were: before sales, logistics, and after-sales issues (as people often view the implementation phase of this work as a role for local government); that there is a lack of support in terms of market development; that local regulatory frameworks for MFIs may be inhibiting; and that there is very little tracking for such social products in MFIs’ information systems.

“Possible solutions,” he offered, “[include] assistance to develop appropriate products, partnerships with manufacturers, integration of research and product development in our activities as MFIs, or establishing of special projects departments. [For example,] I have seen this at K-REP Bank whereby [they also involve the K-REP Development Agency] to handle donor driven projects or products ... before determining their sustainability and rolling them out to the bank. [The right] partnerships or collaborations can address the lack of expertise. ... [Regarding] logistics challenges, I think this could be done if partnerships are well structured and well thought out. [Regarding the challenge of] inadequate capital, of course, [requires] convincing lenders, banks, and other partners of the sustainability of this product.”

“So what are we doing as Water.org? We are partnering with MFIs and banks, we are giving them subsidies for capacity building so that they develop products, train their staff, do market assessments—and in that regard, we are also creating a secondary ... [market for our work],” he concluded.

Following are a few key comments from the Q&A session:

Comments from Mr. Lumumba on water tanks: “Water harvesting products, are the most common water credit product, at least in Kenya and Uganda. ... And the most consistent way that MFIs have been doing that is by partnering with tank manufacturers, whereby a client seeks out such a loan, applies, and the MFI mobilizes or consolidates such applications, and presents them to the tank

manufacturer, who in turn distributes the tank to the client. The MFI then pays the manufacturing company, but ownership is registered under the client's name. So that is the most prevalent water credit product.”

“Challenges have been in terms of logistics, because sometimes the distributors or the manufacturers sometimes bring the tanks to the MFI branch offices, so we find that the branch office has been turned into a store, whereby there are several tanks that have not been ... [picked-up by their owners yet]. Those are some of the challenges that need to be sorted out logistically. As well as the after sales-issues that arise, because the tank either has broken down or is damaged, and the client claims that she can't use it, ... [because it isn't] performing. So, MFIs need to address after-sales service in partnership with the manufacturers.”

Comments from Mr. Islam on solar panels and solar energy: “[At Grameen Shakti,] we do import our solar panels. They are sourced from various places, from Europe and China, whoever gives us a better price. We are trying to figure out how to make them in Bangladesh, but the technology is expensive. The infrastructure cost is also very expensive. So we are trying to figure out what is more cost efficient for us, to import it or to manufacture it. It is pretty challenging.”

“Why solar? If there were anything else better, we would go for it. ... Even in the cities we do not have the power; we are a severely power-deprived country. ... So, this is something that is better than nothing. This is something that we can do; it's readily usable. You can just put it up, wire the house, switch it on, and it is there.”

Comments from Mr. Kuria on the cost and pricing of the eco-toilet: “The infrastructure cost of eco-toilet construction is about US\$20,000 per unit, and primarily what we have done is pure debt investment. ... We have developed two products now. [The first is for] all the eco toilets in urban areas where we charge 5 Kenya shillings per use. [The second is] in the slums, where we are charging USD \$1.22 per month, per family, irrespective of the family number. So they get a ‘mega card’ that they can use irrespective of the frequency of use. That is purely to promote 100% access in the slum area. So that is how the package is working.”

Comment from audience member: (*Translated from French to English*): “I come from Congo Kinshasa, and I am a Mayor. First, I thank all of today's presenters because at one point, I had little hope. They have given me hope in so far as this morning's presentations have tried to give me some answers. What has been said about sanitation, and toilets, is an experience that we underwent in our town when I inaugurated a toilet which rather looked like a restaurant. The people laughed. They were wondering why such a building would be installed for sanitary use. Therefore, somehow, I think that to change the peoples' habits, we need to sensitize them with adapted means and updated means. Everyone should know that a town's cleanliness is a concern. Therefore, I thank the person who talked about this urban sanitation, and I am so happy and encouraged.”

Comment from Mr. Kuria on sanitation issues: “As I mentioned in my presentation, when it comes to the issue of sanitation I think it's really a very confidential affair. It's not a public issue. It's also very private ... [and] really taboo in the parts where I come from. ... I think the perception ... is that if you go to the slums of Nairobi you will be shocked by how many Nokia phones are there, and we

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are still saying they can't afford water, they can't afford sanitation. And almost every household in the slum has a Nokia phone. So to me it's an issue of status, it's an issue of dignity. So when you are talking about water and sanitation and the dignity part of it, it's not for the poor. I think the quality of water we are taking is purely standard, whether you are rich or whether you are poor. And we need the same thing to apply to sanitation."

"So, to us, the eco-toilet we are putting in the middle of the city near our Parliament building perhaps for use by the Honorables, is the same facility we are putting in the slums of Nairobi—the same quality, the same standard—because to us the standards for personal hygiene are the same whether you are rich or poor. So, to me the approach in terms of marketing is more emotional than functional. The function remains standard. So, it's purely an emotional issue."



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