



Measuring the environmental performance of microfinance

Marion Allet

Environmental performance is becoming an increasing concern for all businesses. The microfinance sector is no exception. Today, a growing number of microfinance institutions are developing environmental management programs, and microfinance stakeholders are increasingly willing to monitor environmental improvement. However, no adapted methodology currently exists to do so. This article proposes a new tool to measure the environmental performance of microfinance institutions: the Microfinance Environmental Performance Index (MEPI). This tool is based on management performance indicators that have been adapted to the specificities of the microfinance sector. It measures MFIs' environmental performance along five dimensions: environmental policy, ecological footprint, environmental risk assessment, green microcredit, and environmental non-financial services. MEPI can be a useful tool for research and serve as a basis for environmental strategy planning, progress monitoring, and communication in the microfinance industry.

JEL Classifications: G21, Q01, Q56

Keywords: Microfinance, Environmental Performance, Indicators, Green Microfinance

CEB Working Paper N° 11/045
2011

Measuring the environmental performance of microfinance

Marion Allet*

Université Libre de Bruxelles, Solvay Brussels School of Economics and Management, CERMi
Université Paris 1 Panthéon-Sorbonne, IEDES, UMR 201 « Développement et Sociétés »

mallet@ulb.ac.be

Abstract:

Environmental performance is becoming an increasing concern for all businesses. The microfinance sector is no exception. Today, a growing number of microfinance institutions are developing environmental management programs, and microfinance stakeholders are increasingly willing to monitor environmental improvement. However, no adapted methodology currently exists to do so. This article proposes a new tool to measure the environmental performance of microfinance institutions: the Microfinance Environmental Performance Index (MEPI). This tool is based on management performance indicators that have been adapted to the specificities of the microfinance sector. It measures MFIs' environmental performance along five dimensions: environmental policy, ecological footprint, environmental risk assessment, green microcredit, and environmental non-financial services. MEPI can be a useful tool for research and serve as a basis for environmental strategy planning, progress monitoring, and communication in the microfinance industry.

Key words: Microfinance, Environmental Performance, Indicators, Green Microfinance

JEL codes: G21, Q01, Q56

* I would like to thank Isabelle Guérin, Marek Hudon, Marc Labie and Jean-Yves Moisseron for their valuable comments on earlier versions. I am also grateful to PlaNet Finance and ANRT for their financial support.

1. Introduction

Climate change, natural resource depletion, and pollution problems have put environmental issues high on the global agenda. Recently, these issues have also been raised in the microfinance sector. Promoters of 'green microfinance' emphasize that microfinance, like any other business or stakeholder, has a responsibility to the environment (GreenMicrofinance, 2007; Rippey, 2009; Van Elteren, 2007). Beyond their financial and social bottom lines, some microfinance institutions (MFIs) have started to look at their environmental performance. However, the triple bottom line approach is still little known in microfinance. In a survey conducted with 160 MFIs (Allet, 2011), 78 per cent believe that they have a role to play in protecting the environment. Yet, most of these MFIs do not know what strategy they could adopt to achieve this. Microfinance investors also seem interested in knowing the environmental performance of MFIs (De Bruyne, 2008), but the microfinance industry does not know yet how to measure and monitor this performance. No adapted methodology exists today.

The objective of this paper is to propose a new tool to measure the environmental performance of microfinance institutions: the Microfinance Environmental Performance Index (MEPI). Building on the literature on corporate environmental performance and microfinance social performance, this tool is based on management performance indicators and is tailored to the specificities of the microfinance sector. We show that MFIs who tackle environmental issues do it through a variety of strategies: (1) adopting environmental policies, (2) reducing their internal ecological footprint, (3) managing the environmental risks of their clients' activities, (4) providing green microcredit to promote environmentally-friendly activities or clean technologies, and (5) implementing non-financial services such as environmental awareness-raising campaigns. We therefore propose a multi-dimensional index that encompasses all types of strategies. We believe that MEPI can be a useful tool for research and serve as a basis for environmental strategy planning, progress monitoring, or communication in the microfinance industry.

The rest of the article is structured as follows. Section 2 presents the rationales for measuring the environmental performance of MFIs. Section 3 discusses the challenges around performance measurement and the reasons for focusing on processes rather than outcomes. Section 4 introduces the variety of strategies that are adopted by MFIs today to actively reach an environmental bottom line, therefore calling for a multi-dimensional index. Section 5 presents the indicators that have been

selected for MEPI. Section 6 discusses scoring and aggregation issues, which call for a relative use of the tool. Finally, section 7 provides some concluding remarks.

2. Why measure the environmental performance of microfinance?

When the microfinance sector started to promote social performance measurement in the early 2000s, there was initially reticence in the industry. Adding social performance indicators was seen as too complex and burdensome for MFIs (Jacquand, 2005). Today, with the recent over-indebtedness crisis (Guérin, et al., 2009; Schicks, 2011; Servet, 2011) and controversies on commercialization and high interest rates (Ashta & Hudon, 2009; Hudon, 2011; Mersland & Strøm, 2008; Woller, 2002), the sector has come to an agreement on the need for monitoring microfinance performance on a double bottom line (Doligez & Lapenu, 2006; Gutiérrez-Nieto, et al., 2009; Hashemi, 2007; Lapenu, et al., 2009). Even though significant progress has been made in designing standards and tools¹ for measuring this social performance, the debate for defining the most adequate indicators is still going on. This article goes one step further: in addition to measuring financial and social performance, we propose to assess MFIs' environmental performance as well. This proposal may seem controversial. Indeed, in a context where assessment on a double bottom line is still subject to debate, why should we advocate for measuring a triple bottom line performance? Since its inception, microfinance has been presented as a tool to fight poverty (Yunus, 2008). Measuring its social performance thus appears necessary to check whether microfinance manages to fulfill its social promises (Morduch, 1999). However, microfinance has never been presented as a means to protect the environment. Hence, why should we measure microfinance environmental performance? Are we not just putting a greater burden on MFIs by imposing new standards to reach and report upon? Are we not making them drift away from their initial mission by adding a third bottom line?²

The rationale for proposing to measure MFIs' environmental performance does not come from an external, pre-conceived idea that MFIs should reach an environmental bottom line. Rather, it derives

¹ Existing social performance tools include: CERISE Social Performance Indicators, MFC Quality Audit Tool (QAT), MicroSave SPM toolkit, M-CriI, MicroFinanza and PlaNet Rating social performance ratings, The Grameen Foundation Progress out of Poverty Index (PPI), The Iris Center's Poverty Assessment Tool (PAT), etc.

² For a discussion on MFIs' mission drift, see Armendáriz & Szafarz (2011) and Copestake (2007).

from an actual observation: more and more MFIs are starting to adopt environmental objectives in addition to their financial and social goals. In a survey conducted in 2011 with 160 MFIs (Allet, 2011), environmental protection was identified as a major objective for their institutions by 19 per cent of respondents and as an important objective by 49 per cent. Only 9 per cent stated that environmental protection was not an objective for their institutions, and 24 per cent said it was a minor objective. Due to self-selection bias, these results may not be totally representative of the whole microfinance sector and may slightly overestimate the level of interest of MFIs in the environmental bottom line (Allet, 2011). However, they clearly show that this concern exists today and that a certain number of MFIs are already willing to improve their environmental performance. The interest in a triple bottom line approach is also shared by a growing number of microfinance investors and donors. In a survey realized by the Social Performance Task Force with forty-five social investors in 2007, 62 per cent of the respondents expressed their interest in knowing the environmental performance of MFIs (De Bruyne, 2008). Additionally, in 2011, the Microfinance Investment Vehicles (MIVs) Survey carried out by Symbiotics revealed that, out of seventy participating MIVs, 46 per cent seek to assess MFIs' environmental risks, and 45 per cent seek to integrate environmental issues into their investment decisions (Symbiotics Research & Advisory, 2011).

In this context, a tool enabling the measurement of the environmental performance of MFIs could serve several purposes: (a) research, (b) strategic planning and progress monitoring, and (c) communication with stakeholders. First, such a tool could be used by researchers to better understand the emerging phenomenon of 'green microfinance.' There are still many questions regarding the relevance of an environmental bottom line in microfinance. Do MFIs have a comparative advantage in tackling environmental issues? Can they effectively contribute to environmental protection? Could aiming at an environmental bottom line compromise their financial or social bottom lines? Measuring the environmental performance of microfinance can help investigate some of these issues. Using this tool, researchers could identify the extent of the phenomenon, the characteristics of MFIs that adopt environmental objectives, the rationales associated with certain environmental practices, the consistency between stated objectives and achievements, the benefits and costs linked to different environmental strategies, the potential trade-offs with the financial and social bottom lines, etc.

Second, a tool enabling the measurement of environmental performance could be used by microfinance institutions as a guideline for internal planning, strategy, and management. An increasing

number of MFIs are willing to improve their environmental bottom line. However, they often claim that they do not have clear ideas on how to achieve this and would need some orientation. A measurement tool can help them define what environmental performance means to them and identify the exact environmental objectives that they would like to pursue.³ It can draw their attention to the possible strategies and means for achieving these objectives. It can help them identify where they stand and how they could follow up on their progress. Applied at the internal level, this tool can thus help improve decision making for MFIs willing to aim at an environmental bottom line.

Finally, measuring MFIs' environmental performance through standardized and comparable indicators could also serve as a communication tool to respond to stakeholders' interest in the topic. So far, most MFIs that go green engage in environmental management through pilot experiences. They scarcely develop formal environmental policies and action plans beforehand. They do not always advertise their initiatives or label them as 'environmental.' Better communication regarding their environmental performance could help them improve their image and attract socially responsible investors.

To respond to donors' and investors' interest, microfinance rating agencies have begun to look at the environmental performance of microfinance institutions. As part of their Social Performance rating products, M-Cril, MicroFinanza, and PlaNet Rating⁴ have defined some specific indicators for assessing MFIs' environmental responsibility: existence of environmental policies, processes for assessing and screening environmental risks, processes for monitoring client compliance, training and awareness-raising of staff, development of specific green microfinance projects (renewable energy, sustainable farming, sanitation), etc. The Social Performance Indicators (SPI)⁵ questionnaire also includes two indicators for environmental responsibility: environmental policy for portfolio activities, and environmental policy for internal activities. These environmental performance indicators are already useful and adapted. However, they are not always very precise and do not cover all aspects of MFIs' environmental performance. The Microfinance Environmental Performance Index (MEPI) proposed in this paper has been designed to fill this gap.

³ Similarly to Social Performance measurement tools (Doligez & Lapenu, 2006)

⁴ M-Cril, MicroFinanza and PlaNet Rating are rating agencies specialized in the rating of microfinance institutions. In addition to financial rating, they also offer social rating services.

⁵ The Social Performance Indicators (SPI) initiative has been led since 2002 by the French network CERISE in association with international partners. Its objective is to define and implement a tool to measure the social performance of MFIs.

3. Focusing on processes, not outcomes

When seeking to evaluate the environmental performance of a business, two main approaches can be adopted: (a) measuring operational performance, or outcomes, and/or (b) assessing management performance, or processes. These two approaches are the ones promoted by ISO 14031⁶ and are very commonly used in the literature on corporate environmental performance (Brunklau, et al., 2009; Henri & Journeault, 2008; Ilinitch, et al., 1998; Jasch, 2000). The first approach looks at quantitative indicators, measuring outcomes such as energy consumption, material inputs, waste and emissions, etc. The second approach focuses on the efforts accomplished by the top management to influence the environmental operational performance (outcomes) of the business. It looks at the policies, programs, and resources mobilized.

Quantitative indicators measuring outcomes often appear as being more rigorous and objective. Many studies focus on this category of indicators and even chose to keep only one or a few indicators as proxies, such as pollution emission or energy use. However, these studies always end up focusing on manufacturing industries (Cole, et al., 2008; Henri & Journeault, 2008; Hermann, et al., 2007; Lefebvre, et al., 2003; King & Lenox, 2001; Stanwick & Stanwick, 1998). They do so because (a) it is representative to take pollution emissions as a proxy for the environmental performance of this type of firms, since pollution emissions represent their biggest environmental impact (Tyteca, 1996); and (b) data is easily available for big companies from this sector (e.g.: using the Toxic Release Inventory, like in Stanwick & Stanwick, 1998). In the microfinance sector, the situation is very different. Outcome indicators do not seem to be the most adapted to measure the environmental performance of MFIs. First, data is not easily available. MFIs that measure and track their carbon emissions, use of paper, or energy consumption are still very scarce (ACLEDA, Banco Solidario, K-Rep, etc.). Second, such indicators would only measure the direct impacts of the MFIs, i.e. their internal ecological footprint. These impacts however represent a very small portion of their total environmental impact. According to a study published by WWF & VIGEO (2010), 99.9 per cent of the environmental impacts of financial institutions are actually indirect impacts, through the activities they finance.

⁶ ISO 14031 is an international norm that provides guidelines on the design and use of environmental performance evaluation within an organization.

A better proxy could be to assess energy consumption or pollution emissions at the portfolio level. However, that would require conducting environmental audits of all microfinance clients' activities, which is not a realistic option. Indeed, environmental impact assessment or other types of environmental audits are difficult to handle at a micro-scale (it would be complicated to apply them to individual loans) and are furthermore very costly and time-consuming (Wenner, 2002). MFIs would generally be reluctant to engage in such assessments because they require the development of new, specific technical skills and entail very high transaction costs that can challenge the MFIs' financial sustainability. It could be interesting for an MFI to have an environmental audit conducted from time to time at a sector or community level, in order to understand the impact of its portfolio (Pallen, 1997). But it is unrealistic to expect that such assessments could be conducted systematically before and after the allocation of each loan. Even if these assessments were done, what would their results mean? Could we hold the MFI responsible for any negative or positive change in the environmental impact of clients' activities? How could we differentiate microfinance's influence from that of other factors? Proving any causality would entail dealing with significant methodological challenges.

The microfinance sector has already been through extensive debates regarding the evaluation of microfinance impact on clients. The question is actually complex. MFIs' impacts are both direct and indirect; they apply to different levels (individuals, households, villages, local economy, etc.) and to different fields (economics, social issues, health, and even the environment) (CERISE, 2003). Impact assessment faces significant methodological challenges, in terms of both selection bias (how can we ensure that control and pilot groups share the same characteristics?) and attribution issues (what part of the change is attributable to microfinance influence?) (Armendáriz & Morduch, 2005; Goldberg, 2005; Hashemi, 2007). Moreover, conducting rigorous impact evaluations is time-consuming, costly, and often does not provide operational recommendations to help MFIs improve their impact (CERISE, 2003; Copestake, et al., 2005). Drawing from this observation, the microfinance sector has progressively moved towards more operational, cost-effective performance management tools that can be used by MFIs for internal planning (CERISE, 2003; Copestake, et al., 2005). The idea is that, in order to strengthen its social impact, an MFI needs to make sure that it gives itself the means for reaching its social goals (Doligez & Lapenu, 2006). Social performance is thus observed not only at the level of outcomes or results (impacts on clients), but also at the level of the whole process leading to this social impact (Hashemi, 2007). This process is measured through the intent of the MFI (social

mission and goals), the effectiveness of the internal system and activities (decision-making and actor responsibility, specific actions, internal monitoring, tracking systems), and MFI outputs (Doligez & Lapenu, 2006; Hashemi, 2007).

Similar to the approach promoted by the Social Performance Task Force⁷ in microfinance, we decided to consider environmental performance through the whole process that leads to environmental impact. The evaluation of environmental performance then consists of assessing the means employed by MFIs to reach their environmental objectives. Among the two approaches endorsed by ISO 14031, we therefore opt for measuring the environmental performance of MFIs through management performance indicators. The limit of these indicators is that they only assess the efforts made by an organization, without showing whether these efforts actually translate into positive changes in terms of environmental impact. But, similar to the social performance approach, our assumption is that processes do count (Lapenu, et al., 2009). In order to improve its environmental impact, the MFI has to give itself the means for reaching its environmental objectives. In addition, these indicators can be more easily identified and assessed from information available within the institution (policies, organizational processes, etc.), making it more cost-effective to measure MFIs' environmental performance. They also provide more operational recommendations and can be used internally by MFIs as a planning tool. Apart from studies focused on manufacturing companies, they are also the type of indicators frequently used in the literature on corporate environmental performance (Brunklau, et al., 2009; Henri & Journeault, 2008; Ilinitich, et al., 1998; Jasch, 2000). We therefore propose a Microfinance Environmental Performance Index (MEPI) based on management performance indicators.

4. Assessing the five dimensions of green microfinance

MEPI was designed in order to reflect the diversity of the environmental management strategies that can be adopted by MFIs. Indeed, microfinance institutions that are looking at their environmental bottom line are doing it through a wide variety of approaches. Some MFIs choose to be green at the internal level, by reducing their institutional ecological footprint. Others decide to address the issue at

⁷ The Social Performance Task Force was created in 2005 by CGAP, the Argidius Foundation, and the Ford Foundation. Its objective is to bring together leaders from various social performance initiatives in the microfinance industry to come to agreement on a common social performance framework and to develop an action plan to move social performance forward.

the portfolio level, by reducing the (indirect) environmental impact they may have through the activities of the clients they finance. Some MFIs opt for a 'defensive' approach with a 'do no harm' objective: they seek to avoid financing activities that are highly polluting and/or overexploit or degrade natural resources. Others adopt a more 'positive' approach: they develop specific products and services to support environmentally-friendly activities, practices, and technologies. Some MFIs integrate environmental concerns as a cross-cutting, transversal issue in all their daily operations, requiring some redefinition of management and business processes. Others opt for a niche approach, wherein the environmental component is present in specific, purposely tailored products and services. All of these various approaches are not mutually exclusive. Sometimes, they are even combined within a single strategy of intervention.

Overall, we identified five main types of strategies of intervention that MFIs are implementing today: (1) adopting environmental policies; (2) reducing the internal ecological footprint; (3) managing portfolio environmental risks; (4) providing green microcredit; and (5) providing environmental non-financial services.

STRATEGY 1: Adopting environmental policies

A first approach, widely adopted by any type of business, is to start integrating environmental concerns into the business's official mission, principles, and policies. The idea is to confirm institutional commitment and create a framework that is favorable for the implementation of environmental programs. For instance, Fundación Amanecer, in Colombia, includes environmental concern in its official mission statement: "Promote human, entrepreneurial, and productive development in La Orinoquia, by supporting the collective ownership of citizenship and environmental values." ACLEDA, in Cambodia, has developed an Environmental, Social, and Community Policy, which has the following mission statement: "ACLEDA Bank is focused on achieving strong, sustainable financial returns, while respecting the environment and community within which we live. We are committed to the concept of triple bottom line ('people, planet, profit')." Some MFIs, such as Apoyo Integral (El Salvador), CAMIDE-PASECA (Mali), and INECOBANK (Armenia) have appointed managers to be in charge of environmental issues. This first strategy can be a preliminary step in developing concrete environmental activities.

STRATEGY 2: Reducing the internal ecological footprint

Like any other business, MFIs wanting to improve their environmental performance can take actions internally, at the institutional level. Some of them seek to improve their waste management. For instance, Apoyo Integral, in El Salvador, has set up a partnership with a company that buys used paper from all of their branches and recycles it. Other MFIs seek to reduce the environmental footprint of their operational activities. This is the case for ACLEDA (Cambodia), Banco Solidario (Ecuador), FIE (Bolivia), K-Rep Bank (Kenya), MiBanco (Peru), and XacBank (Mongolia).⁸ These MFIs set specific objectives and closely monitor their levels of energy and water consumption, paper use, carbon emissions, etc. They even decided to communicate on their progress by publishing annual sustainable reports that follow the Global Reporting Initiative guidelines⁹ (GRI, 2008).

STRATEGY 3: Managing portfolio environmental risks

Another strategy focuses on the environmental impact at the clients' level. It consists of screening and monitoring all loans according to environmental criteria. The objective here is to manage the environmental risks of clients' activities and avoid supporting harmful practices.

Some MFIs, like ACLEDA (Cambodia), FIE (Bolivia), Kashf Foundation (Pakistan), ProCredit, and VisionFund (Cambodia) use an exclusion list, which defines the types of activities that the institution will never finance. Activities that are screened out are ones that are illegal under national and international standards and that present high environmental (and social) risks with no mitigation plan, such as: production or trade of wood or other forestry products that do not come from sustainably managed forests, production or trade of hazardous chemicals, trade of protected wildlife products, trade of banned pesticides/herbicides or ozone-depleting products, etc. Loan applications for activities falling into one of these categories are thus rejected by the institutions. This approach is also often adopted by the traditional financial sector (UNEP-FI, 2006). Similar to many banks, most MFIs that have adopted an exclusion list are using the one promoted by the IFC¹⁰.

⁸ These MFIs participate in the Transparency and Sustainability in Finance program, promoted by Triodos Bank and Global Reporting Initiative

⁹ The Global Reporting Initiative (GRI) is a network-based organization that seeks to promote the mainstreaming of disclosure on environmental, social and governance performance.

¹⁰ The International Finance Corporation (IFC), a member of the World Bank Group, is a global development institution focused on the private sector in developing countries.

Some MFIs decide to go further and use simplified tools to assess the level and type of environmental risks of the activities of their clients. This approach is commonly used in the banking sector, but it is usually applied to large-scale project financing only and not to SMEs or retail lending (UNEP-FI, 2008). The microfinance sector is innovative in that some MFIs are trying to assess environmental risks at the level of individual clients and micro-activities. MicroCred, for instance, adopted an environmental risk categorization list that ranks different activities according to their level of environmental risk. The list classifies high-risk activities in category A (leather tanning, textile dyeing, metal work, brick making, food processing, mechanical workshops, printing, painting, charcoal making, etc.); activities with an overall medium risk in category B (crop growing, animal husbandry, fishery, transportation, etc.); and low-risk activities in category C (small trade, etc.). A quick assessment of the environmental risk level can thus be made simply by identifying the sector of the client's activity. MicroCred then sought to limit its portfolio exposure, by allowing only a certain percentage of the total loan portfolio to be dedicated to category A (high-risk) activities. In Partner (Bosnia), as part of the client appraisal process, loan officers use a 20-question form to check whether clients respect their environment. They look particularly at chemical use, waste management, and use of natural resources. Clients are eligible for a loan only if they obtain a certain score. The MFI regularly follows up on and provides advice concerning the clients' environmental practices. In Apoyo Integral (El Salvador) and K-Rep (Kenya), loan officers also assess the environmental risks of the clients' activities during their field visits. They use sector fact sheets¹¹ that specify the main environmental (and social) risks per type of activity that loan officers would need to track and provide insight on possible measures that can be taken at the client level to reduce these risks. These sector fact sheets help loan officers raise clients' awareness of environmental risks and possible mitigation actions.

STRATEGY 4: Providing green microcredit

Still focusing on environmental impact at the clients' level, some MFIs choose to tailor their financial products in order to promote environmentally-friendly practices. The logic here is more that of a 'positive' and 'niche' approach, which has also been adopted by the traditional banking sector (UNEP-FI, 2007). MFIs develop green microcredit (a) to support the development of environmentally-friendly income-generating activities, such as eco-tourism, agroforestry, waste management, and recycling; or

¹¹ Such as the ones developed by Triodos Facet for the Netherlands Development Finance Company (FMO, 2008)

(b) to support access to environmentally-friendly technologies, such as renewable energy technologies (solar home systems, solar lamps, solar water-heaters, solar dryers, biogas digesters, etc.) or energy efficient technologies (improved cook stoves, energy-efficient motors, etc.). This can be done by adapting lending modalities in terms of amount, duration, and repayment schedule, and eventually by providing some kind of incentives (a reduced interest rate, for instance) to encourage microentrepreneurs to develop such activities or invest in clean technology. In Bangladesh, under the national solar program, institutions such as BRAC and Grameen Shakti have established partnerships with renewable energy technology providers and extend loans to households for the purchase of solar home systems. Clients are required to contribute a minimum 20% down payment. The loans have a duration of 24 to 36 months, and, thanks to the support of international donors, an effective annual interest rate of 12 to 15 per cent. Between 2003 and 2010, more than 645,000 solar home systems were installed in the country. FINCA (Uganda), Ningxia CEPA (China), and Tamweelcom (Jordan) are other examples of MFIs who provide green microcredit to promote renewable energy solutions.

STRATEGY 5: Providing environmental non-financial services

Beyond their core financial operations, some MFIs also choose to develop non-financial environment-oriented services. This approach is rarely used in the traditional banking sector. It is more a specificity of the microfinance sector, where, for some MFIs, non-financial services are as important as their financial products. These services can include environmental awareness-raising campaigns. This is what is being actively done by CAMIDE in Mali. In one of its programs (Aliniha), this microfinance institution has defined an environmental code of conduct to be signed by each client. The client commits to plant trees and take care of them, stop using plastic bags, keep her house and surroundings clean, engage in environmentally-friendly activities, and raise her relatives' awareness of environmental issues. Furthermore, CAMIDE regularly organizes movie-debates about deforestation and waste management and raises community awareness through poster displays and T-shirt distribution. Some MFIs also choose to provide environmental non-financial services by organizing specific training sessions for microentrepreneurs engaged in environmentally-sensitive activities. This is the case, for instance, for CEPRODES (Nicaragua) and Fundación Campo (El Salvador), which train their farmer clients on sustainable agriculture techniques. Other MFIs undertake actions to encourage the exchange of experiences and good practices between microentrepreneurs. For

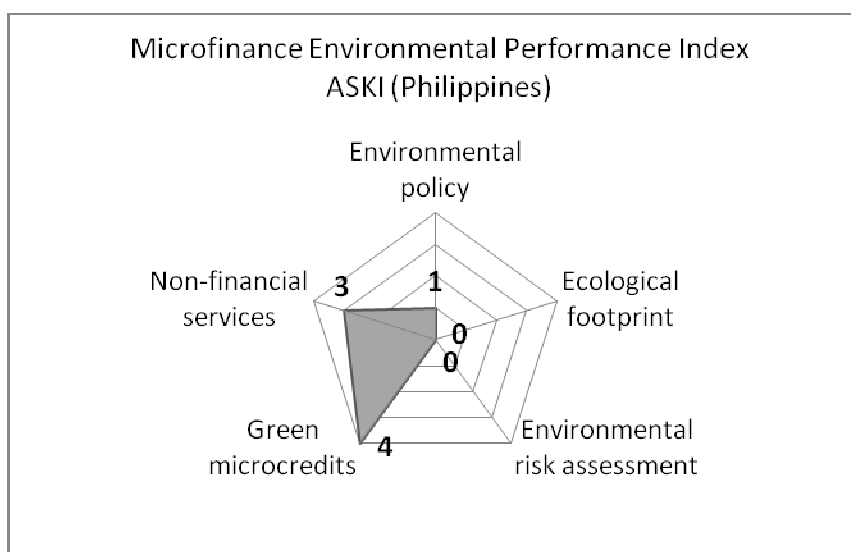
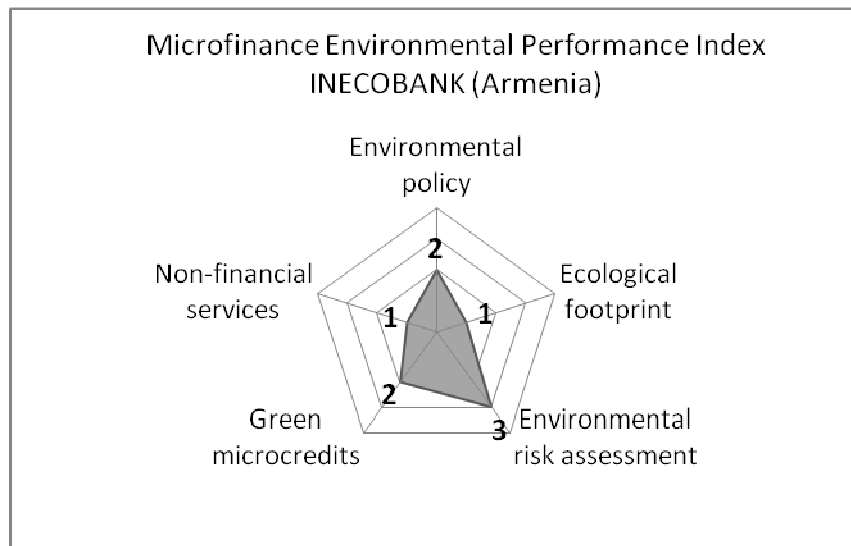
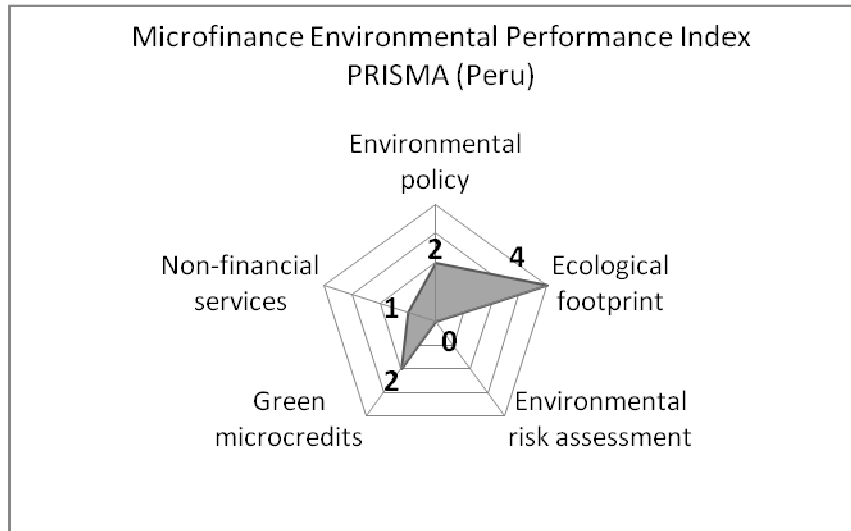
instance, CrediMujer, in Peru, selected Mrs Lirenza Chavez, who has an agro-ecological farm, as its client with the best environmental practices. Mrs Lirenza Chavez was awarded the International Microfinance Award for Environment in 2010¹² and became a model for her community and other CrediMujer clients.

These are only a few examples among a variety of initiatives implemented by MFIs around the world. Even though they are not exhaustive, they already illustrate that, today, some MFIs are already seeking to improve their environmental performance and that they choose to do it in different ways. Most of the time, MFIs who aim at an environmental bottom line do not simultaneously adopt all five strategies. Many MFIs start developing programs without having a formal policy. Some focus only on their internal ecological footprint, others on green microcredit, and still others on awareness-raising. The decision to engage in one strategy is not necessarily linked to the engagement in another one. That is why it is essential that the Microfinance Environmental Performance Index encompasses the large variety of environmental strategies that can be adopted by MFIs. Within the index, we have therefore defined five dimensions of environmental performance, adapted to the reality and specificities of the microfinance sector: (1) Environmental policy; (2) Ecological footprint; (3) Environmental risk assessment; (4) Green microcredit; and (5) Environmental non-financial services.

Similarly to the Social Performance Indicators tool (Lapenu, et al., 2009), MEPI allows for graphic representation of performance scores along its five dimensions. Such graphic representation helps to visualize the environmental strategy of the MFI. Figure 1 provides examples of three MFIs where we used MEPI to measure their environmental performance. As shown in the graphs, each institution seems to adopt a different environmental strategy. PRISMA, in Peru, is primarily focusing on its internal ecological footprint. INECOBANK, in Armenia, is putting more effort into assessing the environmental risks of its portfolio. And ASKI, in the Philippines, seems to be prioritizing the provision of green microcredit and environmental non-financial services.

¹² The International Microfinance Awards are organized by PlaNet Finance to reward the best microentrepreneurs around the world every year.

Figure 1. Examples of MEPI scores in three MFIs, illustrating three different strategies



Having a multi-dimensional tool thus enables us to obtain a global vision of environmental performance in microfinance. It does not mean that all MFIs should follow all five strategies. One MFI could make the deliberate choice to prioritize one strategy over the others in accordance with its context and mission. The advantage of a multi-dimensional tool is that (a) it specifically enables the identification of the strategic choices made by MFIs, and (b) it could improve decision-making processes by providing ideas on possible strategies to MFIs who wish to manage their environmental bottom line.

5. Indicator selection

To select MEPI indicators, we first looked at the literature on corporate environmental performance evaluation. We selected the most adapted management performance indicators and added some others to reflect the specificities of the microfinance sector. Our objective was to select indicators that are clear, simple, verifiable, and specific and that could allow for comparisons between MFIs.

Indicators were selected along the five main dimensions of environmental performance in microfinance: (1) Environmental policy; (2) Ecological footprint; (3) Environmental risk assessment; (4) Green microcredit; and (5) Environmental non-financial services. The first two dimensions are the ones that are the most commonly measured in the literature, for all types of companies.

The first dimension, 'Environmental Policy', relates to the existence of an environmental strategy within the company. Some of the most frequent indicators used in the literature to assess this dimension are: the existence of a written environmental policy (Azzone, et al., 1996; Ilinitich, et al., 1998; Lefebvre, et al., 2003), and employees with environmental roles and responsibilities (Azzone, et al., 1996; Ilinitich, et al., 1998; Jasch, 2000; Lefebvre, et al., 2003; Olsthoorn, et al., 2001). These two indicators can also be applied to the microfinance sector and have been selected to be part of MEPI. They provide essential information on the effort made by the MFI to create a framework that is conducive to the implementation of environmental programs.

The second dimension, 'Ecological Footprint', refers to all efforts undertaken to manage the direct impacts of the company. The most frequent indicators in the literature all appear relevant to measuring MFIs' internal performance and have been included in MEPI: environmental audits (Azzone, et al., 1996; Henri & Journeault, 2008; Ilinitich, et al., 1998; Jasch, 2000; Lefebvre, et al., 2003), the

establishment of quantifiable objectives (Jasch, 2000; Lefebvre, et al., 2003; Pratt & Rojas, 2001), environmental reporting or disclosure (Azzone, et al., 1996; Henri & Journeault, 2008; Ilinitch, et al., 1998 ; Weber, 2005), and environmental training for staff (Henri & Journeault, 2008; Jasch, 2000; Lefebvre, et al., 2003; Rao, et al., 2009).

The following two dimensions, 'Environmental risk assessment' and 'Green microcredit', are specific to the financial sector, since they look at the management of indirect environmental impacts, at the portfolio level. As mentioned previously, these indirect impacts are the most important ones for financial institutions, contrary to most other types of businesses. Nevertheless, so far, very few academic studies have tried to assess the environmental performance of banks or financial institutions (Pratt & Rojas, 2001; Weber, 2005). In this literature, two main indicators are used for measuring the 'Environmental risk management' dimension: no credit given to non-sustainable companies (Weber, 2005), and tools for risk analysis and monitoring of loans (Pratt & Rojas, 2001; Weber, 2005). The 'Green products' dimension is assessed through the following indicators: green loans for sustainable companies or start-ups (Pratt & Rojas, 2001; Weber, 2005), and connection between credit pricing and sustainable performance of the debtor (Weber, 2005). Such indicators are also very relevant for the microfinance sector and have been selected as part of MEPI.

Our fifth dimension on 'Environmental, non-financial services' is very specific to the microfinance sector and does not appear anywhere in the literature. Indeed, financial institutions usually do not grant as much importance to their non-financial services as some MFIs do. Many environmental initiatives implemented by MFIs so far are related to these non-financial services, such as environmental awareness-raising and training. We therefore had to define our own indicators for this dimension, on the basis of ongoing practices in the sector.

The exact composition of MEPI is presented in Figure 2 in a simplified version. The detailed version of the index can be found in Appendix 1.

Figure 2. Microfinance Environmental Performance Index (MEPI)

1. ENVIRONMENTAL POLICY		4
MISSION / VISION / VALUES	Environmental protection mentioned in the official vision, mission, or values	1
ENVIRONMENTAL POLICY	Formal policy on environmental responsibility	1
ENVIRONMENTAL MANAGER	A person appointed to manage environmental issues	1
INCENTIVES	Incentive system to encourage employees to take into account specific environmental objectives	1
2. ECOLOGICAL FOOTPRINT		4
CARBON AUDIT	Previous realization of a carbon audit	1
FOOTPRINT OBJECTIVES	Specific objectives to reduce ecological footprint (e.g.: reduction in energy consumption, carbon emissions, waste, etc.)	1
STAFF AWARENESS	Toolkits to raise employees' awareness of good practices in paper, water, and energy consumption, transportation, waste management, etc.	1
REPORTING	Inclusion of environmental performance indicators in annual report (paper, water, and energy consumption, etc.)	1
3. ENVIRONMENTAL RISKS ASSESSMENT		4
EXCLUSION LIST	Use of an environmental exclusion list	1
SCREENING TOOLS	Use of specific toolkits to evaluate the environmental risks of clients' activities	1
STAFF TRAINING	Training module to teach loan officers how to evaluate the environmental risks of their clients' activities	1
MIS	Inclusion of indicators into Monitoring and Information System (MIS) to track the environmental performance of clients	1
4. GREEN MICROCREDIT		4
RE&EE LOANS	Provision of credits to promote access to renewable energy or energy efficient technologies (RE&EE)	2
GREEN IGAs LOANS	Provision of loans with reduced interest rates to promote the development of environmentally-friendly activities	2
5. ENVIRONMENTAL NON-FINANCIAL SERVICES		4
CLIENT CHART	Environmental chart to be signed by clients	1
CLIENT AWARENESS	Programs to raise clients' awareness on environmental risks	1
PROMOTION ACTION	Organization of actions to promote environmentally-friendly microenterprises	1
CLIENT TRAINING	Training and other services to support clients who want to develop environmentally-friendly activities	1

Overall, we favored indicators that reflect inputs and processes, rather than outputs. For example, for the 'Green microcredit' dimension, we decided to measure whether MFIs offer green microcredit, with a binary 'yes/no' variable. Another valid indicator could have been the percentage of green microloans in the total loan portfolio. Similarly, for the 'Environmental risk assessment' dimension, we opted to

measure whether MFIs use specific toolkits to assess the environmental risks of their clients, with a binary 'yes/no' variable. Another option could have been to ask for the percentage of clients engaged in an environmentally risky activity¹³. These output indicators could provide very interesting information. However, we decided not to include them yet in MEPI for various reasons. First, information is still limited on these outputs. MFIs that are providing green microcredit or assessing environmental risks do not systematically track these activities through their Monitoring and Information System, making it difficult for them to provide accurate data. Second, in a context where environmental management is still a new and little known issue in microfinance, we wanted to focus first on the actions and effort undertaken by MFIs to reach an environmental bottom line. Looking at inputs and processes provides essential information on existing strategies and on the means the MFI employs to reach an environmental bottom line. Such information is useful both for research purposes and for providing operational guidelines to MFIs wishing to engage in environmental management.

As can be seen in the detailed MEPI version, we decided to back up several indicators with control questions. Experiences from previous surveys and interviews reveal that MFIs tend to give 'greenwashing' discourses. In order to avoid overestimating their environmental performance, we ask MFIs to provide more specific, concrete details on what they do. These control questions are not counted any point. We assume that simply by getting asked these questions, the MFIs will feel compelled to answer the questionnaire more genuinely, allowing MEPI to accurately reflect their level of environmental performance.

6. Scoring and aggregation issues

Even though the Microfinance Environmental Performance Index has been designed to encompass all aspects of environmental performance in microfinance, our objective was not to come up with a 'to do' list of actions that should be carried out by all MFIs. MEPI has not been designed to be interpreted or used in a normative way. All possible types of interventions listed in MEPI may not have the same relevance, outreach, effectiveness, or impact, depending on the context of the MFI. The limit of this type of index comes when we try to aggregate the results of the different indicators. By giving them

¹³ Measuring the percentage of clients engaged in environmentally risky activities may however be tricky since (1) not all MFIs may share the same definition of what is considered as environmentally risky, and (2) a positive trend could mean that the MFI helped clients to upgrade to less risky activities, but it could also mean that the MFI screened out the most risky activities, which could constitute a mission drift.

different weights, we are arbitrarily deciding whether an action is more desirable or valuable than another (Van den Bossche, et al., 2010). Should we give the same weight to the definition of internal ecological footprint objectives and to the provision of green microcredit, when we know that MFIs' environmental indirect impacts are much greater than its direct ones? Should the use of an exclusion list, which may end up discriminating against the poorest clients who do not have the means to upgrade their production processes, be valued more than the organization of training on green income-generating activities? Aggregation and weighting issues thus raise important ethical questions.

Our objective here is not to impose a vision on the level of desirability of each indicator. Instead, the weighting we propose has been defined to suit research purposes. We decided to give an equal weight (4 points) to each of the five dimensions of environmental performance, making the total index rated out of 20. From a research perspective, it is important to look at all of the dimensions, without judging *a priori* which one should be more important or desirable than the other. Our idea is to use MEPI to assess the effort made by MFIs to tackle their environmental bottom line and to better understand the rationales and issues behind this effort. For each indicator, MFIs get full points when they answer Yes, and zero points when they answer No. We left the possibility to get a fraction of a point (0.25) when MFIs answer that they are in the process of developing environmental programs or processes (using then a 3-point Likert scale instead of a binary variable). The rationale for including 'in process' answers is that green microfinance is still in its infancy. A number of MFIs may not have developed any program yet, but they may be in active reflection or a pilot process. Integrating "in process" answers thereby gives a more dynamic dimension to MEPI. Because it is quite exhaustive and neutral, MEPI therefore perfectly suits analytical purposes.

However, if microfinance practitioners or donors intended to use MEPI for strategy planning or progress monitoring, the tool would have to be adapted. Each MFI should select the dimensions and indicators most relevant and review their respective weights according to its context, objectives, and priorities. This could be done through an internal reflection process, whereby the MFI identifies, in a participatory process, which measures of environmental performance are the most desirable ones.¹⁴ Furthermore, each MFI should also consider these environmental objectives and activities in relation to their financial and social bottom lines. They should reflect upon potential trade-offs between these

¹⁴ The microfinance literature on Social Performance already promotes this relative approach regarding social audit (Copestake et al., 2005; Doligez & Lapenu, 2006)

three bottom lines and establish priorities amongst them, according to the overall context of the MFI.¹⁵ Environmental performance would then be assessed according to the environmental mission that the MFI defined for itself, and not according to what some external stakeholders consider appropriate. MEPI is not intended to be a once-and-for-all defined, normative tool. On the contrary, MEPI is meant to be an evolving tool, and serve as a basis for discussions and reflections for microfinance stakeholders willing to develop a triple bottom line approach.

7. Conclusion

This article proposed a new tool to measure the environmental performance of MFIs: the Microfinance Environmental Performance Index (MEPI). The idea to create such a tool came from the following observation: more and more MFIs and microfinance stakeholders are getting interested in their environmental bottom line, but no clear methodology exists today to assess MFIs' environmental performance. MEPI was thus designed to fill this gap.

Building on the literature on corporate environmental performance and on microfinance social performance, we opted for a cost-effective and practical approach: assessing environmental performance through management indicators. Similar to the approach promoted by the Social Performance Task Force, we consider that it is essential to look at the whole process leading to environmental impacts. We therefore selected indicators reflecting the effort undertaken by the MFI to reach an environmental bottom line (policies, processes, products, activities, etc.). In order to reflect the variety of strategies adopted by MFIs, we built our tool around five main dimensions: (1) Environmental policy; (2) Ecological footprint; (3) Environmental risk assessment; (4) Green microcredit; and (5) Environmental, non-financial services. Acknowledging scoring and aggregation issues, we called for a relative use of MEPI, adapted to the context, objectives, and priorities of each microfinance institution.

We believe that MEPI can be a useful research tool and help investigate key issues around the relevance of a triple bottom line in microfinance. MEPI could indeed be used in future research to identify the characteristics of green MFIs, the strategies adopted and their rationales, and the links

¹⁵ An interesting methodology is proposed by De Corte, et al. (2011) regarding the measurement of social performance in Microfinance Investment Vehicles. They suggest applying the MACBETH approach, which enables to weight indicators according to the relative level of attractiveness, defined during a participatory process within the institution.

between the environmental, social, and financial bottom lines. Beyond research purposes, we hope that MEPI will serve as a basis to foster reflection on the environmental bottom line in microfinance, not only at MFIs' internal level, but also within the entire microfinance industry.

8. Appendix

Microfinance Environmental Performance Index (MEPI) – Detailed version

1. ENVIRONMENTAL POLICY		
MISSION / VISION / VALUES	Is environmental protection mentioned in the official vision, mission, or values of your institution?	1 Yes 0 No
ENVIRONMENTAL POLICY	Does your institution have a formal policy on environmental responsibility? <i>CONTROL: If yes, what year was this policy set up?</i>	1 Yes, written policy 0,25 Yes, non-written policy 0,25 No, but we are currently developing one 0 No
ENVIRONMENTAL MANAGER	Has someone in your institution been appointed to manage environmental issues? <i>CONTROL: If yes, what is the exact title or position of this person?</i>	1 Yes 0 No
INCENTIVES	Has your institution set up an incentive system to encourage employees to take into account specific environmental objectives? (e.g.: bonus, promotions)	1 Yes 0,25 No, but we are currently defining such an incentive system 0 No
2. ECOLOGICAL FOOTPRINT		
CARBON AUDIT	Has your institution already conducted a carbon audit? (Carbon Audit = evaluation of the greenhouse gas emissions of an organization)	1 Yes 0,25 No, but we will conduct one within the next six months 0 No
FOOTPRINT OBJECTIVES	Has your institution set up specific objectives to reduce its ecological footprint? (e.g.: reduction in energy consumption, carbon emissions, waste, etc.) <i>CONTROL: If yes, which objectives? [Multiple answers possible]</i>	1 Yes, quantified objectives 1 Yes, non-quantified objectives 0,25 No, but we are currently defining such objectives 0 No <i>Reduction in paper consumption Reduction in water consumption Reduction in energy consumption (electricity, gas) Reduction of CO2 emissions Reduction of wastes Reduction of transportation usages Other: _____</i>
STAFF AWARENESS	Does your institution use toolkits to raise employees' awareness of good practices on paper, water, and energy consumption, transportation, waste management, etc.? (e.g.: procedure manual, power point presentations, flyers)	1 Yes 0,25 No, but we are currently developing such toolkits 0 No
REPORTING	Does your institution include environmental performance indicators in its annual report? (paper, water, energy consumption, etc.)	1 Yes, GRI / ISO 14001 / EMAS indicators 1 Yes, other indicators: _____ 0,25 No, but we are currently integrating such indicators in our next report 0 No

3. ENVIRONMENTAL RISKS ASSESSMENT

EXCLUSION LIST	Does your institution use an environmental exclusion list? (Exclusion list = list of activities that you refuse to finance because they are harmful to the environment)	1 Yes, the IFC exclusion list (IFC = International Finance Corporation) 1 Yes, the IFC exclusion list with some adjustments 1 Yes, according to national regulation requirements 1 Yes, another list 0,25 No, but we are planning to do so in the coming year 0 No
	<i>CONTROL: If yes, how many loan requests did your institution refuse in 2010 on the basis of this list?</i>	
SCREENING TOOLS	Does your institution use specific toolkits to evaluate the environmental risks of its clients' activities?	1 Yes, FMO toolkits (FMO = Dutch development bank) 1 Yes, FMO toolkits with some adjustments 1 Yes, other toolkits 0,25 No, but we conduct unformal evaluations 0,25 No, but we are currently developing such toolkits 0 No
	<i>CONTROL: If yes, which actions does your institution take after evaluating environmental risks? [Multiple answers possible]</i>	<i>None for the moment</i> <i>Refusal of loan request for activities that are the most harmful to the environment</i> <i>Contract clauses requiring the clients to reduce his ecological risks</i> <i>Client awareness-raising</i> <i>Provision of adapted financial products: renewable energy credits, sustainable agriculture credit, etc.</i> <i>Reduced interest rate for environmentally-friendly activities and for clients reaching objectives of environmental risk reduction</i> <i>Selection and reward of model environmentally-friendly microentrepreneurs</i> <i>Other: _____</i>
STAFF TRAINING	Does your institution use a training module to teach loan officers how to evaluate the environmental risks of their clients' activities?	1 Yes 0,25 No, but we are currently developing such a module 0 No
	<i>CONTROL: If yes, how many loan officers did your institution train last year?</i>	
MIS	Has your institution included in its Monitoring and Information System (MIS) indicators that allow you to track the environmental performance of clients?	1 Yes 0,25 No, but we are currently integrating such indicators 0 No 0 We do not use a computerized MIS

4. GREEN MICROCREDIT

RE&EE LOANS	Does your institution offer credits to promote access to renewable energy or energy efficient technologies? (e.g.: photovoltaic systems, biogas digesters, etc.)	2 Yes 0,25 No, but we are currently developing such products 0 No
------------------------	--	---

	<i>CONTROL: If yes, for which technologies? [Multiple answers possible]</i>		Solar lanterns Photovoltaic systems Solar water-heaters Biogas digesters Solar cook stoves Efficient cook stoves Solar dryers Other: _____
	<i>CONTROL: If yes, how many credits has your institution provided last year for investing in this type of technologies?</i>		
GREEN IGAs LOANS	Does your institution offer credits with reduced interest rates to promote the development of environmentally-friendly activities? (e.g.: sustainable agriculture, recycling, ecotourism, etc.)	2 0,25 0	Yes No, but we are currently developing such products No
	<i>CONTROL: If yes, for which activities? [Multiple answers possible]</i>		Recycling, waste management, composting Conservation agriculture, agroforestry, sylvopastoralism, organic production Reforestation, forest sustainable management Ecotourism Water management Production, distribution, installation of Renewable Energy and Energy Efficient equipment Other: _____
	<i>CONTROL: If yes, how many credits has your institution provided last year for promoting this type of environmentally-friendly activities?</i>		

5. ENVIRONMENTAL, NON FINANCIAL SERVICES

CLIENT CHART	Does your institution ask clients to sign an environmental chart? (Environmental chart = document signed by the clients, where they commit to adopt environmentally-friendly behaviours)	1 0,25 0	Yes No, but we are currently designing such a chart No
CLIENT AWARENESS	Has your institution already implemented programs to raise clients' awareness of environmental risks? (e.g.: flyers, discussions during group meetings, etc.)	1 0,25 0	Yes No, but we are currently developing such programs No
	<i>CONTROL: If yes, which type of awareness-raising program? [Multiple answer possible]</i>		Diffusion of information through flyers, posters, media Discussions during group meetings Discussions during field visits Other: _____
PROMOTION ACTION	Has your institution already organized actions to promote environmentally-friendly microenterprises? (e.g.: contest for the most environmentally-friendly client, organisation of a green microenterprise fair, etc.)	1 0,25 0	Yes No, but we are currently organizing such an action No
CLIENT TRAINING	Does your institution offer services to support clients who want to develop environmentally-friendly activities? (e.g.: training, technical assistance)	1 1 0,25 0	Yes, thanks to partnerships with other specialized organizations Yes, thanks to the competences that our institution developed in-house No, but we are currently setting up such assistance services No

CONTROL: If yes, in which sectors?
[Multiple answers possible]

Sustainable agriculture
Renewable Energy and Energy Efficient
equipment installation / distribution services
Reforestation
Waste management, recycling
Water management
Ecotourism
Other: _____

9. References

- Allet, M. (2011) 'Why do microfinance institutions go green?'. Second International Research Conference on Microfinance, Groningen, The Netherlands, June 2011
- Armendáriz, B. & Szafarz, A. (2011) 'On mission drift in microfinance institutions'. Published in: *The Handbook of Microfinance*, B. Armendáriz & M. Labie (eds), UK: World Scientific
- Armendáriz, B. & Morduch, J. (2005) *The economics of microfinance*. Boston: MIT Press
- Ashta, A. & Hudon, M. (2009) 'To whom should we be fair? Ethical issues in balancing stakeholder interests from Banco Compartamos case study'. CEB Working Paper No. 09/036
- Azzone, G., Noci, G., Manzini, R., Welford, R. & Young, W. (1996) 'Defining environmental performance indicators: an integrated framework'. *Business Strategy and the Environment* 5: 69-80
- Brunklaus, B., Malmqvist, T. & Baumann, H. (2009) 'Managing stakeholders or the environment? The challenge of relating indicators in practice'. *Corporate Social Responsibility and Environmental Management*, 16: 27-37
- CERISE (2003) 'L'évolution récente des enjeux et outils de l'analyse d'impact'. *Techniques Financières et Développement*, 70: 1-6
- Cole, M., Elliott, R. & Strobl, E. (2008) 'The environmental performance of firms: The role of foreign ownership, training, and experience'. *Ecological Economics* 65: 538-546
- Copstake, J. (2007) 'Mainstreaming Microfinance: Social Performance Management or Mission Drift?' *World Development*, 35(10): 1721-1738
- Copstake, J., Greeley, M., Johnson, S., Kabeer, N. & Simanowitz, A. (2005) *Money with a mission: microfinance and poverty reduction*. Warwickshire, UK: Practical Action
- De Bruyne, B. (2008) 'Summary of social performance indicators survey', in 'The role of investors in promoting social performance in microfinance', pp. 25-31. *European Dialogue* 1, Luxembourg: European Microfinance Platform
- De Corte, J.-M., Labie, M., Urgeghe, L. & Vansnick, J.-M. (2011) 'Microfinance Investment Vehicles and Social Performance: Moving from Traditional Techniques to the MACBETH Approach'. Second International Research Conference on Microfinance, Groningen, The Netherlands, June 2011
- Doligez, F. & Lapenu, C. (2006) 'Stakes of measuring social performance in microfinance'. *SPI3 Discussion Paper N°1*, Paris: CERISE Discussion Paper
- FMO (2008) 'Environmental and social risks management tools for MFIs'. Available on FMO's website: www.fmo.nl/smartsite.dws?id=531
- Goldberg, N. (2005) 'Measuring the impact of microfinance: taking stock of what we know'. Washington DC: Grameen Foundation USA Publication Series
- GreenMicrofinance (2007) 'Microfinance and the environment: setting the research and policy agenda'. Roundtable May 5-6, 2006. Philadelphia: GreenMicrofinance-LLC
- Global Reporting Initiative (2008) *Sustainability reporting guidelines and financial services sector supplement, Version 3.0*. Amsterdam: Global Reporting Initiative
- Guérin, I., Roesch, M., Héliés, O. & Venkatasubramanian (2009) 'Microfinance, endettement et surendettement : une étude de cas en Inde du Sud'. *Revue Tiers Monde*, 197(1)
- Gutiérrez-Nieto, B., Serrano-Cinca, C. & Molinero, C. (2009) 'Social efficiency in microfinance institutions'. *Journal of the Operational Research Society*, 60(1): 104-119
- Allet M. (2011) *Measuring the environmental performance of microfinance*

- Hashemi, S. (2007) 'Beyond good intentions: measuring the social performance of microfinance institutions'. *Focus Note 41*. Washington DC: CGAP.
- Henri, J.F. & Journeault, M. (2008) 'Environmental performance indicators: An empirical study of Canadian manufacturing firms'. *Journal of Environmental Management* 87: 165-176
- Hermann, B., Kroeze, C. & Jawjit, W. (2007) 'Assessing environmental performance by combining life cycle assessment, multi-criteria analysis and environmental performance indicators'. *Journal of Cleaner Production* 15: 1787-1796
- Hudon, M. (2011) 'Ethics in microfinance'. Published in: *The Handbook of Microfinance*, B. Armendáriz & M. Labie (eds), UK: World Scientific
- Ilinitch, A., Soderstrom, N. & Thomas, T. (1998) 'Measuring corporate environmental performance'. *Journal of Accounting and Public Policy* 17: 383-408
- Jacquand, M. (2005) 'Measuring social performance: the wrong priority'. UNCDF: http://uncdf.org/english/microfinance/newsletter/pages/2005_08/news_measuring.php
- Jasch, C. (2000) 'Environmental performance evaluation and indicators'. *Journal of Cleaner Production* 8: 79-88
- King, A. & Lenox, M. (2001) 'Does It Really Pay to Be Green? An Empirical Study of Firm Environmental and Financial Performance'. *Journal of Industrial Ecology* 5(1): 105-116
- Lapenu, C., Konini, Z. & Razakharivelo, C. (2009) 'Evaluation de la performance sociale : les enjeux d'une finance responsable'. *Revue Tiers-Monde* 197: 37-54
- Lefebvre, E., Lefebvre, L. & Talbot, S. (2003) 'Determinants and impacts of environmental performance in SMEs'. *R&D Management* 33(3): 263-283
- Mersland, R. & Øystein Strøm, R. (2008) 'Performance and trade-offs in Microfinance Organisations - Does ownership matter?'. *Journal of International Development*, 20(5): 598-612
- Morduch, J. (1999) 'The microfinance promise'. *Journal of Economic Literature*, 37(4): 1569-1614
- Olsthoorn, X., Tyteca, D., Wehrmeyer, W. & Wagner, M. (2001) 'Environmental indicators for business: a review of the literature and standardisation methods'. *Journal of Cleaner Production* 9: 453-463
- Pallen, D. (1997) 'Environmental sourcebook for microfinance institutions'. Canadian International Development Agency
- Pratt, L. & Rojas, E. (2001) 'Programas ambientales en bancos latinoamericanos: Una Evaluación'. Centro Latinoamericano para la Competitividad y el Desarrollo Sostenible (CLACDS) de INCAE Business School
- Rao, P., Singh, A., O' Castillo, O., Ponciano S. & Sajid, A. (2009). 'A Metric for Corporate Environmental Indicators for Small and Medium Enterprises in the Philippines'. *Business Strategy and the Environment* 18: 14-31 (2009)
- Rippey, P. (2009) 'Microfinance and climate change: threats and opportunities'. CGAP Focus Note 53, Washington DC: CGAP
- Schicks, J. (2010) 'Microfinance Over-Indebtedness: Understanding its drivers and challenging the common myths'. CEB Working Paper N°10/048, Université Libre de Bruxelles
- Servet, J.M (2011) 'La crise du microcrédit au Andhra Pradesh (Inde)'. *Revue Tiers Monde*, 207(3): 43-60
- Stanwick, P. & Stanwick, S. (1998) 'The Relationship Between Corporate Social Performance, and Organizational Size, Financial Performance, and Environmental Performance: An Empirical Examination'. *Journal of Business Ethics* 17: 195-204
- Symbiotics Research & Advisory (2011) *Symbiotics 2011 MIV survey report*. Geneva: Symbiotics Research & Advisory SA
- Tyteca, D. (1996) 'On the Measurement of the Environmental Performance of Firms - A Literature Review and a Productive Efficiency Perspective'. *Journal of Environmental Management* 46: 281-308
- UNEP-FI (2006) *Sustainability management and reporting: benefits for financial institutions in developing and emerging economies*. Geneva: UNEP Financial Initiative
- UNEP-FI (2007) *Green financial products and services: current trends and future opportunities in North America*. Geneva: UNEP Financial Initiative
- UNEP-FI (2008) *Biodiversity and ecosystem services: bloom or bust?* Geneva: UNEP Financial Initiative
- Van den Bossche, F., Rogge, N., Devooght, K. & Van Puyenbroeck, T. (2010) 'Robust Corporate Social Responsibility investment screening'. *Ecological Economics*, 69: 1159-1169
- Van Elteren, A. (2007) 'Environmental and social risk management and added value at MFIs and MFI funds – the FMO approach'. The Hague: Netherlands Development Finance Company (FMO)

- Weber, O. (2005) 'Sustainability Benchmarking of European Banks and Financial Service Organizations'. *Corporate Social Responsibility and Environmental Management* 12: 73-87
- Wenner, M. (2002) 'Microenterprise growth and environmental protection'. *Microenterprise Development Review* 4(2): 1-8
- Woller, G. (2002) 'The promise and peril of microfinance commercialization'. *Small Enterprise Development*, 13(4): 12-21
- WWF & VIGEO (2010) 'Entreprises et changement climatique. Défis sectoriels et perspectives pour une approche globale'. Paris: WWF & VIGEO
- Yunus, M. (2008) *Creating a world without poverty: social business and the future of capitalism*. New York: Public Affairs