

4. MICROFINANCE AND THE ENVIRONMENT¹

INTRODUCTION

Microenterprise includes a wide variety of business activities that create a broad range of environmental effects that include, for example, small-scale industrial pollution, land degradation, deforestation, and destruction of natural protective barriers (e.g., mangroves and swamps that help mitigate the effects of natural disasters). Although the environmental impact of a single microenterprise may be small, the sheer number of microenterprises, their low technological level, the general lack of regulatory supervision, and the absence of a supporting infrastructure and services all combine to make the cumulative environmental impact of microenterprise activity significant.

To the extent microfinance succeeds in scaling up and facilitating widespread growth in business activity, its potential environmental impact looms even larger over the horizon. There is thus an important need to address the environmental consequences of microenterprise activity and the corresponding role of microfinance in it.²

HOW MICROENTERPRISES AFFECT THE ENVIRONMENT

There are three main areas in which microenterprise activities impact the environment: unsustainable use of natural resources, pollution (air, water, and solid waste), and occupational health and safety. The specific environmental effects of microenterprise activity stem from a number of factors, such as the production method (e.g., burning or mining), productive inputs (e.g., inorganic fertilizer, pesticides), inefficient production technologies (e.g., leading to overutilization of natural inputs), waste (e.g., litter, diesel smoke), or unsustainable outputs (e.g., lumber, endangered species), or the local political structure (e.g., uncertainty of land tenure).

Microenterprises, and the (frequently poor) people who operate them, are both the agents and victims of environmental degradation. Microenterprises are frequently concentrated in sectors that involve destructive environmental impact, waste of natural resources, and occupational safety hazards. Microenterprises also tend to operate informally outside of the environmental, legal, and regulatory system (with the institutions responsible for such enforcement often being weak in any case). They are thus not subject to environmental regulatory enforcement or incentive structures—such as subsidies to promote adoption of environmentally sound technologies—designed to minimize environmental damage.

On top of all this, the developing countries in which so many microenterprises operate lack the physical infrastructure and government and health institutions to implement the kinds of adaptation and mitiga-

1. This document draws on a number of resources for its content and language, including Abhishek Lal, [“An Overview of Microfinance and Environmental Management”](#); Joan Hall and Abhishek Lal, [“How MFIs and Their Clients Can Have a Positive Impact on the Environment”](#); and Mark D. Wenner, Norman Wright, and Abhishek Lal, (2004), [“Environmental Protection and Microenterprise Development in the Developing World,”](#) *Journal of Microfinance*, 6, 1, 95–122. Elizabeth Israel and Liam Collins of Green Microfinance, LLC also contributed to this chapter of the Social Performance Map.

2. For a good summary of the environmental issues in microfinance, see the summary of the roundtable on [Microfinance and the Environment: Setting the Research and Policy Agenda](#).

tion strategies wealthier countries can be expected to employ in the face of environmental degradation. The prevalent poverty found in these countries often pushes environmental concerns down the hierarchy in favor of more immediate priorities of sustenance and income growth. Citizens in these countries are also relatively uneducated about environmental, safety, and health issues and mitigation options.

Urban Areas

While many environmental issues span all localities, some are influenced by geographical setting. In urban areas, environmental degradation is more likely to take the form of pollution (water, land, and air), poor sanitation, and damaged aesthetics. Urban microenterprises tend to be concentrated in the commerce and service sectors (e.g., food and produce vendors, seamstresses, hairdressers, tailors, cobblers, tire patchers, auto mechanics, trash recyclers). These types of enterprises may produce noise, congestion, or refuse, but they tend to leave a small environmental footprint. An exception occurs where there is a poor waste-management infrastructure, in which case microenterprise refuse can be a significant environmental concern. Some urban businesses also encroach on or convert urban green spaces (e.g., parks) and bodies of water for their own use, compromising the aesthetics, safety, and purpose of these public resources.

Small-scale industry is the most intensive urban polluter (although as an economic sector, it is dwarfed in size by the commerce and service sectors). Much of the environmental damage caused by small-scale industry results from the clustering of small-scale, pollution-intensive industries (e.g., brick making, electroplating, leather tanning) near population centers. Small-scale industrial polluters adversely affect sewage systems and bodies of water in addition to the health of workers and inhabitants through the release of refuse, production runoff, smoke, dust, and harmful chemicals into the ground, air, and water.

Rural Areas

Rural areas are, if anything, more vulnerable to environment degradation resulting from microenterprise activity.³ In contrast to urban areas, environmental degradation in rural areas is most likely to affect natural-resource sustainability such as soil quality, biodiversity, and water quality. Although specific data is not available, it is probably the case that millions of small-scale farmers, fishermen, agroprocessors, and miners engage in unsustainable resource-use patterns.

Soil erosion from farming activities and soil and water contamination from the improper use of fertilizers and pesticides are important types of environmental damage that affect land productivity and water quality and, in turn, agricultural income, food security, and health. Unsustainable farming practices contribute to a loss of soil fertility and to increased sedimentation of nearby streams, rivers, lakes, reefs, and dams as a result of water runoff and soil erosion. The improper use, storage, and disposal of fertilizers and pesticides result in excessive nutrient runoff into nearby bodies of water, degrades water quality for downstream users, endangers some forms of aquatic life, and contaminates local sources of drinking water.

Improper cattle grazing contributes to environmental degradation in the forms of devegetation, deforestation, water pollution, desertification, and loss of biodiversity. Grazing cattle degrade soil quality by compacting the dirt and reducing vegetation cover, leaving topsoil exposed to wind and water erosion. They affect biodiversity by altering the species composition and vegetation quality on grazing lands and in other natural areas.

Animal slaughtering and rendering dump toxic by-products into local ecosystems and noxious odors into the air. Agroprocessing contributes its share of environmental damage via effluent runoff and other by-products. The expansion of small-scale farming to previously untouched ecosystems produces yet more environmental degradation through (often widespread) deforestation, loss of biodiversity, and soil erosion.

3. In rural areas, microenterprises include small-scale farming, agroprocessing, livestock rearing, aquaculture, and silviculture.

The small-scale trade in natural products (e.g., medicinal plants, wild game, building materials, fuel wood, fodder, artisan materials and supplies) in both rural and urban areas can also have significant and adverse environmental consequences, particularly when involving rare or endangered animal or plant species.

Workplace Health and Safety

Health and safety issues are closely related to environmental issues within the microenterprise sector. According to the International Labour Organization (ILO), a major part of the workforce in developing countries is involved in agriculture, services, and cottage industries characterized by heavy workloads, multiple tasks, and exposure to health risks such as poor hygiene, sanitation, and nutrition; parasitic disease infection; repetitive motion stress; and exposure to smoke, solvents, chemicals, heavy metals, fungicides, toxic gasses, corrosive acids, etc. Overall, two-thirds of workers in these countries work under conditions that do not meet minimum safety standards.

Low compliance with health and safety norms among microenterprises is due to multiple factors:

- Nonexistent or weak regulatory structure
- Lack of knowledge about safety and health practices, the consequences of those unsafe practices, and ways to mitigate them
- Fear of being noncompetitive with others who do not adhere to safety norms
- A preference for allocating scarce resources to productive or household needs
- The cost of safety equipment
- The lag time for certain health effects (e.g., repetitive motion stress) to manifest themselves

Examples of Microenterprise Activities that Adversely Impact the Environment

Of course, not all microenterprise activity is harmful to the environment, and in some cases it can actually be environmentally healthy. Microenterprises that use green inputs for production (e.g., certified or sustainably grown lumber, organic seeds, compost or green fertilizer, organic dyes); that use sustainable production techniques (e.g., reforestation, controlled water usage, natural pesticides, microdrip irrigation, solar water pumps); that recycle trash or used goods; or that use recycled materials as inputs can benefit the environment.

Certain microenterprise activities, however, are generally accepted to have pronounced adverse environmental impacts.

Leather tanning produces several noxious pollutants, including heavy metals, organic compounds, and liquid detergents, that are frequently discharged into sewer systems, streams, and rivers.

Brick and tile manufacturing contributes to air and water pollution and land degradation. Its environmental impact often depends on its proximity to densely populated areas and on the extent to which producers depend on “dirty fuels” (scrap wood with varnish on it, tires, plastics, used motor oil, and solvents) as a low-cost alternative to clean wood or propane gas.

Agriculture adversely impacts the environment where farmers engage in improper methods to store, use, and dispose of fertilizer, pesticides, and herbicides. Such practices can result in soil infertility, water runoff, soil erosion, increased sedimentation of water sources, contaminated drinking water, and loss of aquatic life.

Aquaculture produces a loss of biodiversity due to high conversion rates of wetlands and mangroves to fish ponds; water pollution caused by the improper disposal of blood and offal; water runoff, soil erosion, and salinization from poor pond-construction practices; and the elimination of other species in the ecosystem due to use of toxic chemicals to control predator and competitor fish species.

Metalworking and electroplating discharge heavy metals in sewer and water systems, contaminating aquatic life and posing health threats to humans who consume contaminated fish.

Small-scale mining produces land degradation and chemical pollution. Mining operations move significant amounts of rock and soil that produce substantial changes in surrounding landscapes. Alluvial mining operations result in erosion, riverbank destruction, and dam siltation. The processing of mined ore, especially gold, releases significant quantities of mercury and cyanide into the ecosystem, negatively affecting local plant, animal, and aquatic life.

Painting and printing use a number of toxic substances. The improper disposal of pigments, inks, paper waste, and solvents can contaminate soil and water with heavy metals.

Automobile and motor repair contaminate the environment through the inappropriate disposal of oil, battery acid, and engine sludge into sewer and water systems.

Wood processing and metal finishing use glue, paints, and solvents. The improper disposal of these items degrades soil and water resources. The increased demand for wood, coupled with outdated harvesting technology and inadequate regulation, may also contribute to unsustainable logging practices.

Charcoal making contributes to deforestation through unsustainable tree harvesting and to air pollution.

Textile dyeing can lead to large discharges of particulates, such as alkali, into local water sources.

Food processing plants can discharge significant amounts of untreated wastewater and offal into local water systems. The degraded water quality has adverse consequences for aquatic life, downstream communities, and human health. When water runoff is trapped in stagnant pools, moreover, it can be highly odorous and serves as a breeding area for mosquitoes.

Animal slaughtering and rendering discharges a variety of harmful items into local ecosystems including wastewater, suspended solids, nitrogen, solid waste (offal), and toxic compounds. It also releases noxious odors that adversely affect the quality of life for people living in geographical proximity to the slaughtering/rendering operations.

Trade in exotic or rare plants and animals can produce unsustainable harvesting practices and threaten the viability of several plant and animal species.

THE ENVIRONMENT AND THE POOR

The effects of environmental degradation on the poor are probably greater than on the well-off. Relative to the well-off, the poor tend to rely more heavily on natural resources and ecosystem services for their livelihoods. They also tend, therefore, to suffer more from natural resource degradation and biodiversity loss.

The biodiversity found in ecosystems—such as forests, agro-ecosystems, grasslands, wetlands, coastal waters—provide many essential services that contribute to productive activities, expand livelihood options, and provide natural safety nets against environmental shocks. Examples include the provision of natural

habitat for wild pollinators essential to food crops; natural predators that control crop pests; soil organisms important to agriculture productivity; watershed protection and hydrological stability that mitigate drought or flood conditions; maintenance of soil fertility through storage and cycling of essential nutrients; and the breakdown of waste and pollutants.

The poor, moreover, tend to live in marginal areas with little access to water, sanitation, and clean air and land. As such, they are hit hard by pollution for which they pay with their health and livelihoods. They can also expect to be hit hard by the effects of global climate change, including drought, loss of arable land, loss of freshwater sources, loss of coastal lands and islands, and increased incidence of severe weather events (from which they have the least protective shelter, ability to relocate, and ability to recover afterward).

WHY MICROFINANCE SHOULD CARE ABOUT THE ENVIRONMENT

Having demonstrated that microenterprises can impact the environment for good or ill (and perhaps both at the same time), why should the microfinance industry care? The industry ought to be involved for six reasons: scale, risk, regulation, access to funding, competition, and ethical considerations.

Scale

According to the Microcredit Summit, at the end of 2004, microfinance institutions had reached 92 million clients, representing a nearly seven-fold increase from the 13.5 million loan recipients in 1997.⁴ This figure, however, still represents a small fraction of the total number of micro- and small enterprises operating in developing countries. It is reasonable, therefore, to expect the scale of worldwide microfinance activity to continue to grow over time, potentially reaching well into the hundreds of millions of clients.

Even if microfinance exerts only a small impact on business formation and growth, the cumulative environmental impact of hundreds of millions of clients starting and expanding businesses, most outside any formal regulatory structure, through access to financial services will be large. If the industry is to make serious efforts to address its environmental responsibility and impact, it is better to start soon, before its environmental effects begin to reach critical mass.

Risk

Environmental issues can affect an MFI's profitability by increasing its risk. Poor people are more dependent on natural resources, frequently using natural resources as inputs for their production. The depletion of these inputs reduces the sustainability of the business. As the inputs become more scarce, they become more expensive, jeopardizing the client's ability to save or repay loans. Since MFIs often support sectors in which many clients are engaged in similar activities, natural resource depletion can put an MFI's loan portfolio at risk.

Environmental outcomes that negatively affect the health of poor or marginal business operators impose further risks to MFIs. As mentioned earlier, the effects of environmental degradation are acutely felt by the poor and other marginal groups. When microentrepreneurs become sick from pollution, for example, they are less productive, and their ability to pay off loans or save decreases.

If microentrepreneurs are destroying natural habitat in order to make a living, they may be increasing their vulnerability to landslides, floods, or other natural disasters. The loss of business and life in the event of a natural disaster caused or exacerbated by environmental destruction will likewise affect an MFI's bottom line.

4. www.microcreditsummit.org

MFI's are also at risk of decreased cash flows due to unforeseen environmental costs faced by borrowers. These costs might include compliance with costly environmental regulations, fines for noncompliance, clean-up costs, lost revenue from damaged reputation, production limitation or termination, and so on.

Environmental crises among microenterprise clients pose a number of risks to MFI's in terms of tarnished reputation, damaged brand identity, and lower profits. An often-ambiguous legal structure opens the door to private suits for environmental damage against parties with deep pockets, including many MFI's. MFI's are also at risk for environmental activism by community or other public-interest groups. Failure to take prudent steps today to anticipate and mitigate these risks increases the likelihood that an environmental crisis down the road does serious damage to an MFI's (and the industry's) reputation and profitability.⁵

Finally, environmental considerations are expected to play an increasingly important role in the competitiveness of micro- and small enterprises in globalizing markets, as end markets insist on products that are healthy, nontoxic, and produced under environmentally friendly conditions by manufacturers who adhere to safe labor standards.

Regulation

There is no guarantee that microenterprises will remain outside a country's regulatory regimen. Rather, there is good reason to believe that many countries will close many of these regulatory gaps over time. If clients are engaged in covered activities or are located in biosensitive regions, environmental regulations may significantly affect the way they do business, and even their ability to do so.

There is any number of regulatory actions governments might take that affect microenterprise operations, profits, and sustainability, both within and across sectors. As countries continue to grapple with and, over time, address their development needs, the environment is expected to emerge as an increasingly important item on the policy agenda. When this occurs, it is unlikely that microenterprises will continue to fly under the regulatory radar to the extent they have to date.

Access to Funding

To the extent corporate social responsibility becomes a mainstream business practice over time,⁶ MFI's will increasingly be evaluated according to triple bottom line criteria. Many socially responsible investment funds and the foundations linked to them use environmental criteria in their due diligence procedures. An MFI's ability to attract financing, in addition to its brand reputation, will increasingly depend on its environmental policies and practices.

Competition

The competitive landscape of the microfinance industry is dynamic. New entrants and traditional rivals (e.g., credit unions, informal savings and loan associations) are increasingly competing for a slice of the microfinance pie. Environmental technologies and practices that save micro- and small enterprises money and in turn increase their productivity offer certain MFI's an opportunity to differentiate themselves from the competition while providing valuable, and profitable, services to clients and communities. Examples

5. The mitigation of such risks is one of the primary reasons, and benefits, for engaging in corporate social responsibility practices. For more on this, see the chapter on the [Business Case for Corporate Social Responsibility](#) in the Social Performance Map.

6. Of course, there's no guarantee this will happen. See the chapter on [Corporate Social Responsibility \(CSR\)](#) in the Social Performance Map for a discussion on mainstreaming CSR.

of such practices and technologies include solar technologies (e.g., solar panels, cell-phone chargers, water pumps, cookers), microdrip systems, and low-wood-use (e.g., Lorena) stoves.

Ethical Considerations

Aside from the practical (or self-interested) reasons for addressing environmental issues, there are also ethical considerations at stake. Many believe that humans have an ethical responsibility to care for the environment, and this belief is reflected in the policies and practices of many industry stakeholders. While the intensity of this belief—and the willingness to put it in practice—vary widely, it is an idea with widespread and growing cache. The developing world lags behind the developed world in this regard, but the gap is expected to close over time.

At the moment, ethical considerations are not by themselves potent enough to motivate generalized action, and it is questionable whether they ever will be. That said, when combined with sound, practical arguments for protecting the environment, they can provide an extra and important legitimacy to the arguments. If, as expected, environmental concerns begin to climb up the priority ladder in developing countries over time, ethical considerations are expected as well to play an important, if subsidiary, role.

WHAT CAN MFIS DO?

Owing in part to the informality of the microenterprise sector, microfinance can provide an important interface to address environmental issues in the sector. In general, there are three broad approaches to mitigate the environmental impacts of microenterprises: command and control, economic incentives, and increased lender liability. The first two approaches have to do with the regulatory and policy environment and are largely outside of the MFI sphere of influence.

The third approach, increased lender liability, is to use MFIs to support supervisory and policy bodies to enforce environmental standards or to promote adoption of environmentally friendly technologies and practices. This approach is attractive because the MFIs interact closely with the microenterprises and are thus in a position to influence their behavior and environmental performance. (A potential downside is the imposition of additional and expensive administrative burdens on the MFI for which it may or may not possess the appropriate resources and technical capacity.) Within this broad approach an MFI has numerous options either to promote sound environmental technologies and practices or to punish unsound environmental technologies and practices. Some specific methods include environmental education and training, environmental assessment and screening, adapting product mix, market research, participatory subsector analysis, partnership/building networks, and promoting regulation. These options are reviewed below.

Before deciding what its specific approach is, the MFI should first look inward to assess its own environmental performance as the precursor to developing a formal environmental policy. Does it, for example, engage in environmentally sustainable pursuits? Is it funding environmentally damaging activities? If so, is it transitioning away, or how can it transition away, to more environmentally friendly activities? What is its own carbon footprint or waste stream in the communities in which it operates?

The **environmental impact assessment** (EIA) is an effective method for assessing an organization's environmental performance. Although often used as an external reporting requirement (i.e., as a condition for receiving a loan),⁷ the EIA is also a useful internal assessment tool. A discussion of the EIA is found below, followed by a review of the aforementioned options available to MFIs to promote greater environmental responsibility among their clients.

7. Spurred by the [Global Reporting Initiative](#) and the [United Nations Environmental Financial Initiative](#), many large commercial banks have begun to implement EIAs.

Environmental Impact Assessment

The environmental impact assessment is “the process of identifying, predicting, evaluating, and mitigating the biophysical, social, and other relevant effects of development proposals prior to major decisions being taken and commitments made.”⁸ Its purpose is to ensure that decision makers consider the environmental impact before deciding whether to proceed with new projects.

There is no single approach to EIA; the specific implementation of the EIA varies from organization to organization and it ranges from simple to complex. In general, however, it can be said to involve at least five basic steps:⁹

1. **Screening:** What project activities may be of concern?
2. **Baseline Conditions:** What environmental conditions surround the project?
3. **Prediction of Effects:** What are the effects and how important are they? Can adverse effects be minimized?
4. **Reporting:** What information was found, analyses made, and conclusions reached?
5. **Environmental Protection Plan:** What can be done to ensure operations meet all guidelines, codes, and regulations?

A number of methodologies and tools can be used to conduct an EIA and identify potential environment effects. Two common and relatively simple tools are checklists and matrices. Checklists provide a systematic method for measuring environmental impact by identifying the features or factors of program activities that need to be addressed. They vary in complexity and purpose from a simple checklist to a structured methodology that assigns significance by scaling and weighting factors. Checklists can be improved and adapted in accordance to local conditions, particularly as organizations gain experience in their use. Items in a checklist might include, for example, air, water, geology, soils, natural vegetation, wildlife and fisheries resources, heritage resources, land use on adjoining property, noise pollution, and solid or liquid waste and disposal.

Where checklists are effective for systematically working through the expected or potential environmental impact of program activities, they are less effective for identifying higher order impact or the inter-relationships between effects.¹⁰

Matrices are used to identify the interaction between program activities. They consist of gridlike tables that list program activities on one axis and environmental characteristics on the other axis. Within the matrix, environment-activity interactions are noted in the appropriate cells or at intersecting points in the grid. Entries in the cells are made to note the severity of impact or to highlight other features related to the nature of the effect, and can consist of (1) ticks or symbols to identify effect type (such as direct, indirect, cumulative), (2) numbers or a range of dot sizes to indicate scale, or (3) descriptive comments.¹¹

In addition to—or in place of—an EIA, MFIs can undertake a variety of actions to assess their environmental impact or develop their environmental policies. Examples include loan application analysis, participatory subsector analysis (PSA), training/environmental awareness, regulation, incentives, and partnering/building networks.

8. Association for Impact Assessment, (1999), “Principles of Environmental Impact Assessment Best Practice.”

9. www.axys.net/expertise/assessments/eia.htm

10. An example of a checklist can be found at http://eia.unu.edu/wiki/index.php/Sectoral_Checklist or in the Annex of Abhishek Lal, “An Overview of Microfinance and Environmental Management.”

11. An example of a matrix can be found at http://eia.uu.edu/wiki/index.php/Assessment_Matrix.

The EIA (or other form of environmental self-assessment) provides the MFI with the basis for an institutional environmental policy. The institutional environmental policy may be a separate policy, or it may be part of a broader corporate social responsibility (CSR) policy. Once the formal environmental policy is in place, the next steps (easier said than done) are to develop internal systems for putting the policy into practice, implement the policy, and monitor its implementation.¹²

Environmental Education and Training

The main incentives for microfinance clients to adopt sound environmental technologies and practices are perceived profit, health benefits, and sustainability of their resource inputs. Any approach to promoting greater environmental responsibility among clients should build on these incentives.

Many MFIs offer training services to their clients, often as a condition for receiving loans. It should be possible to cost-effectively graft an environmental training component into the course content. For MFIs that do not offer training services, there are other ways to integrate environmental education and training into the lending process. The training/education would seek, among other things, to inform clients on the environmental or health and safety consequences of their business activities and offer options for mitigating them.

Environmental Assessment and Screening

MFIs can use simplified environmental assessment tools to identify an enterprise's environmental impact and, depending on the outcome of the assessment, screen out certain enterprises or require others enterprises to adopt a mitigation strategy as a condition for receiving a loan. The loan application offers a convenient means to carry out the environmental assessment.

An alternative (and complementary) approach is to develop a list of and automatically screen out businesses that are known unequivocally to pose serious environmental and occupational safety risks—the so-called “worst offenders.” FMO Finance for Development, for example, has developed an Environmental and Social Risk Audit (ESRA) that combines these two approaches into a single assessment and screening tool. (See this section's annex for a description of the ESRA.)¹³

Adapting Product Mix

Adapting the product mix to promote environmentally sound technologies and practices incorporates a forward-looking approach to lending that views sustainable production as viable investment opportunities. Within this environmental lending paradigm, MFIs can selectively target certain sectors or businesses with a positive or (at worst) benign environmental impact. Specific examples in urban areas might include supporting waste collection and recycling businesses. In rural areas examples might include farming activities utilizing crop and livestock rotation or linking clients with selected input suppliers to promote sound and sustainable farming practices.

MFIs can also adjust their product mix by offering new products or embedding positive incentives into existing products to encourage clients to adopt environmentally friendly technologies or practices, or by linking loan approval to adoption (avoidance) of environmentally constructive (destructive) technologies or practices.

12. Creating and implementing a system to manage environmental performance comprise part of what is called the social performance management (SPM) system. This is discussed in much greater depth in the [Social Performance Management](#) chapter of the Social Performance Map.

13. See Wenner et al. pp. 12–14 for an example of a simple assessment and screening tool.

In the case of urban polluters, for example, the MFI could provide products, perhaps at favorable terms, to finance the acquisition of alternative technologies or alternative types of fuel. In rural areas, the MFI might embed incentives into the loan terms to encourage crop or livestock rotation or to encourage clients to deal with the selected suppliers. The long-term individual loan is one type of product that appears well-suited to finance technology acquisition. Savings also might be used to provide collateral or down payments for technology acquisition. Equipment leasing might also be used for acquisition of environmentally appropriate technologies.

A caveat is appropriate here. Using financial services to encourage microenterprises to adopt environmentally friendly practices and technologies is not easy. There are many challenges in this area, and there have been many failures. Challenges on the supply side include the unavailability of relevant technologies, inadequate distribution networks, quality and capacity limitations of technology providers, and the quality of the technologies themselves. From the demand side, challenges include affordability, inadequate knowledge about appropriate technologies, and uncertainty about returns.

The market is addressing some of these challenges. Many alternative technologies have fallen in price to within the reach of the poor (e.g., small-scale solar electric systems, biogas, efficient stoves, water-saving devices, cleaner fuels and manufacturing equipment, etc.). In some countries, these technologies are being locally assembled or manufactured, further reducing their cost. Global consciousness about environmental problems, both past and future, is pushing research and development of new inexpensive technologies of improving quality.

From the MFI perspective, there are a number of other factors that also pose additional obstacles to the promotion of environmentally friendly technologies. MFIs themselves do not understand the technologies, and many MFIs are reluctant to finance assets that do not clearly relate to income generation. Many MFIs are not familiar with using assets as collateral, and there are few MFIs with experience in leasing. The push by donors to achieve financial sustainability, moreover, limits MFIs' ability to innovate and experiment with new products. On top of this, MFIs tend to be risk-averse, and most are not facing the kind of competition that would incentivize them to make environmentally friendly innovations for new markets.

There are, nonetheless, some successful examples of uptake of environmentally friendly technologies using microfinance. These often come out of a long-term and workable relationship between a financing institution, its clientele, and a technology distributor—a relationship that takes time and perseverance to develop. MFIs that have provided financing for the acquisition of environmental technologies include Prodem in Bolivia, ADEMI in Dominican Republic, Al Amana in Morocco, and SEWA in India. Conservation International in Costa Rica, which serves small farmers working in proximity to a nature reserve, has successfully adopted a loan policy that lends only to activities that it judges to be environmentally benign.¹⁴

Market Research

As MFIs expand into new sectors and geographical areas, this opens the possibility of using environmental criteria in selecting locations and markets. MFIs may want to consider (1) whether there are sensitive biological systems in the areas, (2) whether and how the MFI might ensure that its services and products will not damage the area, (3) whether and how financial services should be used to minimize the environmental impact, or (4) whether it is better not to finance these harmful activities.

14. Interested readers can also refer to the [National Renewable Energy Laboratory's](#) publication *Renewable Energy for Microenterprises*, [SELCO](#), and the Grameen Bank's renewable energy subsidiary [Grameen Shakti](#).

Participatory Subsector Analysis

Participatory subsector analysis (PSA) is already used by MFIs to help microenterprise operators identify inefficiencies in production processes. Given that many of these inefficiencies are themselves sources of environmental degradation, PSA can also be used to identify processes that negatively affect the environment.

Partnering/Building Networks

Networking with NGOs, government institutions, MFIs, input suppliers, etc., is an effective method for obtaining information on environmental management techniques and for facilitating partnerships in tackling environmental issues. Partnerships build on the relative strengths and combined resources of organizations to undertake activities that might not have otherwise been possible alone. Partnerships might, for example, be used to provide training in environmental management, promote adoption of new technologies, obtain environmental or organic certification, promote policy reforms, monitor or encourage compliance with environmental regulations, and so forth.

Further on up the ladder, investors and donors are in a position to exert a significant influence on MFIs, and thus MFI clients, with respect to the incentives they offer to MFIs to incorporate environmental considerations into their operations, product mix, and educational efforts.

Promoting Regulation

MFIs can also play a role in advocating for national regulatory policies in order to advocate for effective approaches to environmental concerns on the part of MFIs and their clients. National microfinance networks are particularly well placed to take on this role of engaging with national policymakers, MFIs, microenterprises, and other sector stakeholders to promote reasonable regulatory reforms.

MOVING FORWARD

The microfinance industry lags behind the curve in terms of environmental awareness and action. There are, to be sure, organizations in the sector promoting both,¹⁵ but these tend to operate along the fringes, not only within the sector itself, but also within the microfinance social performance movement, itself still a fringe (non-mainstream) movement within the broader sector. Much work remains to bring the environment to the microfinance agenda.

There are a number of steps that can be taken in the short run toward this end. One relatively easy step is to introduce the environment into the agenda of the microfinance social performance movement. For reasons described elsewhere in the Social Performance Map,¹⁶ the microfinance social performance movement has developed along a different path from that in the business sector. The latter has tended to focus on issues related to the triple bottom line, while the former has tended to focus on developing proxies for social impact related to the unique characteristics and objectives of microfinance, dominated by concerns for poverty outreach and impact. There are reasons for believing, however, that the paths will converge at some point in the future (more likely that microfinance will converge on mainstream social performance frameworks and standards than the converse).

In anticipation of this convergence, it makes sense for the sector to end its ongoing courtship of the double bottom line (financial and social performance) to fully embrace the triple bottom line (financial,

15. See, for example, [Green Microfinance](#), [FMO](#), [Finance for Development](#), [EcoVentures International](#).

16. See the chapter on the [Business Case for Corporate Social Responsibility](#).

social, and environmental performance). Advocates who have effectively promoted the double bottom line to date are well positioned to promote the triple bottom line as well.

Some may resist taking this step due to a concern that broadening the social performance framework will weaken the relative position of poverty outreach/impact in the sector's hierarchy of values, while giving MFIs an opt-out from being held accountable for their poverty outreach/impact. This is a legitimate concern, but there is no reason that poverty concerns cannot continue to hold a prominent place within a triple bottom line framework, particularly for those MFIs that claim a poverty outreach/impact agenda. Rather than use such concerns to delay a transition to the triple bottom line, a more productive approach is to work closely with industry stakeholders to ensure that poverty retains a preeminent position within an expanded triple bottom line framework.¹⁷

Another short-run step to integrate environmental concerns into actual practice is to support grassroots efforts to increase the level of environmental awareness among MFI staff and clients. Where it is appropriate, staff and clients can be referred to qualified third parties for guidance in environmental management. Such actions need not require excessive effort and can be scaled up reasonably quickly. Donors will likely need to play a large role in this effort.

It is best early on, however, to work within existing MFI practices while increasing general awareness and promoting reasonable mitigation strategies, rather than try to prescribe, or proscribe, certain activities. (An exception to this policy might include worst-offender enterprises.) Starting out of the gate with a heavy-handed approach to environmental protection increases the risk of introducing market distortions and inefficiencies—such as artificially high transactions costs—without producing corresponding environmental benefits and potentially reducing access to credit by the poor.

The preferable approach is to help microenterprise operators educate themselves about the environment, adopt more environmentally sound technologies and practices, and improve occupational safety standards. The emphasis of these efforts should be on convincing microentrepreneurs of the economic (e.g., increased productivity and profits) and health benefits of adopting such technologies and practices.

Assistance might consist of loans and grants to increase environmental and occupational safety awareness, develop and diffuse environmentally friendly technology, and strengthen the government's capacity to adopt and enforce standards. This will require cooperation by multiple industry stakeholders to work jointly toward the goal of improved environmental protection and improved occupational safety and health.

17. The Global Reporting Initiative (GRI) is recommended in this Social Performance Map as the most appropriate triple bottom line framework for microfinance. The GRI is described in detail in the chapter on [Social Auditing](#).

ANNEX: FMO ENVIRONMENTAL AND SOCIAL RISK AUDIT¹⁸

FMO Finance for Development is a Dutch development finance company that has developed a tool to help MFIs minimize the negative environmental and social impacts of the microenterprises they support.¹⁹ The Environmental and Social Risk Audit (ESRA) combines positive and negative approaches to promote greater environmental consciousness among MFI staff and clients and to bring clients' business practices in line with sound environmental practices. The ESRA includes support tools, a course, and Internet support to help MFIs build an environmental and social (E&S) risk management system.²⁰ It is highlighted here as a good example of an integrated approach to environmental management.

A premise underlying the ESRA is that social and environmental factors must be included with other (traditional) factors in making loan decisions. The ESRA breaks the lending process into four phases—application, appraisal, contracting and disbursement, and reporting—and integrates environmental and social risk assessment into each phase.

LOAN APPLICATION

The exclusion list is the main instrument of the ESRA during the loan application phase. The exclusion list is a list of sectors and activities that, in the opinion of FMO, should under no circumstances be financed. It includes

- activities regulated or prohibited under international agreements and by national laws,
- activities that may give rise to significant environmental or social problems or that may lead to significant adverse public reaction, and
- activities prohibited under the MFI's contractual agreement with FMO.

MFIs financed by FMO are legally obliged to include all the sectors and activities of the FMO exclusion list, as follows:

- Production or activities involving forced labor or child labor
- Production or trade of any product or activity deemed illegal under host country legislation or regulations or international conventions and agreements
- Production or trade of weapons and munitions
- Trade in wildlife or wildlife products regulated under the international treaty CITES

18. The information and much of the language in this chapter is taken from the [FMO website](#).

19. www.fmo.nl/en/publications/environmental_social_risk_management_tools_MFI.php

20. Support tools offered by the FMO include (1) an exclusion list, (2) an activity assessment tool, and (3) environmental and social evaluation guidelines. The latter of the three provides guidance on how environmental and social risk evaluation and follow-up processes can be implemented in alignment with an MFI's evaluation, approval, monitoring, and reporting processes.

- Production, use, or trade of hazardous materials such as radioactive materials, unbounded asbestos fibers, products containing PCBs and chemicals subject to international phaseouts or bans
- Commercial logging operations or the purchase of logging equipment for use in any primary forest or forest areas with a high biodiversity value or any other activity that leads to substantial clear-cutting of such forests
- Production or trade of pharmaceuticals subject to international phaseouts or bans
- Production or trade of pesticides or herbicides subject to international phaseouts or bans
- Production or trade of ozone-depleting substances subject to international phaseout
- Drift net fishing in the marine environment using nets in excess of 2.5 km in length

LOAN APPRAISAL

In the loan appraisal phase, the MFI decides whether to make the loan. In reaching this decision, the MFI will consider environmental and social factors in addition to traditional loan criteria. Environmental and social factors include information, or projections, about the occurrences of environmental, health and safety, and labor risks or defaults.

The source for information on environmental and social factors is the **activity assessment tool** and the **sector factsheet**. The former is a matrix summarizing the key environmental and social risks for the various sectors in which MFIs work, including agriculture, trade, services, and manufacturing. The latter lists observed client behaviors, analyzes whether they pose a risk, discusses the relevance of the behavior, and offers suggestions to the client about possible mitigation strategies.

There are three possible outcomes of social and environmental appraisal:

1. Raise awareness of the client about social and environmental impact.
2. Train/educate the client regarding social and environmental improvements.
3. Include specific clauses in the loan contract to mitigate specific social and environmental risks.

Which of the three outcomes occurs depends on the social and environmental risk and size of the loan, among other factors.

LOAN CONTRACTING

The MFI builds into the loan contract a set of standard mitigation actions to which the borrower must commit as a condition for receiving the loan. The language is as follows:

I, . . . , undertake to carry out my business in a way that avoids, reduces, and compensates for damage to nature, public services, or the well-being of the individuals who work with me and who live in the vicinity, by continuing with or taking the following actions:

- Operate and maintain machines and equipment professionally and with proper (safety) measures.
- Don't employ children.
- Use (toxic) chemicals with proper safeguards and store them properly.
- Comply with accepted standards and regulations regarding land cultivation.

- Reduce the amount of waste by improving the process or recycling.
- Prevent land erosion or degradation.
- Take precautions in waste disposal, not dump liquid or solid waste in public places.
- Avoid, reduce, control processes that pollute the air.
- Take steps to protect my own health and that of my employee, clients, or neighbors.
- Comply with municipal regulations on environmental protection, health and safety, hygiene, labor.
- Comply with government regulations.

I have been informed that the entity granting me the loan may take a visit to evaluate my activities from the environmental, health and safety, and labor standpoints and that I may only obtain a new loan if, in addition to complying with the financial conditions, I also comply with my environmental, health and safety, and/or labor commitments.

In addition to the standard contractual language, the MFI may also specify loan clauses aimed at mitigating risks particular to that loan. In most cases, these can be simple adaptations of the standard clauses.

REPORTING

Once a lending decision has been made, the next step is to integrate the information into the MFI's management information system (MIS). Information entered into the MIS includes

- whether an environmental and social appraisal has been performed,
- what the most important environmental and social aspects of a client or a loan are,
- what clauses have been added to the contract, and
- whether a client has made the necessary improvements.

Once this information has been logged into the MIS, the MFI can utilize it in a number of ways:

- monitor progress and compliance with loan clients' contractual obligations,
- assess status and progress for future loan appraisals with the same client,
- generate cross-loan-book overviews about the nature and magnitude of the environmental and social risks, and
- reporting to investors and donors about environmental impact.

For MFIs adopting the ESRA, FMO will produce a specific set of monitoring indicators based on the experiences of MFIs using the tool.