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**Reference:**

Huybrechts Frédéric, Bastiaensen Johan, Van Hecken Gert.- Exploring the potential contribution of green microfinance in transformations to sustainability  
Current Opinion in Environmental Sustainability - ISSN 1877-3435 - Oxford, Elsevier sci ltd, 41(2019), p. 85-92  
Full text (Publisher's DOI): <https://doi.org/10.1016/J.COSUST.2019.11.001>  
To cite this reference: <https://hdl.handle.net/10067/1641000151162165141>

# Exploring the potential contribution of green microfinance in transformations to sustainability

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## *Abstract*

In this review, we explore the potential of green microfinance to contribute to transformations to sustainability. Green microfinance aims for environmental objectives in addition to microfinance's traditional financial and social goals. We argue that the questions of whether and how these instruments contribute to social-ecological change on the ground have so far remained underexplored. Moreover, the incipient green microfinance practice and discourse often reflect individualistic economic framings of social-ecological dynamics, at the risk of maintaining or even strengthening the structures that reproduce social exclusion and environmental degradation. To better understand green microfinance's potential contribution to transformations to sustainability, we advocate for a systemic and power-sensitive approach to its theory and practice.

## Introduction

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The quest for ‘sustainable development’ has become common discourse and practice among policy-makers, practitioners, researchers, and the public at large. The definition of what ‘sustainability’ entails and how it can be achieved is a contentious issue, and is beyond the reach of this article. Here, we adhere to notions of ‘transformations to sustainability’ [1●, 2, 3●●, 4,5] which are underpinned by a need to fundamentally challenge incumbent structures and processes which lie at the root of unjust social relations and ecological harm. Significant shifts in structures are needed to redirect the predominant development pathways [1●,6]. Such transformative change, according to Nightingale et al. [3●●], is “founded on change in knowledge systems and the opening of deliberative space for defining futures.” This perspective on transformation emphasises that any definition of what constitutes meaningful change towards sustainability reflects particular framings and underlying assumptions that prioritise particular actions at the expense of alternative solutions [7]. Processes of change in social-ecological systems, characterised by complexity, emerge out of partially unpredictable interactions between variegated system components, and thus imply non-linear evolution (thresholds), high levels of uncertainty and knowledge gaps, with little opportunity for centralised control [6,8]. To engage in a process of transforming dominant assemblages of ideas, rules and practices requires coalitions of actors and active engagement with iterative negotiated-deliberative (discursive) struggles, without ever achieving full control over the emergent processes of change [3●●,9].

It is amidst increasing sustainability concerns that a recent strand in microfinance is turning ‘green’, by adding environmental objectives to its traditional double bottom line of financial and social performance [10-12]. In this article, we explore whether and how green microfinance could play a role in transformations to sustainability. In the next section we explore the recent turn to ‘green microfinance’ (GMF). We take stock of the rise in GMF practice and research, and note that so far little attention has been paid to the underlying assumptions and how it plays out on the ground. In section three we elucidate the social-institutional role of microfinance as a particular intervention in broader, complex processes of local environmental governance and social change. We point to challenges related to the predominantly individualistic-economic underpinnings of GMF, which risk maintaining or even strengthening the structural conditions of social exclusion and environmental degradation. Finally, in the last section, we explore how

microfinance could potentially be a lever for more profound transformative change through an explicit re-politicisation, and as part of strategic alliances in support of bottom-up change. We also explore what this means for future microfinance research and practice.

## The rise of green microfinance

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Broadly speaking, microfinance refers to the provision of formal financial services to people and micro-enterprises that previously had no access to them [13,14,15]. This often requires particular social-financial practices such as group lending and alternative collaterals [16]. Micro-financial services mainly include micro-credits, but increasingly also savings, insurance, and digital payment services. The industry now exceeds 100 billion USD and serves over 200 million clients; a growth spurred by donor investments and commercial successes [17,18]. While the industry has spread over all continents, it is predominantly active in the Global South, with epicentres in South Asia and Latin America [18].

Ever since its inception in the 1980s-90s, the microfinance sector has aimed for a double bottom line, i.e. reaching social objectives while creating a profitable niche in the financial sector [15,19]. The financial performance of microfinance is primarily assessed through returns on assets and equity, determined by the efficiency, productivity and profitability of service delivery [20]. The social performance of a microfinance institution (MFI), in turn, is mainly monitored through “the poverty level of clients, the focus on women clients, the number of clients, the type of products delivered and the cost of microfinance services” [20]. The balancing of these social and financial goals is exercised in different ways among different types of microfinance policies/institutions [19]. Furthermore, the financial services can be offered either in an isolated way or in combination with other non-financial services, in which case it is referred to as ‘microfinance *plus*’ [21]. The accompanying non-financial services can include technical assistance, business services or (financial) education, and in rural areas they can be integrated within a value chain approach [22].

The (public) enthusiasm and support for microfinance has followed a ‘pendulum movement’ over the years [23]. While the socially transformative capacity of microfinance has been increasingly questioned in recent years [24-26], microfinance still attracts substantial support from policymakers and public funders [27]. For example, ‘access to financial services’ is

presented as a key condition for achieving the United Nations Sustainable Development Goals [28], with some regretting that financial inclusion has not become a goal in itself [29].

A recent trend of GMF adds environmental objectives to the traditional financial and social bottom lines. This is manifested by a growing number of MFIs that integrate environmental concerns in their strategies and a proliferation of green working groups within multilateral microfinance networks [30-32]. Multiple motivations and concerns underlie the green turn of MFIs. These may relate to MFIs' concerns about the (negative or positive) environmental impact of their clients' activities [33-35]. Another motivation relates to the environmental (and thus also financial) risks to which microfinance clients are exposed, including climate change and natural disasters [11,36-39]. Additionally, the inclusion of environmental objectives opens up new investment frontiers, allowing MFIs to tap from new (green/climate) funds and market segments [40-42]. From either perspective, the interest in GMF is underpinned by an expected 'triple win', addressing social and environmental problems while achieving financial returns [43].

In practice, GMF encompasses different approaches and strategies. One important dimension of GMF is the provision of environmentally targeted financial services. For example, an MFI could provide credits to support the adoption of agricultural practices for climate change adaptation or mitigation [44,45]; support investments in renewable energy [46]; or provide micro-insurance for climate-related risks [39]. In addition, MFIs can offer non-financial services such as technical assistance for more environmentally friendly practices or provide trainings for raising environmental awareness. Other dimensions of GMF include the greening of an MFIs' mission statement, the assessment of the environmental risks of its portfolio, and the reduction of its internal footprint (i.e. the resources that the MFI uses in its operations) [47].

These different dimensions of GMF have been integrated into an internationally accepted environmental performance indicator, called the Green Index [48,49], through which MFIs can indicate what GMF activities they undertake. Currently, the Green Index is the backbone for the further promotion and monitoring of microfinance's environmental bottom line [50,51]. However, as with earlier social performance indicators, measurement and reporting is mostly based on tracking intentions and efforts, "without showing whether these efforts actually translate into positive change in terms of environmental impact" [47].

## Green microfinance and complex change

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GMF as an emergent practice creates high expectations and real opportunities. However, so far insufficient effort has been invested in understanding how this new approach can optimise its impact, in particular in view of the much needed fundamental transformations to sustainability. We argue that adopting a more power-sensitive, systemic approach to transformative change can illuminate the way forward.

Most empirical studies in the incipient grey and academic literature on GMF remain largely descriptive. The assessment of social-ecological outcomes tends to be perceived primarily in light of specific financial products, their direct beneficiaries and the specific technologies and innovations that are supported [35,39,46,52,53]. Only a few studies reflect more profoundly on the variegated, dynamic and often unexpected ways in which GMF initiatives interact with the local social-political and ecological contexts [54-58]. For example, in examining a credit-related programme promoting access to water pumps in a drought-prone region in India, Taylor [54] explains how the project's individualised and technical focus unwittingly ended up exacerbating overexploitation of water resources by those who gained access to improved pumps, thereby further increasing the vulnerability of the poorest. The wider private availability of pumps also reduced the support base for more inclusive and collective solutions to water problems in the region. Similarly, in their assessment of a microfinance project supporting biodiversity-friendly practices in Nicaragua, Huybrechs and colleagues [55,59] found that the project's incentive structure disproportionately benefited relatively larger farmers, whose unsustainable land-use practices were not significantly challenged. Rather than supporting alternative agro-ecological practices implemented by smaller peasants, the project unintentionally ended up supporting the dominant socially exclusive and environmentally destructive development pathway in this region. These cases are illustrative of the importance of engaging with the complex and political ways in which microfinance interacts with social-ecological systems.

Reflections on the dynamic interactions between GMF and the (emergent) equilibria or disequilibria in the local context, and how these influence impact and outcomes, are reminiscent of earlier discussions on the social bottom line in microfinance. In view of the

major investments of public funds in the microfinance sector, a considerable effort has been made to attribute social impact to the widened access to credit and other financial services. Despite this effort, the jury on social impact is still out, for several reasons which are also relevant for the discussion on environmental impact. A few years ago, a collection of highly publicised Randomised Control Trial (RCT) studies suggested that the initial high expectations of social impact were not met in practice [25]. This added to systematic reviews that highlighted the sector's allegedly unimpressive social impact [60], as well as more radical perspectives that largely dismissed microfinance as a neoliberal 'Trojan Horse' [61]. However, critical analyses of the RCT studies have indicated technical-scientific problems [62] as well as a lack of statistical power, suggesting "that we still know very little about the impact of microfinance" [63]. The assessment problem is compounded by a lack of clarity or consensus on the underlying criteria for meaningful social impact. For GMF this challenge might be even more daunting, considering the contentious nature of what is understood by sustainability. Finally, the complex nature of the interactions of microfinance interventions with context-specific mediating factors altogether questions the possibility to attribute social impact to microfinance as such. It is indeed the broader assemblage of factors and interventions which determine the emerging ultimate impact of financial services within specific social-institutional contexts [64,65] or, in terms of our discussion here, the social-ecological system.

The emergent, partially unpredictable and interactive nature of complex social-ecological change is often overlooked in microfinance research and practice, since its analysis remains largely informed by individualistic economic models and assumptions of (bounded) rationality underpinning human behaviour [8,66,67]. Improving the lives of the poor is then focused on easing the financial (and possibly other) constraints faced by individuals or individual households. Johnson [68] describes this underlying rationale as a 'residual' approach to poverty, where poverty becomes an apolitical "financial problem" [69]. This residual approach contrasts with a more 'relational' and power-sensitive social-institutional approach to poverty. The latter emphasises that social and political interactions between members of a (local or global) society structure differentiated opportunities and limitations in interaction with identities and – often unequal – social positions of those members of society [65,68,70]. Reducing poverty and social exclusion thus requires a broader social-institutional system change which goes beyond the provisioning of financial services. Interestingly, for the link with an environmental bottom line for microfinance, this critique of the individualistic-economic approach to social impact and the need for a systemic approach strongly resonates

with a similar critique by Ostrom and Cox [71], who question the suitability of ‘universal’ models of natural resource management for solving complex social-ecological problems.

In order to assess GMF’s potential role in the transformation of complex social-ecological systems, we thus suggest the adoption of a power-sensitive, social-institutional pathway approach focused on achieving systemic change [72●]. In line with our approach to ‘transformation to sustainability’, this implies two main considerations. First, microfinance should be approached more modestly as just one component of the broader societal ‘assemblages’ of ideas, rules and actors, from whose ongoing complex interactions the dominant development pathways emerge [64,65,73●●]. It is therefore not possible to understand microfinance’s social and environmental impact without gauging its interconnection with broader social-institutional processes. It implies that impact will be difficult to attribute to the mere provisioning of financial services (and/or complementary services), but is conditioned by the societal processes in which such provisioning is inevitably embedded. In this way, even well-intended interventions may be absorbed and re-worked by the dominant social-economic context, and may eventually end up supporting practices which run counter to their initial objectives, as indicated in the examples above. Similarly, it is possible that some of the intended environmental outcomes are accidentally produced by financial services which are not explicitly targeting environmental goals [55●]. The inevitable institutional embeddedness of microfinance also means that it has the potential to be a catalyst for the crystallization and promotion of new or previously invisible assemblages of ideas, rules and actors. In this way, it could be a useful entry point to change the nature of the emerging development pathways (see below). Given the complexity of the social-ecological system and despite the intentionality of actors involved in the change process, this can however not take the form of a managerially planned linear evolution [3●●,4].

Second, the promotion of particular pathways of transformation unavoidably entails ‘political’ choices which are often concealed (but do not disappear) through the use of economic frameworks underlying current microfinance approaches. The ‘framing’ of the sustainability challenges and solutions within the social-ecological system is unavoidably a power-laden process in itself, possibly excluding or weakening potential alternatives and contestations, while prioritising views and interests of more powerful groups [74,75●]. The tendency in (green) microfinance practice to conceive of social-ecological problems as being rather technical – with an individual focus on a lack of access to resources, knowledge or



technology - potentially fails to question the root causes of these issues. Herein lies the risk of perpetuating a status quo and excluding possible alternative – and more collectively constructed – practices and ideas. As indicated in the introduction, a more fundamental contribution of microfinance to a ‘transformation to sustainability’ implies a need to align with currently less visible, less articulated and less powerful views and related actors [3●●,76] and eschews the use of such interventions as mere justifications of business as usual [1●]. Being an entry point or catalyst for sustainability - or just a supportive part of social-institutional change towards sustainability - requires microfinance to be part of innovative societal alliances, engaging in the collective learning and discursive struggles over a change towards more viable development pathways.

## Avenues for transformative green microfinance

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In this concluding section, we reflect upon possible avenues for the further development of GMF initiatives in relation to more fundamental transformations to sustainability. The above considerations on the complexity of change first point to the need to go beyond ‘microfinance narcissism’ [77] – i.e. not to view GMF as a standalone intervention, isolated from the complex interactions from which development pathways emerge. Additionally, we point to the need to make more explicit the underlying processes and ensuing costs and benefits of supporting particular economic, social and environmental practices. Together, this aligns with a call to “re-configur[e] triple wins as processes of delivering recognition, rights and justice within pathways of transformational change” [43]. What are opportunities to support alternative practices; how and by whom are they identified and contested; and how can supporting them contribute to broader transformational change? These are questions which come to the forefront of an agenda for transformative GMF.

Alternative pathways can be obscured or obstructed by dominant and prevailing interests and ideas [7]. If we aim to use microfinance as a way to support “leverage points for meaningful change” [78], it is imperative to embrace a more explicitly social-political commitment, which privileges the aspirations and environmentalisms of more socially excluded groups [76,79]. At the micro-level, there can be opportunities to identify and co-generate alternatives and help to consolidate these with the aim to scale into a broader change. In relation to ‘transformations to sustainability’, this can be linked to ongoing debates on how ‘niches’ (or places where

innovations take place) could contribute to broader ‘regime change’, challenging incumbent rules and development pathways. These debates also include discussions about the extent to which ensuing transformative change also remains dependent on regime shifts at other scales [5,6,80,81].

Niches potentially challenge incumbent rules, practices and power relations through their scaling up (as the innovative niche grows and consolidates) [80] or scaling out (when the key principles and processes of support for a particular niche inspire other actors to engage with locally defined futures and practices elsewhere) [76]. Here lies a potential role for locally embedded savings and credit cooperatives (possibly related to multi-purpose cooperatives), but also for more entrepreneurial and more supra-local MFIs, provided that they deliberately reach out to support bottom-up initiatives and groups in the territories where they operate. In both options, the key will be to co-create, promote and support local coalitions of actors that engender potentially enduring conditions for the survival and expansion of the innovative, more ‘sustainable’ practices [5]. This resonates well with the historical tradition of (cooperative) banking linked to rural and urban social movements [82,83].

In terms of future research, we clearly cannot suffice with just tracking green intentions of microfinance institutions. There is a need for further case-study-based analyses of the ways in which microfinance plays out in the field, dealing with the underexplored question of how it contributes to social-ecological change on the ground. Such studies on actually realised triple bottom line benefits should engage with ongoing debates on how to monitor and evaluate sustainability goals, fully recognizing the normative and political dimension of doing so. This will assist in exploring and realising the transformative potential of GMF through explicit disclosure and the ability to course-correct where needed.

Preferably these studies should draw on interdisciplinary and mixed methods approaches, with long-term presence and engagement in the field. This would allow for insights into microfinance’s context-dependency and the complex and dynamic interactions in social-ecological systems [84,85]. A more power-sensitive approach can thereby explore how microfinance is enmeshed in broader processes of prioritising or marginalising certain practices and environmental issues, and how this unevenly distributes costs and benefits at different levels [86-88●●]. This further contributes to reflections on how complex processes of change are framed and instigated, and how they evolve over time and scale [2].

We also see avenues for action research, actively seeking to contribute to developing or adjusting (non-)financial services to support positive social and environmental change. Collaborative, co-designed efforts between practice and research could then engage more thoroughly with the realities of local territories and their actors –for instance through ‘transformative spaces’ which open up possibilities for experimentation and innovation [89]– for a broader view on possible problems and solutions and to explore what role microfinance can play herein [85].

Overall, we have argued that an assessment of the environmental impacts of microfinance inevitably depends upon the (political) complexities of its interactions with social-ecological conditions. A thorough engagement with how and why finance relates to transformations to sustainability requires humility towards the controllability and predictability of interventions. Simultaneously it requires more ambition and political consciousness in light of the collective process of defining and attaining particular social, economic and environmental objectives. For microfinance to be a lever for transformation, it needs to be considered as part of a broader and power-laden structure of incentives, ideas and motivations and related to particular social networks with potential to transform dominant pathways of development. We call for more context-specific and deliberative approaches for microfinance to enact its potential to engage with transformations to sustainability; allying with other relevant actors to contribute to the collective capacity and power to transform.

## Disclosure section

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The authors declare no conflict of interest.

## Acknowledgements

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We want to thank Sarah Moore, Susanne Moser, Peter Marchetti and three anonymous reviewers for their constructive comments on this article. We gratefully acknowledge the support of the Flemish Interuniversity Council (VLIR-UOS) which funded the PhD research of Frédéric Huybrechs. This article also relates to the TruePATH project which is financially supported by the Belmont Forum and NORFACE Joint Research Programme on Transformations to Sustainability, co-funded by ANR, FWO, ISC/Sida and the European Commission through Horizon 2020.

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- Of special interest
- Of outstanding interest

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