Social Marketing in India

Lessons learned from efforts to foster demand for cleaner cookstoves



2013

ABOUT SHELL FOUNDATION

Shell Foundation is an independent charity that was established by Shell Group in 2000 to catalyse scaleable and sustainable solutions to global development challenges. We apply business thinking to a range of social and environmental issues linked to the energy industry – seeking to harness links to Shell where possible to deliver greater development impact.

Over the last 12 years we have developed an 'enterprise-based' approach to: identify the market failures that prevent products and services that can support sustainable development from reaching the poor; co-create new business models with long-term 'social enterprise' partners to service these markets; and to provide extensive business development support to help these partners develop the skills, capacity and incentives to operate at scale and achieve financial independence.

By applying this approach to major global challenges such as job creation through small and medium enterprises, access to modern energy, urban mobility, cleaner cooking solutions and sustainable supply chains – and by learning from both success and failure – Shell Foundation have created several strategic partners that are now delivering large-scale impact in multiple countries across Africa, Asia and Latin America.

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EXECUTIVE SUMMARY

Context

Throughout the developing world, the private sector, donors, governments, NGOs and often innovative partnerships made up of these organisations are trying to provide the four billion people who live at the so-called 'Bottomof-the-Pyramid'¹ with a wide range of products. To-date there has been mixed success.

The sale and adoption of goods that deliver a range of health, livelihood, gender and environmental benefits and cost from just a few to several hundred dollars – such as improved cookstoves, solar lanterns and water purifiers – have proved particularly challenging due to a wide range of factors, including: affordability, diverse consumer needs and desires (rarely does 'one-size-fit-all'), the difficulty of supplying bulky products to remote or poorly served regions and the fact that they are usually 'push' products – ones that require a significant amount of consumer convincing to drive purchase – as opposed to relatively easy to sell 'pull' products like mobile phones.

For the past 12 years, Shell Foundation (SF) has been trying to tackle these market barriers with a view to developing sustainable markets where these products sell (and their benefits are felt) at scale – as part of its wider mission to catalyse enterprise-based solutions to global development challenges. A particular focus for SF has been the problem of 'Indoor Air Pollution' (IAP) – the toxic smoke caused when people cook on open fires or traditional stoves in poorly ventilated homes. With three billion people cooking in this way, IAP causes almost two million deaths a year (a similar number to HIV/AIDS). Burning biomass such as wood, charcoal or dung inefficiently not only produces dense smoke – it also carries a high cost for the poor, either financially or in time spent gathering fuel, degrades local environments (through deforestation) and contributes to climate change.

Since 2002, SF has been working to develop a market for more efficient, 'improved cookstoves' (ICS) that significantly reduce fuel use, emissions and cooking time for people who rely on biomass fuels. In 2007, we formed a long-term partnership with Envirofit International, a social enterprise based in the US, and together we began to develop a business-based model to design, produce and sell a range of clean cookstoves that are affordable, durable and desirable.

This term refers to the billions of people living on less than US\$2 per day, as first defined in 1998 by Professors C.K. Prahalad and Stuart L. Hart, subsequently expanded upon by both in their books: The Fortune at the Bottom of the Pyramid by Prahalad in 2004 and Capitalism at the Crossroads by Hart in 2005.

Room to Breathe

In late 2008, SF launched Room to Breathe (RtB), a social marketing campaign, in Shimoga – one of 26 districts in the state of Karnataka in south India – designed to raise awareness of the multiple benefits of ICS to households currently using traditional stoves and biomass for cooking (benefits such as lower fuel costs, time saved and improved health).

Of the 61 million people living in Karnataka, 70% are impacted by IAP – yet the issue is not recognised by many as a problem. SF worked in partnership with three organisations selling ICS in south India (Envirofit, First Energy and SELCO) to explore a wide range of social marketing messaging and activities, such as village demonstrations, street theatre and interactive games and establish new local stove promoters and ways to help NGOs, microfinance institutions and government health workers to promote stoves. The simple aims were to raise awareness in Shimoga (population 1.6 million), to sell 58,000 stoves and to achieve a campaign spend per additional stove sold of US\$5.75 – a cost-level that could eventually be absorbed by ICS manufacturers (and reduced with economies of scale) to make the campaigns financially-viable and scaleable.

RtB was established because several ICS businesses approached SF with the same problem: they were struggling to convince affected households to make the behavioural shift from open fires or traditional stoves to ICS. In part, this was down to the product offer itself,



The Room to Breathe campaign logo

with producers in the early-stages of learning how to balance stove performance with the needs and wants of the user. However, there was another distinction. All previous marketing campaigns had focused on the health and environmental benefits of ICS which had failed to excite consumers and trigger demand. Surveys showed that only 10% of impacted households spontaneously identified ICS as a way of reducing smoke in their households – an alarmingly low figure given that the use of ICS is the most viable way for households to do this.

This need to find new ways to connect with lowincome consumers across the developing world is reiterated in *Igniting Change: A Strategy for Universal Adoption of Clean Cookstoves and Fuels*, a report produced by the Global Alliance for Clean Cookstoves² following a consultation of 350 leading global experts. It states: "The cookstove sector must promote broad-based awareness campaigns targeted at impacted populations," and goes on to say: "...if the customer is not aware of the product's benefits, demand for clean cookstoves and fuels will be low and efforts to increase their use will be in vain."

Igniting Change is also very clear that the sector needs to tackle a wide-range of existing barriers in the cookstove value-chain simultaneously and holistically and SF echoes that view; tackling the social marketing challenges highlighted in this report alone will not be enough, but they absolutely must be part of the solutions mix.

If we fail to address the need for sustainable, scaleable social marketing solutions, then arguably products like stoves, lanterns, water purifiers and others – and their related social and environmental benefits – will never be delivered at scale.

Report Purpose

This report captures SF's journey – the ups and downs, successes and failures – over several years of running stove social marketing campaigns. We believe there is value in publishing these lessons for several reasons:

- No Easy Answers: Social marketing is like baking a cake: you need the right ingredients in the right proportions. If you are missing an ingredient or put too little or too much in then it will not turn out the way you want it. Just to complicate things further, there is no one-sizefits-all recipe: every market is different. To help with this conundrum we need to at least record and learn as much as possible from past and current efforts, such as RtB.
- Limited Track Record: While there has been a long history of social marketing, little of it has been around the sale and adoption of products like ICS in the developing world, where the behavioural shift is sizeable – often from a technology used for thousands of years that costs either nothing (a three stone fire) or a few dollars (a primitive, traditional clay-mud fire) to a new, unproven technology that can cost tens of dollars.
- Lack of Evaluation: Very few stove social marketing efforts to-date have been successful and the few that were have not generally been fully evaluated or the results were not published.
- Lack of Resources/Capacity: Many past stove social marketing efforts – due to lack of resources or capacity – only put some of the necessary recipe ingredients in place, almost guaranteeing failure (or at least limited success) before they even started.

We are very clear this report does not contain all the answers, but we hope it will make a small contribution to the efforts of those trying to drive adoption of ICS and other similar products in the future.

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Social Marketing

What is 'social marketing'? There are numerous definitions, but in essence social marketing is about applying commercial marketing's '4Ps' – Product, Price, Place, Promotion – with a social twist. Marketing is about convincing people to buy a product. Social marketing is about convincing people to adopt a behaviour or product that will improve their quality of life or that of the wider community. Population Services International, a leading social marketing organisation, say their social marketing work: "engages private sector resources and uses private sector techniques to encourage healthy behaviour and make markets work for the poor" (Population Services International, 2011).

When it came to RtB we worried little about these definitional differences, applying a pragmatic approach that saw us use a hybrid of marketing and social marketing i.e. promoting a social product and positive behaviour change.



Results

RtB has been a journey for SF – with some very good results and also plenty of hard lessons learned, which we are keen to identify so that others do not repeat them.

Our greatest success has been a partnership with Indian microfinance institution, Grameen Koota (GK), where we combined stove promotion activities with stove loans to address both lack of awareness and price barriers simultaneously. We managed to do this at a cost of US\$4 per stove sold during our campaign. As sales continued to increase, this cost would also reduce to a level that could be built into a US\$30 stove loan – thus making this route selffinancing and scaleable.

Between October 2009 to July 2012 the campaign reached 300,000 people – with awareness levels about IAP and ICS regularly exceeding the 30% target – but overall achieved modest success on sales, directly selling 11,447 ICS.

A number of different marketing activities (and combinations thereof) were piloted, including static wall paintings, demonstration vans, street markets and working through microfinance networks, health workers or local influencers (household 'activists').

The total cost of the campaign was US\$350,000 – but costs varied significantly by activity from US\$4 (marketing through microfinance institutions) to, in one case, US\$135 per stove sold (through household activists) though this latter activity was quickly stopped. While the cost of these pilots were high, the aim is that successful initiatives can ultimately be replicated more cheaply by local organisations.

Ultimately we were not able to bring the cost of activities per additional stove sold down to a sustainable level, yet many of the innovative ways we explored to deliver social marketing in a cost-effective manner showed real potential and warrant further investigation.

Lessons Learned

We learned numerous lessons and have attempted to capture these in this report. We have combined those into four main lessons learned with each containing numerous sub-lessons:

- Know your market Before launching any social marketing activities it is essential you understand your market; the knowledge, attitudes, aspirations and practices of your target audience; the current stoves they use; the impact (both real and perceived) of cookstove smoke on households – and the triggers and barriers to purchasing an ICS.
- 2. Match the message to purchase triggers and barriers – Once you have identified the triggers and barriers you need to tightly match your communications messaging to them, repeatedly trialling and honing the message before rolling it out at scale.
- 3. Get the mix right Without the right mix of all (or almost all) of the following ingredients stove sales at scale are unlikely to happen: a high-quality desirable stove at an affordable price (and/or consumer finance available); brand awareness of the product and producers; credible partners (in the eyes of the consumer) delivering the message; cost-effective campaign delivery mechanisms; stove supplies within easy reach of consumers; and, of course, the right messaging.

4. A surge of social marketing activities is required initially (and it may have to be donor-funded)

- A surge of social marketing is required when an ICS is first introduced into a market, particularly in markets where ICS are a relatively new product. Furthermore, in this initial high volume activity period it is difficult for stove businesses to cover the costs within their business models; they may therefore have to be donor-funded. Donors may have to accept that the first people to buy a stove in a community (the so-called 'early adopters') may not be the poorest in the community. As the market develops, word-of-mouth plays an increasingly important role and early barriers to purchase get addressed, making ICS available to poorer households too.

These broad lessons are not rocket science – and some readers may have spotted Marketing's '4Ps' running through them – but much of the detail underlying them is unique to the product category that includes stoves, solar lanterns and other similar products and we feel is therefore worth exploring in depth.

Next Steps

There is large and growing evidence to suggest social marketing will play a critical role in delivering ICS sales at scale. If we are going to find sustainable, scaleable social marketing solutions for stoves, solar lanterns and other similar social products we need organisations of all types to act.

- All organisations in this space need to be more ruthlessly disciplined about how they implement social marketing activities; they need to explore innovative partnerships and models; and they need to enhance evaluation and publish results. They also need to think ahead: the sector has largely focused on social marketing that convinces consumers to buy ICS... but ensuring consumers use ICS consistently and correctly is essential if the sector is to achieve the health, environmental, gender and livelihoods benefits it desires.
- ICS businesses (manufacturers, distributors, retailers) must ensure social marketing is firmly embedded in their business models and value chain.
- Multinationals (MNCs) must take the opportunities available to innovate in this space, particularly around the boundaries between corporate social responsibility and core business activities as this space tends to straddle both. MNCs with strong core competencies in marketing (such as Fast Moving Consumer Goods firms) are particularly well placed to bring their expertise to this sector.

- Governments of IAP-affected countries need, in addition to making stoves a policy priority, to embed social marketing in all their plans and activities. They should also explore how they can add stoves to the portfolio of social marketing they already conduct on other major health and environmental issues.
- Organisations like the Global Alliance for Clean Cookstoves, other policymakers and donors need to fund a range of activities that gives the sector a far better understanding of the role social marketing plays as a driver of ICS sale and adoption at scale in different markets. They also need to create sector efficiencies and drive bestpractice. Finally, if proven necessary and effective, they need to commit significant resources to social marketing activities – both to innovate towards identifying sustainable, scaleable solutions and to subsidise activities in the early stages of a market's development.

Solving these route-to-market conundrums is not easy and we experienced plenty of failures. But ultimately we identified one model that is not only self-financing but also solves price, distribution and lack of consumer awareness barriers, and crucially has the potential to go to scale.

As an actor in this space for the last decade we hope this report – along with our ongoing efforts to identify sustainable, scaleable solutions to some of the world's greatest development challenges – makes a small contribution to meeting these needs.

INTRODUCTION

- Many organisations are trying to catalyse markets so that the world's poor can purchase products like improved cookstoves (ICS), solar lanterns and water purifiers that deliver a range of social and environmental benefits – but this is complex and few have achieved adoption at scale.
- This report captures Shell Foundation's (SF) journey the ups and downs, successes and failures – over several years of running social marketing campaigns designed to drive adoption of improved cookstoves.
- Finding sustainable, scaleable solutions to barriers such as the lack of awareness among impacted populations that products like improved cookstoves exist, or lack of affordability is crucial if scale is to be achieved; this report makes a small contribution to these efforts.

Throughout the developing world the private sector, donors, governments, NGOs and often innovative partnerships made up of these organisations are trying to provide the four billion people who live at the so-called 'Bottomof-the-Pyramid'³ with a wide range of products. To-date there has been mixed success. The sale and adoption of goods that deliver a range of health, livelihood, gender and environmental benefits and cost from just a few to several hundred dollars – such as improved cookstoves, solar lanterns and water purifiers – have proved particularly challenging due to a wide range of factors, including: affordability, diverse consumer needs and desires (rarely does 'one-size-fit-all'), the difficulty of supplying bulky products to remote or poorly served regions and the fact that they are usually 'push' products – ones that require a significant amount of consumer convincing to drive purchase – as opposed to relatively easy to sell 'pull' products like mobile phones.

For the past decade, Shell Foundation (SF) has been trying to tackle these market barriers with a view to developing sustainable markets where these products sell (and their benefits are felt) at scale – as part of its wider mission to catalyse enterprise-based solutions to global development challenges. A particular focus for SF has been the problem of 'Indoor Air Pollution' (IAP) – the toxic smoke caused when people cook on open fires or traditional stoves in poorly ventilated homes. With three billion people cooking in this way, IAP causes almost two million deaths a year (a similar number to HIV/AIDS).

Burning biomass such as wood, charcoal or dung inefficiently not only produces dense smoke that increases incidences of pneumonia, bronchitis, cancer, heart disease and low birth weight – it also carries a high cost for the poor, either financially through fuel wastage or in time spent gathering fuel, degrades local environments (through deforestation) and contributes to climate change.

Since 2002, SF has been working to develop a market for more efficient ICS that significantly reduce fuel use, emissions and cooking time for people who rely on biomass fuels. In 2007, we formed a long-term partnership with Envirofit International, a social enterprise based in the US, and together we began to develop a business-based model to design, produce and sell a range of clean cookstoves that are affordable, durable and desirable. Envirofit now lead the clean biomass cookstove sector, with operations across Asia, Africa and Latin America. The business has sold more than 500,000 stoves – benefiting an estimated three million people and saving over one million tonnes of carbon from entering the atmosphere.

Addressing the market barriers to large-scale adoption of ICS has been a core focal area for SF – with the Foundation working to tackle critical issues such affordability, awareness and more effective distribution channels to make the product available where it is most needed – all challenges that are relevant to a large range of 'pro-poor' products beyond stoves.

Room to Breathe

In late 2008, SF launched Room to Breathe (RtB), a social marketing campaign, in Shimoga – one of 26 districts in the state of Karnataka in south India – designed to raise awareness of the multiple benefits of ICS to households currently using traditional stoves and biomass for cooking (benefits such as lower fuel costs, time saved and improved health).

Of the 61 million people living in Karnataka, 70% are impacted by IAP – yet the issue is not recognised by many as a problem. SF worked in partnership with three organisations selling ICS in southern India (Envirofit, First Energy and SELCO) to explore a wide range of social marketing messaging and activities, such as village demonstrations, street theatre and interactive games and establishing local stove promoters and ways to help NGOs, microfinance institutions and government health workers to promote stoves.

RtB was established because several ICS businesses approached SF with the same problem: they were struggling to convince affected households to make the behavioural

³ This term refers to the billions of people living on less than US\$2 per day, as first defined in 1998 by Professors C.K. Prahalad and Stuart L. Hart, subsequently expanded upon by both in their books: The Fortune at the Bottom of the Pyramid by Prahalad in 2004 and Capitalism at the Crossroads by Hart in 2005.







ICS promoted by RtB, including (top to bottom):

- Envirofit's G-3300, price 1399 Rupees (US\$28)
- Prakti's Single Pot promoted by SELCO, price 750 Rupees (US\$15) and Double Pot, price 1100 Rupees (US\$22)
- First Energy's Oorja Plus, price 1250 Rupees (US\$25) and Oorja Super, price 1575 Rupees (US\$33)

Exchange rate: US\$1 : 50 Rupees

shift from open fires or traditional stoves, to ICS. In part, this was down to the product offer itself, with producers in the early stages of learning how to balance stove performance with the needs and wants of the user.

However, there was another distinction. All previous marketing campaigns had focused on the health and environmental benefits of ICS which had failed to excite consumers and trigger demand. Surveys showed that only 10% of impacted households spontaneously identified ICS as a way of reducing smoke in their households – an alarmingly low figure for the internationally-recognised most viable method of tackling IAP.

The campaign initially focused on pure awareness-raising in Shimoga (population 1.6 million) but quickly evolved to tackle other barriers. For example, partnerships with MFIs helped tackle affordability issues by allowing households to pay for the stoves in US\$1-2 per week instalments rather than the entire US\$15-30 price upfront.

RtB aimed to sell 58,000 ICS and to achieve an average campaign spend per additional stove sold of US\$5.75, with a view to this figure falling over time to US\$1.5-2 – a level that the ICS businesses could potentially accommodate within their business models thus making it financially sustainable and scaleable. The initial US\$5.75 target was identified through a combination of trialling certain social marketing activities and anecdotal evidence from businesses with existing experience marketing ICS.

It also aimed to raise awareness among its audience by at least 30%, an ambitious figure compared to most social marketing activities. Extensive pre and post activity surveys were conducted to measure the campaign's success.

This report is designed primarily for organisations that plan to run stove social marketing campaigns in the future; ICS businesses, NGOs, governments and donors. It captures SF's journey – the ups and downs, successes and failures – over several years of running stove social marketing campaigns. We believe there is a value in publishing it because:

- No Easy Answers: Social marketing is like baking a cake: you need the right ingredients in the right proportions. If you are missing one or put too little or too much in then it will not turn out the way you want it. Just to complicate things further, there is no one-sizefits-all recipe: every market is different. To help with this conundrum we need to at least record and learn as much as possible from past and current efforts, such as RtB.
- Limited Track Record: While there has been a long history of social marketing, little of it has been around the sale and adoption of products like ICS in the developing world, where the behavioural shift is sizeable – often from a technology used for thousands of years that costs either nothing (a three stone fire) or a few dollars (a primitive, traditional clay-mud fire) to a new, unproven technology that can cost tens of dollars.
- Lack of Evaluation: Very few stove social marketing efforts to-date have been successful and the few that have were generally not fully evaluated or the results published.
- Lack of Resources/Capacity: Many past stove social marketing efforts, due to lack of resources or capacity, only put some of the necessary recipe ingredients in place, almost guaranteeing failure (or at least limited success) before they even started.

As we highlighted at the beginning of this introduction, we also think this report will be valuable to a wide range of organisations trying to provide or sell not just stoves but similar goods such as solar lanterns and water purifiers.

Cracking these route-to-market conundrums is not easy and we experienced plenty of failures. But ultimately we identified one model that is not only self-financing but also solves price, distribution and lack of consumer awareness barriers – and crucially has the potential to go to scale.

We hope the lessons learned from this success – along with our failures – make a small contribution to the many ongoing efforts to create markets that work for the poor.



The front and back cover of a leaflet promoting ICS. In the same way a tourist board promotes hotels by using a 'star' rating but never subjectively promotes one hotel over another, the RtB campaign promotes several ICS partners whose stoves pass certain minimum standards. Stove prices ranged from 750 Rupees (US\$15) to 1,575 Rupees (US\$32).

Shell Foundation's More Than Money' Approach

For the past decade, SF has been working across the entire clean cookstoves value chain to help pioneer a new market to deliver impact at scale – in ways that are sustainable over the long-term. We believe this takes much more than money.

What do we mean by this? It means that along with funding, all our partners and initiatives receive significant business support and advice from SF staff. This 'more than money' approach forms a critical part of our differentiated business model and also significantly reduces the risks of working in a start-up environment. (In RtB's case, this support was particularly significant with staff actively managing the campaign on a daily basis and senior staff providing extensive strategic input. We also received advice and support from Shell India).

- Between 2002 and 2007, SF ran extensive pilots with nine partners in seven countries, gaining substantial knowledge of technologies, cooking fuels, dissemination models and markets for ICS;
- In 2007 we formed a strategic partnership with Envirofit (EF) to create a pioneer in design, mass manufacturing and commercial routing of high-quality ICS to the market, with more than 500,000 ICS sold to-date across India, Africa and Latin America;

- Envirofit stoves improve fuel efficiency, cut cooking times and reduce emissions significantly. The stoves sell for US\$15 to US\$30 and are built to last, coming with a five year warranty;
- Our 'more than money' support to EF has helped us develop several alternative routes to market and innovative finance solutions (carbon and consumer finance);
- By focusing on monitoring and evaluation, in collaboration with partners such as Berkeley Air and Aprovecho, SF has achieved a (widely accepted) standard for improved stoves and a methodology for sound field testing;
- As a co-founder of the Global Alliance for Clean Cookstoves (GACC), SF is playing a central role in wider sector development, mainly through promoting a 'market based approach' and through leveraging others, including Shell the company, to join the GACC.

Overall, our clean cookstoves programme has improved the lives and livelihoods of over four million people and reduced carbon emissions by 1.25 million tonnes. Overall, our clean cookstoves programme has improved the lives and livelihoods of over four million people and reduced carbon emissions by 1.25 million tonnes.



A RtB stove demonstration in full swing. Teams of promoters visit villages, conducting stove demonstrations, games and using flipcharts (see promoter in centre of picture) to tell stories illustrating the benefits of ICS. They also make tea on the stoves and hand it out to the crowd along with leaflets identifying recommended ICS designs and the nearest location where one can be bought.

SOCIAL MARKETING: WHAT IS IT?

- Social marketing is about applying commercial marketing's '4Ps' Product, Price, Place, Promotion – with a social twist.
- RtB was a campaign 'run in the public interest' by SF on behalf of several ICS businesses who were also conducting their own marketing and social marketing activities as commercial entities.

In essence, social marketing is about applying commercial marketing's '4Ps' (see Figure 1) with a social twist. Marketing is about convincing people to buy a product. Social marketing is about convincing people to adopt a behaviour or product that will improve their quality of life or that of the wider community.

Social marketing has been defined in many ways. An early definition stated that "social marketing is the design, implementation and control of programmes calculated to influence the acceptability of social ideas and involving considerations of product planning, pricing, communication, distribution and marketing research" (Kotler and Zaltman, 1971). Population Services International, a leading social marketing organisation, say that their social marketing work "engages private sector resources and uses private sector techniques to encourage healthy behaviour and make markets work for the poor" (Population Services International, 2011).

When it came to RtB we worried little about these definitional differences, applying a pragmatic approach that saw us use a hybrid of marketing and social marketing i.e. promoting a social product and positive behaviour change.

Figure 1: Explaining Marketing's '4Ps'

Pricing

The process of setting a price for a product, including availability of consumer credit. The price need not be monetary; it can simply be what is exchanged for the product or services, e.g. time, energy, or attention.

Place

How the product gets to the customer, referring to the channel by which a product or service is sold, to which geographic region or industry, to which segment, etc. It also refers to how the environment in which the product is sold can affect sales.

It is important to note that RtB was a campaign 'run in the public interest' by SF on behalf of several ICS businesses who were also conducting their own marketing and social marketing activities as commercial entities. The advantage of SF or another charity/ foundation running activities in the public interest is two-fold:

They are seen by consumers as more credible than commercial marketing and this is important given high levels of consumer scepticism towards ICS (see 'Know your Market' section)

Product

The specifications of the actual good or service and how it relates to the end-user's needs and wants. The scope of a product generally includes supporting elements such as warranties, guarantees, and after-sale support.

Promotion

The various methods for promoting the product including its packaging, branding, publicity, positioning and advertising.

 Donors are arguably more likely to fund a 'for the public good' campaign than to fund a particular ICS business's commercial marketing

However, all marketing and social marketing mixes (and the mix of organisations delivering them) should be explored. If trials were to show commercial marketing to be more effective then thought must be given on how best to establish and support these activities as a sustainable part of an organisation's business model from the start.



- Our greatest success has been a partnership with microfinance institution (MFI) Grameen Koota, where we combined stove promotion activities with stove loans to address both lack of awareness (among impacted populations about IAP and ICS) and price barriers simultaneously.
- Overall, we think the potential to sell ICS at scale through MFIs, while not without its challenges, remains significant.

RtB has been a journey for Shell Foundation, with some very good results but also plenty of hard lessons learned, which we are keen to identify so others do not repeat them.

Our greatest success has been a partnership with MFI Grameen Koota (GK), where we combined stove promotion activities with stove loans to address both lack of awareness (among impacted populations about IAP and ICS) and price barriers simultaneously – and managed to do this at a cost of US\$4 per stove sold, a level that can potentially be built into a US\$30 stove loan, thus making this route selffinancing and scaleable.

A wide range of other activities that focused less on price and more on pure consumer education about stoves was successful at increasing awareness but crucially failed to drive stove sales. We were also unable to bring down the cost of the activities per additional stove sold to a sustainable level.

Metrics of Success

Metric and Target	Result achieved	Source
58,000 stoves sold	11,447	Stove companies reporting stove sales
Cost of campaign activities per extra stove sold = US\$5.75, falling over time with economies of scale to US\$1.5-2.	Costs varied from US\$4 to in one case US\$135, though this route was quickly scrapped	Campaign costs divided by stove sales
Raising awareness of IAP and ICS by at least 30% amongst affected populations. (Note: this objective was secondary to sales)	Awareness about different aspects of both IAP and ICS regularly increased by 30%+ amongst people exposed to the campaign	Pre and post campaign surveys

Social Marketing Activities Piloted

Activities	Period
Static – Billboard and wall Paintings	October 2009 to Jan 2010
Van Campaign	October 2009 to May 2010
Sustained Activist Householders (SAHs)	October 2009 to April 2010
Market Activity	November 2009 to February 2010
Anganwadi Workers	June 2010 to July 2010
MFI – Grameen Koota (GK)	January 2010 to January 2012

The following case studies describe our activities – and the results – in more detail.

Definitions

Visibility in areas of high transit in the towns and areas of high visibility in markets and villages.

Mobile awareness-raising campaign covering a large geographic area within Shimoga over defined period, where villages engaged in games and activities. Promotional materials were left with households explaining where they could purchase the stove. Stoves were also sold directly during the activities.

Female villagers who would raise awareness and foster demand for stoves on behalf of the manufacturers. They would also interact with groups/networks of women in their areas to catalyse information on the issue and the solution.

Campaign staff who would raise awareness and promote stoves in weekly markets across Shimoga.

Leveraging networks of government health workers in the villages to raise awareness about IAP and ICS.

Raising awareness through MFI networks, who would then offer the option for users to purchase the stove and pay in instalments through an MFI loan.

Case Study: Using MFIs to tackle both price and awareness barriers

A successful partnership with GK, an MFI based in Karnataka with over 400,000 members, took time to get right but we have now reduced the cost of the campaign per additional stove sold to less than US\$4. GK are now planning to use the lessons learned from providing stove loans to their customers to establish a portfolio of loans for other products like water purifiers and solar lanterns.

Beyond the low US\$4 cost, this case study is valuable for two other reasons:

- It tackles the price/affordability issue (by allowing people to pay for the stove in US\$1-2 per weekly instalments), which is one of the greatest barriers to stove purchase in southern India.
- It has the potential to go to scale; the potential exists to include the US\$4 cost in a customer's stove loan thus making this route-to-market self-financing and therefore scaleable. Numerous other MFIs could replicate this model in India and elsewhere, reaching tens of millions of MFI members with stoves and other social products.⁴

So how did the GK partnership work? In summary:

- Shell Foundation: provided grant (initially US\$125,000) to fund 35 'stove promoters' + training and collateral (posters, leaflets etc) from RtB's earlier campaign activities.
- Grameen Koota: provided stove loans and access to its then 400,000+ members.
- Navya Disha (GK's NGO-arm): recruited, trained and coordinated the 35 promoters.
- Stove businesses (Envirofit and SELCO): ensured stoves were stocked within easy reach of GK members

⁴ We acknowledge we have been the beneficiary of some unintended consequences with regards to this point. In late 2009 and early 2010, when we started approaching MFIs, we were constantly rebuffed because they could make more money on traditional paper loans (with both existing and new customers) rather than loans for physical products like stoves, which come with numerous logistical challenges. However, the 2010/11 MFI crisis in India means the industry is now keen to illustrate there are social returns from its work (not just financial). Suddenly social products like stoves, lanterns and water purifiers are more attractive, even if the financial returns are lower. "It is important for microfinance institutions to support livelihood enhancement products such as cookstoves, so that we can help improve the quality of life. But care should be taken to ensure that the product manufacturer ensures proper supply of quality products and provides adequate after sales support."

Suresh K Krishna, Managing Director, Grameen Financial Services Pot. Ltd



Step	Time	Activity
1	Day 1	Morning: A Stove Promoter (SP) joins a GK Loan Officer (LO) as they conduct their usual morning business – visiting between 3-5 groups of around 20 women (spending 30-60 mins with each group).
		While the LO collects weekly loan repayments and issues new loans, the SP promotes the stoves, using leaflets, posters and flipcharts. The women are also invited to attend a stove demonstration that evening and urged to bring along their husbands (who tend to be working in the fields in the mornings) ⁵ .
		Evening: On average three groups of women (all located closely together) + husbands attend the same full stove demonstration, where an ICS is compared to a three-stone fire or traditional, primitive stove.
2	Day 7	In the standard MFI weekly meeting with the women, the original LO asks and records who is interested in a stove loan.
		Note: The SP has already moved on to work alongside another LO, allowing them to reach 500 women each per week.
3	Day 14	When the LO meets the women again at the weekly meeting he hands out the stove loan (usually US\$15-30) and tells the women where the nearest stove retailer or supplier is located.
		The women go to the supplier and exchange the loan for a stove.
4	Day 21	At the weekly meeting the women who have purchased a stove give the receipt to the LO (to prove the loan has been spent on the stove and not on anything else).
5	Subsequent	Each week the women give the LO US\$1-2, gradually repaying the stove loan.
	weeks 4-24	Note: Length of time depends on the cost of the stove, the rate of interest and the repayment terms.

The following table explains the stove promotion, loan and purchase process

The aforementioned activities were planned in 6-8 week phases, allowing the 35 SPs to roll through the membership of several GK branches (average membership 15,000), before moving on to another area. In total, in the first four originally planned phases, US\$176,000 (more than the originally budgeted US\$125,000) was spent on establishing and supporting this route to market. 95,520 people were reached at a cost of US\$1.84 each. 3,854 stoves were

sold, with the overall conversion rate gradually improving from 1% to 12% leading to a fall in cost per stove sold from US\$126 in Phase 1 to US\$16 in Phase 4.

The consistent progress led to a decision to extend the initiative to a Phase 5 with cost per stove falling to US\$4 per stove and an impressive 26% conversion rate being achieved.

Approach	Dates	Reach	Sales	Cost (\$)	Cost / Reach (\$)	Cost / Sale (\$)	Conversion rate
MFI (Phase 1)	Apr 10- May 10	27,846	348	44,000	1.58	126	1%
MFI (Phase 2)	Jul 10- Sep 10	15,719	260	44,000	2.80	169	2%
MFI (Phase 3)	Oct 10- Jan 11	29,685	568	44,000	1.48	77	2%
MFI (Phase 4)	Mar 11- Jun 11	22,000	2,678	44,000	2.00	16	12%
MFI (Part of Phase 5)	Oct 11- Jan 12	12,000	3,199	\$13,125	1.10	4	26%

Summary Lessons Learnt (See Appendix 4 for more detailed lessons learned)

- **Financial Returns:** MFIs in India make more money from loans (and other paper products) to existing and new customers than from loans to customers for physical products like stoves.
- **New Territory:** Selling physical products like solar lanterns and stoves through MFI memberships is a relatively new idea and those that have tried have had limited success⁶; this makes many MFIs reluctant to try to sell stoves.
- Price Point: Loans for stoves costing 1,000-1,500 Rupees (US\$20-30) are often not profitable for MFIs as the loan collection costs are too high.

- Overall Complexity: There are many moving parts and processes – MFI members, MFI teams, stove promoters, stove businesses - to coordinate. It only takes one gap in the process and it quickly collapses. Particularly complex issues included:
- i. Incentivisation: Identifying the right incentive structure for staff, particularly amongst the existing overstretched MFI branch teams.
- ii. MFI Stove Business Link: MFIs do not want (or are unable due to legal constraints) to stock stoves themselves. This puts a pressure on stove businesses to develop a sizeable network of stocking points or retail outlets that are often not cost-effective.

⁵ Purchasing a stove is a joint decision (i.e. involving both husband and wife) for up to 94% of households, according to our surveys (see 'Match the message to purchase triggers and barriers' section) so demonstrating to both is important.

Case Study Conclusion:

The MFI approach, when implemented and executed well, offers a 'win-win' to all involved. It allows stove suppliers to leverage existing infrastructure to access difficult to reach customers while simultaneously addressing affordability and awareness issues. The MFI organisation also benefits from a practical opportunity to address serious social issues for members and to enhance loyalty and satisfaction, increasing 'stickiness' in an increasingly competitive MFI environment.

But as the lessons learned show, implementation is logistically complex. Furthermore, it may not be an answer in every market, particularly those where price is less of an issue. Other ways of tackling price – for example by using carbon finance revenues – may also be as effective, if not more so.

Nevertheless, overall we think the potential to sell ICS at scale through MFIs, while not without its challenges, remains significant. Our partnership with GK has since developed further – with social marketing and demonstrations now led by specialist distribution partners while GK endorses the product and provides consumer finance to enable its membership to afford it.

We will continue to explore this route and urge others to do so too.

Case Study: Focus on Promotion

From October 2009 to July 2010, we focused our social marketing activities in Shimoga, one of 29 districts in the southern Indian state of Karnataka. The district, with an estimated population of 1.6 million, would be blitzed with a wide range and combination of campaign activities (with three 'levels' of intensity – low, medium and high) to identify what would be most effective.

These included (see Appendix 4 for more detail) various combinations of:

- Static wall-paintings and hoardings across key transit routes and markets;
- Van campaigns, where teams of promoters toured villages in vans, conducting stove demonstrations, games and other educational activities;
- Stove demonstrations in local weekly markets ('Haats');
- So-called Sustained Activist Householders (SAHs), one women per 5,000 population village who was a permanent presence, with their own house branded so villagers had a focal point. SAHs started off conducting on average 15 door-to-door visits a day where they would educate households. Later on they targeted self help groups (SHGs) – local groups of 5-20 women who meet each week – and conducted many stove demonstrations.
- Local government health workers ('Anganwadis⁷') added ICS promotion to their existing portfolio of health education activities. This built on a successful programme, which saw them promote adoption of toilets in homes.

The **lowest** level, which took place in 70 villages, included wall-paintings, van campaigns and SAHs conducting door-to-door visits for three months.

The **medium** level took place in 40 villages and added a greater focus on SAHs, who conducted more stove demonstrations and targeted SHGs.

The **high** level took place in 10 villages and saw, in addition to the above activities, Anganwadis going door-to-door promoting stoves.

All activities were conducted in close collaboration with our partner ICS businesses. We made sure their teams were present (with stock to buy on the spot) alongside our promotion teams and/or had stock available in a nearby retail outlet or stock point, which our promoters were always quick to point out to the crowds.

Cost Calculations and Results

Surveys showed many of the activities achieved significant increase in awareness among impacted populations of both the impact of cookstove smoke and that improved stoves were available as a solution. However, in general the activities did not drive stove purchase, with the cost of different campaign activities per additional stove sold ranging from US\$10 to US\$135 (with the expensive activities being quickly dropped).

Anganwadi centres were established by the Indian government in 1975 to provide basic health care in Indian villages as part of the Integrated Child Development Services programme to combat child hunger and malnutrition.

Low Intensity

Activities were limited to wall paintings, van campaigns and SAHs for three month intervals.

Despite constant attempts to improve the performance of the various activities (in terms of stoves sold) costs were unsustainable for

most activities. Vans were costing US\$21 per additional stove sold, SAHs US\$92. There clearly needed to be a higher conversion ratio. The reach figures were more encouraging – vans 57,920 and SAHs 82,417 – and exceeded targets.

Approach	Dates	Reach	Sales	Cost (US\$)	Cost / Reach (US\$)	Cost / Sale (US\$)	Conversion rate
Static	Oct 09- Jul 11	n/a	n/a	19,301	n/a	n/a	n/a
SAH (Door-to-door)	Oct 09- Feb 10	82,417	331	30,321	0.37	92	>1%
Vans	Oct 09- Mar 10	90,429	2512	53,242	0.59	21	3%
Market activities	Nov 09- Jan 10	35,303	1058	22,185	0.62	21	3%

Medium Intensity

All above activities with higher numbers of SAHs focusing on SHGs in particular

417 gatherings were held with SHGs with 1,480 members present in total. Across all meetings, 320 members expressed an interest in buying a stove (21.6%) in the first round of demonstrations, falling to 309 (20.9%) at the second but rising to 349 (23.6%) by the third round of demonstrations. Of those interested, 337 (96.6%) bought stoves.

As can be seen, this route was a more intensive contact, costs per reach were significantly higher but the conversion of reach to sales was also significantly higher. It should also be noted that there was great variation between individual SAHs. The top-performing SAHs sold 74 stoves per month, exceeding the 60 per month required to make this route self-financing and scaleable⁸ but many failed to achieve this.

Approach	Dates	Reach	Sales	Cost (US\$)	Cost / Reach (US\$)	Cost / Sale (US\$)	Conversion rate
SAHs (SHG route)	Apr 10- Jul 11	1480	337	44,429	30	132	23%

High Intensity

Covers all activities with additional communication through Anganwadi worker networks.

Anganwadi workers reached out to 31,570 households (157,850 people based on five per household) during the course of the three month programme and conducted 2,685 stove demonstrations to groups and households. Although the reach – 90%+ of households in an Anganwadi worker's patch – was very good, converting this reach to sales was not

Approach	Dates	Reach	Sales	Cost (US\$)	Cost / Reach (US\$)	Cost / Sale (US\$)	Conversion rate
Health workers	Apr 10- Jun 10	1 <i>57</i> ,850	290	12,848	0.08	44	<1%



A wall painting promoting the benefits of ICS in Kannada, the local language

straightforward and resulted in sales of only 290 stoves. This highlights the need to integrate social marketing with effective distribution. In this example, the Anganwadi network provided a platform for awareness-raising that was very effective due to their credibility and reach – however distribution efforts were not able to keep up in a cost effective manner with this dispersed audience. Solving this requires a specialist rural distribution partner to support the social marketing efforts led by the Anganwadi network.

Summary of Lessons Learned

By channels

Van campaigns: These are almost a necessity because consumers are suspicious of ICS. Evidence from surveys and trials we conducted showed cheap mass-media like TV and radio adverts alone were not enough to drive stove purchase; people wanted to see the new stoves in action – and ideally next to a traditional stove so they could compare. The challenge is that van campaigns are expensive.

Static wall paintings: Their permanent presence means they can score high on recall but they need to be part of a wide set of activities; alone they are ineffective. Their impact is also highly dependent on their position. High footfall locations (e.g. bus stations) can help but also hinder if there is too much 'noise' – e.g. multiple advertising hoardings in one location.

Weekly market stove demonstrations:

These score well on reach because of the high footfall. But our surveys showed the average decision-making period for buying a stove is three weeks. Given this, it is essential stove demonstrations are conducted for several weeks running in exactly the same location in the market. But this is expensive. A further weakness is that women tended to be attracted to these demonstrations yet our surveys showed it is crucial to reach both men and women as stove purchase is almost always a joint decision.

SAHs: Their constant presence in villages was a major plus, but their main downfall, ironically, was their independence as a generic stoves champion acting 'in the public interest' on behalf of Shell Foundation. This allowed them to promote several stoves. But it precluded them from negotiating stove deals themselves and most villagers expect to bargain. They needed to bring in the stove businesses to do the negotiation, which was time-consuming and expensive. Identifying the right incentives for the SAHs also proved challenging, leading to wide variance in the performance. Finally, their inability to offer consumer credit was a major barrier to success. They simply could not attract the 60 sales per month required to cover their costs and make this a sustainable, scaleable model.

Health workers (Anganwadis): They are already respected members of the community so score high on credibility. Using this network is also cost-effective and scaleable as one can leverage existing resources and the Anganwadi system is a national programme in India. The challenge is how to shift from pure education to stove purchase and adoption where a distribution partner is required. As Anganwadis are government workers they cannot negotiate on price or collect money, nor can they easily connect people to consumer finance. All they can do is refer interested households to the nearest stove retailer and too often this is where things break down – as the retailers can be quite a distance from the household.

By intensity of activities

Despite conducting pre and post activity surveys in low, medium and high intensity villages it proved extremely hard to draw robust lessons and conclusions about whether, for example, the higher intensity activities were more effective than the low. A variety of factors – including the aggregate cost of the various mediums, the reach (including accounting for potential double counting of people being exposed to activities), the credibility of the messenger in the eyes of the consumer and sales need to be balanced. For example, one might conclude the higher intensity – which saw Anganwadi networks added to 'medium intensity' activities – were ineffective because they did not drive sales. But this would be misleading because they score incredibly well on cost, reach, credibility and potential scaleablility – as stated previously. They fell down on arguably two elements – the gap between their door-to-door education activities and the availability of the physical stoves for purchase, and their inability to offer consumer finance. If these elements could be cracked then suddenly this channel would be deemed extremely effective and might even mitigate the need for other expensive activities like SAHs. Ultimately, while we include some potential trends between low, medium and high in Appendix 4, we caution against drawing too many firm conclusions from them.

Case Study Conclusion

Even with extensive survey results it is difficult to accurately rank the reasons for our varied success but ultimately it comes down to not having the right mix of the crucial ingredients - see the 'Lessons Learned' section later in the report, particularly Lesson 3, for a more detailed description.

We scored well on 'user-desired stove' (with Envirofit, First Energy and SELCO providing quality and popular product), 'credible partners' (e.g. government health workers) and 'consistency and quality of message and medium'.

But we were not strong enough in two crucial areas:

- Affordability: The best messages and mediums in the world would probably not have overcome the price issue, with consumers repeatedly saying they would buy a stove if it was a third to a half of the ticket price (i.e. if it was 400 Rupees or US\$8 instead of 1,000-1,500 Rupees or US\$20-30) or if they were able to overcome the initial price barrier by paying in instalments through consumer financing.
- Stove availability: Our stove business partners, while 100% committed, did not always have the manpower or capacity to ensure stoves were available for purchase alongside (or nearby) the campaign.

Even if these ingredients had been in place, we would have struggled to reduce the cost of the campaign per additional stove sold down to our initial US\$5.75 target and then with economies of scale to US\$1-2. For example, as previously noted, the vast majority of consumers want to see an improved cookstove demonstrated before they purchase.

There is no cheap way to do cookstove demonstrations; vans literally have to drive from village-to-village conducting demos in front of small crowds. The van campaigns cost US\$21 per additional stove sold – a clearly unsustainable cost for supporting the sale of a US\$20-30 stove. Cheap mass media like TV and radio can play a supporting role, but alone is rarely enough to drive people to swap from something they have used for generations to something new. This is especially the case in immature stove markets (i.e. ones where ICS have not been promoted much before) - and ultimately led us to the conclusion (see Lesson Learned 4) that at least initially, social marketing activities may have to be donor funded because the costs are just too high to be absorbed by stove businesses.

We also do not think it is all doom and gloom when it comes to exploring innovative ways to deliver social marketing in a cost-effective manner. Many of the mediums we explored have real potential and warrant further investigation. As we go on to describe in the rest of the report, success comes through the right mix of crucial ingredients; you cannot bake a cake if you are missing the flour or the eggs or have them but in the wrong quantities. We became expert recipe testers, constantly trying different ingredients and different combinations and repeatedly got close to finding the right ones. We know they are out there because we proved it through our partnership with GK – and we are confident the sector will find more through continued trialling and learning lessons. We must find them otherwise we are unlikely to see stoves or other social products such as solar lanterns and water purifiers – adopted at scale.

We learned numerous lessons from our social marketing activities and have attempted to capture as many of these as possible so that others can use them to hopefully repeat our successes and avoid replicating our failures.

To make things easier we have identified four main lessons learned, with each containing numerous sub-lessons:

- 1. Know your market Before launching any social marketing activities it is essential you understand your market; the knowledge, attitudes, aspirations and practices of your target audience; the current stoves they use; the impact (both real and perceived) of cookstove smoke and fuel inefficiency on households – and the triggers and barriers to purchasing an ICS.
- 2. Match the message to purchase triggers and barriers – Once you have identified the triggers and barriers you need to tightly match your communications messaging to them, repeatedly trialling and honing the message before rolling it out at scale.
- 3. Get the mix right Without the right mix of all (or almost all) of the following ingredients, stove sales at scale is unlikely

to happen: a user-desired stove at an affordable price (and/or consumer finance available); brand awareness of the product and producers; credible partners (in the eyes of the consumer) delivering the message; cost-effective campaign delivery mechanisms; stove supplies within easy reach of consumers – and (as previously highlighted), the right messaging.

4. A surge of social marketing activities is required initially (and it may have to be donor-funded) – A surge of social marketing is required when an ICS is first introduced into a market, particularly in markets where ICS are a relatively new product. Furthermore, in this initial high volume activity period it is difficult for stove businesses to cover the costs within their business models; they may therefore have to be donor-funded. Finally, donors may have to accept that the first people to buy a stove (the so-called 'early adopters') may not be the poorest in the community.

1. Know your market

- Knowing your market the knowledge, attitudes, aspirations and practices of your potential consumers – in detail is essential before starting any social marketing activities.
- Only 10% of survey respondents spontaneously identified ICS as a way to reduce cookstove smoke, an alarmingly low level given that using ICS is the most viable way for households to address this problem.
- Even when shown a list of methods for reducing cookstove smoke, ICS were ranked in the top three by only 22% of respondents.

It is absolutely essential you know your market – the knowledge, attitudes and practices of your potential consumers in detail before launching any social marketing activities.

This is the case with any product but particularly so when you are promoting a 'push' product like stoves as opposed to a 'pull' product like mobile phones i.e. they are not seen as an aspirational 'must-have' so a significant amount of social marketing is required to drive purchase. We conducted several surveys⁹ – both quantitative and qualitative – of impacted households before, during and after running the campaign. This took place in parts of the southern Indian state of Karnataka, population of 61.1m, 70.45% IAP-impacted¹⁰ and focused on current knowledge, attitudes, aspirations and practices related to ICS. Following is a selection of survey statistics that illustrate the size of the challenge.

"Here's my problem. I have a great product, one that's good for the environment, people's health and their wallets. But consumers don't even know it exists, and even if they do they're suspicious of this new modern technology. We need marketing and social marketing to raise awareness, to convince people to make the fundamental behavioural shift from their old stove to an improved one."

Ron Bills, CEO of Envirofit, a leading global ICS business whose stoves were promoted by RtB

The vast majority of survey respondents use biomass as their primary fuel and levels of use rise to almost 90% in the lower socio-economic classes. These fuels are burnt almost exclusively in low-efficiency stoves – either mud stoves or three brick arrangements. These stoves were usually situated in a separate room dedicated to cooking (91%). The 2001 Census also identified that 82% of Karnataka households had separate kitchens and interviewers observed that the majority had no chimney (63%) and that two in 10 had no windows for smoke to escape (22%).

Existing levels of exposure

This burden was not equal across socioeconomic groups (SECs). Significantly more of those who were from lower SECs had a singleoutlet kitchen (i.e. just one window or place for smoke to escape. The time taken for kitchens to clear also significantly differs between biomass users and cleaner (e.g. LPG) fuel users. Six out of 10 users of biomass reported that smoke remained in their kitchen over 10 minutes after cooking was finished.

The burden of exposure also falls primarily on women. The majority of men declined to answer how long they spend in the kitchen but of those that specified, the majority (58%) spent less than one hour in the kitchen each day whilst two thirds of all women spent more than two hours a day. This rose to seven hours for some female respondents (5.3%).

Unsurprisingly, the primary drivers of biomass use were cost and availability. The main perceived advantages of firewood, the most widely used biomass fuel, were low cost (61%) and easy availability (49%). In addition, firewood was also described as convenient to cook on (19%), made food tastier (18%) and cooked food quickly (16%).

 $^{\rm 10}$ Indian Census 2001. More detailed survey results are available from SF on request.

Percentage of lower/middle/upper socio-economic groups that use biomass as a cooking fuel versus cleaner fuels like Liquefied Petroleum Gas (LPG)



Awareness of the health effects of IAP

Overall our target population were largely aware that IAP is harmful to health in some way. 80% of respondents to the Karnataka baseline survey responded that they felt if someone's kitchen filled up with smoke it would be definitely or likely to be harmful to health.

There was, however, a significant lack of awareness about the severity of these health effects. The overwhelming spontaneous response when asked what health problems could be caused by indoor smoke were 'ambient' health problems such as coughs, watery or red eyes, headaches or difficulties breathing. Only a very small minority mentioned more serious health concerns. Once prompted to say whether they believed IAP could cause specific health problems many respondents rejected the idea that it could. The graph shown below shows the proportion of people directly asked if they believed IAP could contribute to the stated health problem who rejected the suggestion. More than half dismissed the idea that cookstove smoke could cause death despite almost two million people dying globally each year.



Awareness of solutions

Respondents were asked what measures they could take if they wanted to reduce smoke in their kitchen. The results are shown graphically in the table below.

Only 10% of survey respondents spontaneously identified ICS as a way to reduce cookstove smoke, an alarmingly low level given that the use of ICS is actually the most viable way for households to do this. The majority of those who had a suggestion for reducing smoke in the kitchen suggested installing more outlets, in particular chimneys (41%). Switching to a cleaner fuel such as LPG was also mentioned. When directly asked if they felt an ICS could reduce smoke in their kitchen 16% of biomass using respondents replied that they did not feel it would and 26% did not know whether it would or not. Only 57% stated that they thought it would reduce the emissions. Even when shown a list of methods for reducing cookstove smoke, ICS were ranked in the top three by only 22% of respondents.



As well as lack of awareness about both IAP the issue and ICS as a solution, survey results suggest social marketing has to overcome another barrier – contradictory consumer opinions:

- 76% of impacted households spontaneously recognise their existing traditional stoves create "fair to heavy" smoke in the kitchen.
- 98% recognise their traditional stove as "old fashioned", and 93% accept "it consumes a lot of smoke", when prompted with a list of stove impacts.
- Yet, two-thirds are "somewhat or very satisfied" with their traditional stove!

2. Match the message to purchase triggers and barriers

- It is extremely important to create communications messages that are tightly aligned to the triggers (typically cost and time savings) and barriers to stove purchase.
- Negative health messaging is not enough to convince people to adopt ICS.
- 94% of households said buying a stove was a joint decision between man and wife, which means social marketing must reach both audiences

It is extremely important to create communications messages that are tightly aligned to the triggers and barriers men and women have to purchase stoves.

Throughout the life of the RtB project we amassed a large body of evidence on the triggers and barriers to purchase through a number of in-depth quantitative and qualitative research surveys (see Appendix 3 for more information on the methodologies). Findings from these surveys were used to refine the messages used in the RtB awareness campaign and are relevant to future endeavours to motivate potential consumers to adopt ICS.

At the heart of these research activities was the search for the answer to this question: What shifts consumers from awareness and interest to desire and purchase? We now outline these high-level triggers and barriers.



Triggers

Hierarchy of triggers to stove purchase amongst target market (summarised from a range of surveys)

Women

- 1. Less coughing and sore eyes from less smoke
- 2. Cleaner kitchen and utensils again from less smoke
- 3. Time saved from collecting less wood
- 4. Healthier children again less smoke
- 5. Husband remains happy as the food is still tasty

Men

- Money saved on buying less fuel or on medicine because the family will fall ill less often
- 2. Time saved from having to collect less wood
- 3. Taste the food retains its smokey flavour
- 4. Portability and durability of ICS
- Cheaper than LPG and the fuel is always available (we do not emphasise this in the campaign as we do not want people using LPG less and ICS more as this would actually increase IAP)

Women were most moved by the claims of the stove offering reduced smoke while remaining close to traditional methods (i.e. it uses the same fuel and produces food that tastes good). Male consumers focused on the economic benefits more. A male respondent noted "with this stove we can use one [load] of firewood to cook for a whole week or sometimes more than a week". Another noted "Earlier we used to spend 50 Rupees (US\$1) per day for firewood ... now the expense is only 7-8 Rupees per day".

Health Miscalculation

From November 2008 to February 2009 we ran a trial campaign in parts of Karnataka with a view to establishing the most effective way to reach IAP-affected households.

Our messaging was almost exclusively around health – see poster below. Khidki Amma – the 'village gossip' – spread the word about IAP and five ways to tackle it: dry wood before burning it, keep children away from fire, use a chimney, open the window and use an ICS. It also used the catchphrase 'My kitchen, my pride' to emphasise the cleaner kitchen that would result from using an ICS instead of a traditional stove.



Key conclusion (from a post-trial survey): The campaign was good at raising awareness about health impacts (from 43% to 69%) but negative health messaging is not enough to convince people to adopt ICS (83% said they would buy but only 2% bought).

Barriers

Barriers tended to be less gender specific. When households who had not bought a stove were asked why:

- 55% said they thought the stove was too expensive.
- 21% said they were not sure how to operate it/were uncomfortable with new technology.
- 18% felt it would not deliver on the benefits promised.

Another crucial barrier to purchase identified in an earlier survey we conducted was that 94% of households said buying a stove was a joint decision between man and wife. This means social marketing must reach both audiences, a potentially expensive and added complication for any activities.

When they were prompted with a list of reasons for non-purchase these were the results:

	Agree Strongly	Agree Somewhat	Disagree Strongly	Disagree Somewhat
I think that it will be too expensive	81	17	2	0
I don't know to operate it / not comfortable with new technologies	52	38	10	0
I don't believe it will deliver the benefits it promises	62	26	10	2
Husband / mother-in-law won't let me buy it	19	34	31	16
I don't have a problem of too much smoke with my current stove	29	31	38	2
Current stove does not consume too much fuel	15	47	37	1
Current stove does not take too much time to cook	33	28	35	4

Qualitative Results

RtB conducted a range of qualitative research – such as two week home trials – linked to people actually using ICS in their homes. For example, Envirofit's G-3300 stove was praised as being **easy to light** and producing a steady flame. The benefit of a **steady flame** came out more strongly than expected, a phrase that emerged from the qualitative research was that it gave a feeling of safety.

One female respondent having experienced the stove stated: "Using this stove our hands will be clean and not have any burns. We cannot wear loose clothes when using our normal stoves (three stone). We can now wear saris and be near the stove."

Importantly this benefit also holds for an ICS compared to an LPG stove which can be viewed as having an unpredictable heat. Although LPG

In summary, there are considerable triggers and barriers to stove adoption which need to be overcome. These are the need for hands-on consumer experience of the stove, availability of financing options and 'push' of the desirable attributes to both genders. There are however numerous triggers or drivers which can be used to maximise uptake. These are not primarily the health benefits but rather ease of use, dependability, comfort, safety, money saved and cleanliness.

was identified as the most desirable stove for those seeking to change how they cook, an improved biomass stove was considered to be a strongly desirable option and the **availability of fuel** and the **similarity to 'traditional' methods** would be a key area to highlight to consumers if product differentiation was desired.

The **reduced smoke** was also a strong product attribute. This was not due to the perceived health benefit but rather to the **reduced soot** and **improved cleanliness of utensils**. Health benefits were mentioned only by a very small number of respondents to our research and even then only in terms of reduced coughing or reduced burning of eyes.

Gaining Credibility

At the centre of any successful social marketing campaign is credibility in the eyes of the audience – in the product, the messaging and the source delivering the message.

To ensure credibility (and accountability) SF did three things:

- Credible Product: In the absence of stove standards we developed our own so-called 'Blue House' symbol of trust. Any stove RtB promoted had to:
- a. reduce fuel use by at least 40% and emissions by at least 55% compared to a three-stone fire in laboratory tests; and
- b. come with a minimum one year guarantee, timely delivery and local servicing (based on field tests by our partner Berkeley Air Monitoring Group (www.berkeleyair.com).

The emissions and fuel reduction claims were enforced through independent laboratory testing of ICS funded by SF and provided by Aprovecho (www.aprovecho.org), a renowned research centre for clean stove technology. Consumer service standards are enforced through ICS businesses regularly reporting sales figures and customer service issues to SF. Once they pass these criteria, the 'Blue House' symbol is carried on the packaging of each ICS. It was also prominent on all campaign materials and promoters would explain to the audience that if they saw the Blue House they could be confident the stove they were buying would meet the above criteria.

- 2. Credible Messaging: RtB was always run 'in the public interest' by Shell Foundation as an independent charity. This was clearly stated on all collateral to build credibility. Furthermore, RtB acted in the same way that a tourist board promotes hotels, never subjectively promoting one hotel over another (because they are not allowed to) but being able to say "all of these have a three star rating so are guaranteed to meet certain standards". Our 'Blue House' - symbol of trust was less sophisticated in that it only had one rating – your stove either passed or failed - rather than a hotelstyle graded 1-5 star system but the same principle applied.
- Credible Messenger: We worked with a wide range of people who have credibility in the eyes of potential consumers. See section: 'Getting the mix right' and Appendix 3.

Examples of posters, leaflets and other campaign collateral

The Room to Breathe campaign logo

An example of a poster from the RtB campaign focusing on messaging designed to convince women to buy an ICS. This included portraying stoves as an aspirational, modern, money-saving, kitchen-enhancing technology, in this case promoted by young, stylish Pragati Sheela who is compared to old, traditional stove user Ole Amma, who is stuck in her smoky, wallblackened kitchen.

The inside of a RtB information leaflet. Messaging is targeted at women (left hand side) and men (right hand side) as our surveys reported that purchasing stoves is a joint decision in 94% of households. The messaging is also tightly aligned to surveys and market research that identified the hierarchy of triggers and barriers to stove purchase.







Advertising (in English and local language Kannada) targeting the identified need to sell to both the man and the woman of the household.



An image from a cartoon story used at demonstrations. Here a young, modern woman convinces an older lady to adopt an ICS.



A pocket calendar distributed free at demonstration events. It targets men who often carry a pocket calendar in the breast pocket of their shirts so it scores well on repeat messaging as they may refer to it several times a day. Key messages: save money and food still tastes great.

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3. Get the mix right

- Social marketing is like baking a cake: you need the right ingredients in the right proportions. If you are missing one or put too little or too much in then it will not turn out the way you want it.
- The ingredients you need include having an affordable, user-desired product, readily available for purchase that is promoted in a cost-efficient manner by credible individuals or organisations using persuasive messaging.

This of course is not rocket science. These ingredients are similar to Marketing's 4Ps -Price, Product, Place, Promotion – and to help with this comparison we have included the relevant 'P' in brackets in the following section. The challenge is that every social marketing situation is different because every market – and the consumers in it - is different. So while we are confident we have identified the right set of ingredients we cannot state the exact quantities required of each. In other words there are no easy to follow recipes. This goes to the heart of this report's purpose: while we do not have the perfect recipe or recipes we can help the sector by outlining lessons so that they can find the right recipe for their market quicker and more efficiently.

We think this is particularly valuable because:

- Very few stove social marketing efforts to-date have identified the right mix of ingredients.
- The few that have often did not evaluate and publish their success stories.
- Many, due to lack of resources, capacity and/or track record, only put some of the ingredients in place, almost guaranteeing failure (or at least limited success) before they even start.

If you can get the mix right – as we did in one of our routes-to-market (see 'Case Study: Focusing on Price') - then stove sales will flow and you can build the cost of the stove promotion activities into business models, making it self-financing and scaleable, which is extremely encouraging.



- User-desired stove (Product): There is no point even running social marketing campaigns if the basic product does not meet local consumer desires around fuel use, cooking time, smoke levels, safety, food taste and a range of other factors.
- 2. Affordability (Price): Many consumers cannot afford the US\$10-US\$100 price tag for an ICS. This was a major issue for RtB. Addressing this by making consumer finance (e.g. working with MFIs to provide stove loans) available and/or through obtaining carbon finance revenues that can be used to reduce the price is highly recommended, particularly in geographies where the economic value proposition is low or the payback for the stove is long.

3. Coordination with product availability (Place): It must be easy to purchase stoves (ideally on the doorstep) and social marketing activities, wherever possible, need to be very closely aligned with (ideally an integral part of) stove company distribution channels. This is, however, tricky as many stove businesses currently do not have the capacity to support large-scale campaigns. Availability also has to be balanced with other criteria on this list. For example, government health workers as promoters are credible, relatively inexpensive and scaleable. But they cannot be seen to favour a particular commercial stove organisation over another, nor can they easily stock product or collect payment. A gap therefore appears between promoter and product availability - resulting in high awarenessraising but low stove purchase rates.

- 4. Brand awareness (Promotion): In an ideal world, consumers will recognise both the stove as a product and the brand of the producer promoting it. This, however, is a real challenge for many small-scale stove entrepreneurs. Solutions include partnering with much larger organisations that already have brand recognition and/or selling stoves to consumers who have already bought related products (such as solar lanterns) under the same brand.
- 5. **Credible partners (Promotion and Place)**: Stoves are often viewed with suspicion as a new-fangled technology trying to replace technologies that have worked for generations. Running social marketing efforts through or in partnership with credible partners embedded in communities is therefore extremely important. It is also hard to beat the endorsement of current users (especially recent adopters). Incentive structures within these partnerships and individuals also needs to be fair, clear and structured so they deliver.

6. Overall cost efficiency of the activity (Promotion and Place):

Some of the social marketing tools that were developed, whilst achieving great results in terms of increased awareness and sales, were simply too expensive to scaleup. Constantly driving down the cost of the campaign per additional stove sold – as a result of running it – should be a priority. However, as we described earlier in the report (see 'Results'section), some activities (e.g. demonstrating the stoves) maybe essential but the costs are simply too high for stove businesses to accommodate. This is where donor-funded campaigns may be required. This needs to be a consideration very early on, and hopefully this report will help in that thought process.



7. Consistency and quality of messaging and medium (Promotion and Place): As we saw in Lesson 2, messaging has to be highly effective, to be delivered consistently and in a way that convinces the consumer to make the behaviour change decision. First knowing your audience, then robustly testing the messaging and mediums, then rigorously training staff is crucial. One missing piece of information – like the location of the nearest shop selling stoves – can lead to failure.

4. A surge of social marketing activities is required initially (and it may have to be donor-funded)

- A proportion of social marketing costs, at least in the early stages of developing a stove market, may have to be donor-funded. Most stove businesses simply cannot afford to build even the lowest of the awareness-raising costs we experienced into their business models.
- In an ideal world we would be able to identify how many activities are required in this surge, the likely cost and length of time. Unfortunately, this is not possible because every market is different. The most effective activities, channels and messages need to be determined before businesses can develop cost-effective marketing plans.

Ultimately, we have come to the conclusion that a proportion of social marketing costs, at least in the early stages of developing a stove market, may have to be donor-funded.

Despite the success of our partnership with MFI GK (see 'Results' section) reducing the cost of promoting stoves to US\$4 per additional stove sold, most of our other attempted social marketing activities were expensive. Costs ranged from US\$10 to, in one case, US\$135 per additional stove sold. Most stove businesses simply cannot afford to build even the lowest of the awarenessraising costs we experienced into their business models. Anecdotal evidence we have collected from several major ICS players (see quotes throughout the report) supports this view. In their ground-breaking report *Emerging Markets, Emerging Models*¹¹, which studied 275 market-based solutions to poverty-related issues at the Bottom-of-the-Pyramid in India, *Monitor Inclusive Markets* concluded that lack of consumer awareness – and the prohibitive price of delivering it – was one of the key barriers that prevent many solutions from going to scale¹².

"Intensive but expensive stove social marketing campaigns are absolutely necessary especially when products are being introduced to new areas as they promote awareness, reduce target customers' initial resistance and promote eventual uptake. However, the costs are definitely beyond the reach of the average small [stove] business."

Suraj Wahab Ologburo, CEO, African stove company Toyola Energy Ltd, Winner of the Ashden 2011 International Gold Award.

² The report also went a step further, illustrating the role donor-funded social marketing can play in removing this particular barrier to scale see Appendix 6. This is particularly the case in very immature markets, where ICS are a relatively new product. This was certainly the case in south India with only 10% of our survey respondents spontaneously suggesting ICS as a way to reduce cookstove smoke.



This is best illustrated by the classic 'Roger's Bell Curve', which shows how new products are first adopted by a small number of socalled 'Innovators' and then gradually become mainstream, adopted by the majority. A surge in social marketing is required to move up the early part of the curve, until a critical mass is reached where awareness of the product is common knowledge and word-of-mouth can start to replace social marketing activities¹³.

¹¹ http://www.mim.monitor.com/downloads/emergingmarkets_full.pdf

¹³ An additional point worth noting related to this curve is that donors may have to accept that the first people to buy a stove in a community (the so-called 'early adopters') may not be the poorest and therefore the initial social benefits may be less. We did not keep data on the socioeconomic status of stove buyers but RtB promoters and the sales forces of the stove companies often noted that the first buyers in a community were certainly not the poorest and were often some of the wealthiest.

"As consumers, people have multiple needs and aspirations. This is as true of populations using old world stoves in developing countries as any other consumer in the developed cities and countries. To get their attention and to make them act (to buy a better solution) the need has to be created. This requires sustained, consistent messaging and marketing. There is no short cut to this. However, the costs of marketing on such lower margin sales are prohibitive and hence requires support from donors until sales volumes build up."

Mahesh Yagnaraman, CEO, First Energy, one of the cookstove companies supported by RtB

There are no perfect answers, but there are things the sector can do to move us closer and many of these are listed in the next section.

In an ideal world we would be able to identify how many activities are required in this surge, the likely cost and length of time. Unfortunately, this is not possible because the answers are dependent on a range of factors, including:

■ the maturity (or immaturity) of each specific local market (i.e. what is the current level of awareness about IAP and ICS among impacted households, have ICS promotional activities already been conducted, etc.);

■ to-date there have been few robust assessments of social marketing activities related to stoves or products with similar price points that deliver similar social benefits so it is impossible to draw robust conclusions;

■ no matter how much you know your market, just like any other type of marketing or advertising, sometimes certain messages or mediums just catch on with consumers. In Ghana, for example, the success of stove social marketing¹⁴ was put down to one particular advert jingle (or catchy tune), which children loved and started singing at home, thus impacting their parents.

RECOMMENDATIONS /NEXT STEPS

- There is large (and growing) evidence to suggest social marketing plays an important – in some cases essential – role in delivering ICS sales at scale.
- There are potential financially-viable, scaleable social marketing models to explore. The sector now needs to learn more, re-evaluate past and current efforts and pilot and scale new ones. If it does not do this it will be failing to tackle some of the largest barriers to ICS adoption at scale.

"There is no single solution to social marketing: every situation is different," states The Social Marketplace¹⁵ in their social marketing toolkit. This means it is impossible to make simple, desirable conclusions like: 'X social marketing activity mix will cost Y and deliver Z additional ICS sales'.

Furthermore, within the ICS sector, there have only been a limited number of stove social marketing efforts and few of these have been fully evaluated (with results published) to identify what does and does not work.

But there is large (and growing) evidence to suggest social marketing plays an important – in some cases essential – role in delivering ICS sales at scale. Ask the head of almost any ICS organisation – in India, Uganda or Guatemala - and they identify lack of awareness as one of the leading barriers they face.

And as our partnership with GK illustrates, there are potential financially-viable, scaleable social marketing models to explore. The sector now needs to learn more, re-evaluate past and current efforts and pilot new ones. If it does not do this it will be failing to tackle some of the largest barriers to ICS adoption at scale.

We hope this report, which highlights the many lessons we learned through RtB, makes a small contribution to these needs. We are very clear that we do not have all the answers but feel, based on our experience, that it is useful to suggest the following recommendations and next steps to key ICS sector players:

All organisations

- Be ruthlessly disciplined when planning and implementing social marketing activities. Follow the lessons learned in this and other reports, particularly related to the marketing mix. Too many stove initiatives falter because they have not considered marketing's '4Ps', do not have the right mix, or may even be missing one or more of the Ps.
- Explore innovative partnerships and models with the private, donor, government and NGO sectors to deliver efficient social marketing activities at scale.
- Enhance evaluation and publish the results so that you and the sector can identify more effective and viable stove social marketing practices.
- Think ahead. The sector has largely focused on social marketing to persuade consumers to buy ICS. Yet such campaigns must go even further. Ensuring consumers actually use ICS consistently and correctly (i.e. adoption) is essential if the sector is to achieve the health, environmental, gender and livelihoods benefits it desires. Future social marketing must take account of this.
- Take an integrated approach. Recognise that a wide range of existing barriers in the cookstove value-chain needs to be tackled simultaneously and holistically. Tackling social marketing challenges is vital but needs to be done as part of a broad mix of innovations (such as distribution channels, consumer financing, supply chain financing or international regulation).

For ICS businesses (and other social entrepreneurs)

- All businesses must embed social marketing in their operations and sales. It has to be integrated into the organisation's business model in a way that is ultimately sustainable. If businesses cannot afford the social marketing or do not have the capacity to deliver it, then they will need to partner with relevant donors and local partners (MFIs, NGOs, religious organisations, government etc.) who do. Without doing so the chances of success are slim.
- Given social marketing is impacted so much by local characteristics, disciplined analysis and **pilots/trials** to identify the most costeffective activities are essential.

For multinationals and other organisations attempting to reach the Bottom of the Pyramid with stoves or similar social products

- Explore and innovate around the boundaries between corporate social responsibility and core business activities and budgets because ICS social marketing tends to straddle both, directly helping sales but also providing significant social benefits.
- Leverage existing distribution channels and marketing and sales expertise to identify innovative social marketing solutions.

For potential non-ICS business implementers of stove marketing campaigns (e.g. NGOs, religious organisations):

Consider adding stoves – and social marketing – to your existing activities. Many NGOs have existing operations, footprints and credibility (in the eyes of communities) that many small-scale ICS businesses need for social marketing to be effective.

For governments within IAPaffected countries:

- Make stoves a policy priority and embed stove social marketing in any subsequent plans and activities.
- Leverage existing government infrastructure and track record in the social marketing space, for example using social marketing mediums already used for other issues (e.g. HIV/AIDS or malaria).

For the Global Alliance for Clean Cookstoves, policy-makers and donors:

- Fund a range of activities that gives the sector a far better understanding of the role social marketing plays as a driver of ICS sale and adoption at scale in different markets. This should include:
- Exploring how realistic it is for ICS businesses to include the cost of social marketing in their business model. If an initial surge of activities is required, how large does this need to be, how long does it need to last and what will it cost?
- Conducting detailed case studies including lessons learned – of the main social marketing activities that have occurred to-date for both ICS and similar social products (e.g. solar lanterns and water purifiers).
- Assessing the pros and cons of different potential delivery models for social marketing i.e. should social marketing campaigns be run by ICS businesses, governments, private sector rural marketing companies, NGOs, MFIs or hybrids?
- **Create sector efficiencies**, for example have a one-stop-shop web portal of social marketing case studies and collaterals that others can use so they do not have to reinvent the wheel.
- Drive best-practice by publishing stove social marketing guidelines.
- If proven necessary and effective, **commit** significant resources to social marketing activities, both to innovate towards identifying sustainable, scaleable solutions but also to subsidise activities in the early stages of a market's development.

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APPENDIX 1 Campaign timeline

Trial Phase: mid-2008 to early 2009

- Stove business needs assessment
- Best-practice social marketing reviewed
- Implementation team assembled
- Campaign creative developed
- Multiple awareness-raising activities conducted
- Impact measured through pre and post trial surveys

Expansion Phase 1: early 2009 to early 2010

- Strategy revised to account for trial lessons learnt
- Messaging and collaterals completely revamped
- A wide range of awareness-raising activities launched

Expansion Phase 2: early 2010 to early 2012

- Campaign routes expanded to include NGOs, local government
- Partnership with Grameen Koota tackling awareness and price barriers delivers particularly good results
- Campaign report and toolkit (to aid lessons) learnt and replication) produced

APPENDIX 2

Key stakeholders and the lessons learned from working with them

Any successful social marketing campaign needs to involve a wide range of stakeholders. The following table lists RtB's key stakeholders, our approach to working with them and summary lessons learned.

Stakeholder	What we did	Lessons Learnt
Social Marketers and Opinion Leaders	We studied social marketing theory and case studies. We also spoke to experts from the World Bank, Hindustan Lever, GIZ, Population Services International and others. We referred to the World Bank's (SANI-FOAM) approach to behaviour change.	There is extensive social marketing on 'free' behavioural changes but limited information case studies (particularly containing detailed evaluation) on trying to convince people to adopt technologies that cost US\$20-30 such as solar lanterns, water purifiers and ICS.
ICS Businesses	We spent an enormous amount of time with the ICS businesses we ran RtB in conjunction with. We learnt from their marketing efforts, made sure our messaging was consistent with their experience and coordinated to ensure the RtB awareness-raising activities only took place within close proximity of ICS stocks i.e. we would not run activities in a village where ICS could not be purchased. We also sent the ICS to be independently tested to validate the product quality in terms of fuel use and emissions (see 'Credibility' section below).	This element was crucial but it was also time consuming and labour-intensive. At times the ICS businesses did not have the capacity – usually in manpower – to support the campaign. The businesses were also simultaneously conducting their own marketing campaigns, which complicated things and made it harder to measure the exact impact of RtB.
Government (State, District and Local levels)	We sought and gained endorsement for RtB from the Chief Minister of Karnataka, which provided a huge boost. We also liaised closely with several state ministries, asking for support and, where required, permission to operate.	The government at all levels was generally very responsive to RtB. Gaining endorsemen from the top helped.
	In addition, we began by informing the district-level authorities of our plans. In time, this relationship developed into a partnership where RtB explored using district health workers as a route-to-market. At the local – sub-district and village – levels	
	we would always ask for permission from the local leaders – usually the Panchayat – before conducting activities.	

Stakeholder	What we did	Lessons Learnt
MFIs	We initially conducted a market assessment of all MFIs in southern India, then identified and approached more than a dozen deemed most suitable for partnerships that would see them provide loans to their customers to purchase ICS. We also learned from MFIs who had	MFIs relevance can be assessed through analysis of their ethos, membership size, demographics, track record of selling similar products and the extent to which they can undertake distribution.
	already been attempting to sell products similar to stoves (e.g. solar lanterns and water purifiers) to their members.	A major challenge is that the margins from introducing new customers to paper products (e.g. traditional MFI loans) are much higher and simpler than introducing loans for physical products such as stoves. MFIs chasing financial rather than social returns were therefore not interested.
Press/Media	We mapped local media outlets – radio, TV (cable and satellite), print – to assess their ability to promote the campaign, both through unpaid coverage and paid adverts. We also conducted research on TV ownership. Part of the campaign launch included a PR blitz: press releases, journalist visits etc.	Unpaid coverage from local press ads was a useful bonus. Paid for TV and radio adverts can also play an important role but they need to be part of a campaign involving stove demonstrations. Run without demonstrations, their impact is limited.
Self-Help Groups (SHGs)	Typically, SHGs are groups of 5-25 women who meet each week and who vary in affiliation. Some are independent, others are part of broader networks organised by NGOs, religious groups or even local banks. Some are very active, others less so. Some have access to credit (a variety of models) others do not. We mapped the SHGs in villages where we were particularly active and built relationships with them.	SHGs are one useful way to reach potential female consumers but it is important to remember they vary in capacity significantly, and evidence shows the purchase decision includes the man of the household who is not directly reached via SHGs.
NGOs and Faith-Based	We mapped NGOs and faith-based groups in our area of activities, initially choosing not to work too closely with them as there were few obvious partners with the right footprint or track record, but as our geography expanded we worked more closely with these groups.	NGOs and faith-based groups are extremely active in India but partnerships tend to take time to develop and it is often a challenge to find ones with aligned vision and interests.

APPENDIX 3

Further detail about the research methodology for the surveys RtB conducted

SF conducted four cross-sectional surveys in target markets with a total sample of around 2,700 households. The surveys covered current cooking practices, fuel use, stove types, kitchen ventilation, likely IAP exposure levels, awareness of health impact and awareness of solutions. They also covered the effect of marketing activities on these variables and, crucially, stove purchase decisions. The surveys were conducted in two sets - before and after trial activities (see previous timeline) and before and after expansion activities.

The initial pre-trial research (Sept 2008) focused on parts of five districts in Karnataka along with one district in neighbouring Andhra Pradesh. This outside 'control' district was intended to serve as a comparison population to allow change to be attributed to the social marketing campaigns. A random sample was employed within each of the six districts (a multi-stage sample with six primary sampling units with 200 randomly selected households in each). A quota of 50% male and 50% female respondents was set although the questions were primarily targeted at a 'household' level. In total (across the five study districts) there were 134 urban respondents and 866 rural respondents. After the survey, a wide variety of social marketing activities took place. Four months after these were completed a follow-up survey, using an identical methodology but with extended questions, was conducted to measure the impact on awareness levels and behaviour change of the programme of activities.

In addition, a smaller study was conducted in Sept 2009 in Shimoga district – the district selected as the focus of the campaign's expansion activities (which ran from October 2009-July 2010). The survey consisted of a 300 household sample from 30 randomly selected villages (10 households in each). Households were recruited to a quota which covered gender, rural vs. urban status and socioeconomic status. Some exclusion criteria applied in that all respondents were aged 20-50 and primarily used biomass for cooking. This study was followed 10 months later by repeating the questionnaire in the same population with additional questions to measure impact of the programme of awareness-raising. All questionnaires are available upon request from Shell Foundation and will be included in the planned RtB Toolkit.

Both surveys were conducted using an intervieweradministered structured questionnaire. Whilst some questions differed and focused on the purposes of the specific campaigns, the wording of the majority of the questions was identical. These surveys were set up to provide baseline measurements of these factors and to monitor any impact of the social marketing campaigns.

To complement and augment this quantitative data, a number of more in-depth qualitative studies were undertaken. The challenge of behaviour change is multifaceted and a deep understanding of the consumer's motivations and beliefs regarding their current situation and what may prompt them to make changes was vital. For example, in one study a dozen homes were given an ICS to use for a fortnight. In-depth interviews were conducted before, during and after to record their reaction. In another example focus groups of both men and women were conducted where their reaction to different messaging and mediums was recorded.

APPENDIX 4 Detailed description of promotional activities conducted

This section describes in more detail the various activities undertaken in Shimoga district in the southern Indian state of Karnataka. Specifically, it focuses on the low, medium and high intensity combinations of activities explored, outlines the number of people reached, stove sales and other key statistics.

The **lowest** level, which took place in 70 villages included wall paintings, van campaigns and Sustained Activist Householders (SAH) – conducting door-to-door visits for three months. The **medium** level took place in 40 villages and added a greater focus on SAHs, who conducted more stove demonstrations and targeted SHGs.

The **high** level took place in 10 villages and included Anganwadis going door-to-door promoting stoves.



Levels in more detail

Low level activities

Activities undertaken

Van Campaigns

- Promotionally branded vans visited every village and town in Shimoga with a population of 2,000 upwards (110 visits in total) twice over a four month period. There were usually four gatherings in different parts of each village (each time), which featured a flipchart story, educational games and a 'Shell Foundation Didi' cookstove demonstration.
- 'Shell Foundation Didi' was an influential local woman, nominated on the day by village leaders, who helped in gathering a crowd and 'hosting' a small tea party using the improved stove while a RtB demonstrator explained the benefits of the product.
- During the second round of visits a testimonial was added where the crowd could hear the experiences of customers who had previously bought the stove.
- Resources committed to this route initially consisted of four teams with a team leader and four promoters in each team. Following a midpoint evaluation this was revised to two teams. Transport was provided through a branded van and a jeep.

Static

 Static wall paintings were erected in notable places. In smaller villages 600 square feet of wall painting was undertaken; 1,000 square feet in each medium sized village and 3,000 square feet in larger villages. In addition up to six mini hoardings were erected in each village.

Markets

 For a few weeks stove demonstrations were conducted in the largest weekly markets in the district.

SAHs

- The SAH acted as a permanent presence in the villages. Her house was RtB branded and she gradually built up her presence by visiting 15 houses a day for three months (20 days a month). In a 5,000 person (est. 1,000 household) village this meant she could in theory reach 90% of households, though in practice multiple visits to households were required to deliver a stove sale so this figure fell to between 50-70%.
- At each house she would use a flipchart containing an entertaining story about ICS and would leave behind promotional leaflets containing details about the ICS being promoted, including the local dealer contact details.
- The SAHs were paid a monthly salary to undertake and report on their activities with the possibility of bonuses for high performance. While SF funded this activity, the aim was to create a sustainable model, where ICS businesses could cover the cost of the SAHs by diverting some of the existing dealer/retailer margin built into the price of their stoves. To achieve this goal the women needed to sell 50 stoves each a month or 2.5 per working day.
- The SAHs were selected on the criteria that they be aged around 22 to 45, preferably without the responsibility of an infant, were socially active in the village community, articulate, had access to a phone, were educated to a minimum standard and were entrepreneurial by nature.

Estimated cost calculations and results

Despite constant attempts to improve the performance of the various activities (in terms of stoves sold) costs were unsustainable for most activities. Vans were costing US\$21 per additional stove sold, SAHs US\$92. There clearly needed to be a higher conversion ratio. The reach figures were more encouraging – vans 57,920 and SAHs 82,417 – and exceeded targets.

Approach	Dates	Reach	Sales	Cost (US\$)	Cost / Reach (US\$)	Cost / Sale (US\$)	Conversion rate
Static	Oct 09-Jul 11	n/a	n/a	19,301	n/a	n/a	n/a
SAH (Door-to- door)	Oct 09- Feb 10	82,417	331	30,321	0.37	92	>1%
Vans	Oct 09- Mar 10	90,429	2512	53,242	0.59	21	3%
Market activities	Nov 09- Jan 10	35,303	1058	22,185	0.62	21	3%

Medium level activities

- Medium level activities were identical to low level (as previously described) with the addition of a new SAH model, which was trialled in 40 out of the 110 villages and lasted for an additional three months.
- In these 40 villages, instead of going door-to-door the SAHs turned their attention to local self help groups (SHGs) – small groups of women (typically five to 20) who gather together each week. Often they make contributions to a small capital fund which can then lend out to specific SHG members or others. It was hoped this would help address the price barrier that many potential consumers were facing.
- Each SAH was required to collate an exhaustive list of the SHGs in their 2,000-5,000 person village and share the list with stove manufacturers. The SAH would then arrange to meet the SHGs and demonstrate the stoves.
- If five or more SHG members were interested in purchasing a stove, the SAH would call the ICS manufacturer to arrange delivery.

 Targets were set for each SAH to sell 15 stoves a week/60 stoves a month. Each SAH was given a prize for achieving their targets, for example a pressure cooker or set of glasses.

Estimated cost calculation

- 417 gatherings were held with SHGs with 1,480 members present in total. Across all meetings 320 members expressed an interest in buying a stove (21.6%) in the first round of demonstrations falling to 309 (20.9%) at the second but rising to 349 (23.6%) by the third round of demonstrations. Of those interested 337 (96.6%) bought stoves.
- As can be seen, this route was a more intensive contact; costs per reach were significantly higher but this conversion of reach to sales was also significantly higher.
- It should also be noted that there was great variation between individual SAHs. The top-performing SAHs sold 74 stoves per month and therefore had much lower 'cost per stove'.

Approach	Dates	Reach	Sales	Cost (US\$)	Cost / Reach (US\$)		Conversion rate
SAHs (SHG route)	Apr 10- Jul 11	1480	337	44,429	30	132	23%

High level activities

- At the highest level of intensity a health worker was also recruited to the campaign to promote the stove during their work.
- The Anganwadi is a female health worker chosen from the community and given training in health, nutrition and childcare. Each health worker is in charge of an Anganwadi who covers a population of approximately 1,000 people. The Anganwadi workers are, in a sense, the government's last mile approach to reaching every single household. The workers are educated on health issues and carry the government's messages and programmes to each household. They are usually entrusted with attaining government targets and are the implementation arm for the government's women and children directed programmes, including schooling, maternity and disease control.
- In this 'route to market' Anganwadi workers were trained in the dangers of IAP and incentivised to promote stoves in their communities in the course of their existing duties.

Activities undertaken

- The approach adopted was based on a recent sanitation initiative in Shimoga where health workers received small incentives for each household that they convinced to build a toilet.
- It was decided to roll out the Anganwadi activation programme in a pilot area (known as a 'Taluk') that constituted one twentieth of the entirety of Shimoga District, with an initial set of 100 health workers.
- RtB trained these 100 Anganwadi workers on the dangers of IAP and on how these dangers could be communicated, the Anganwadi workers then took this message out to the community.

Approach	Dates	Reach	Sales
Health workers	Apr 10- Jun 10	157,850	290

- An incentive of 50 Rupees (US\$1) was offered for each successful sale made through the efforts of the worker. The workers were also paid a monthly honorarium of 250 Rupees (US\$5). This payment was in addition to the monthly wage they received from the government.
- Day-to-day the Anganwadi worker went from house to house and educated villagers on the harmful effects of smoke in the kitchen. They also organised stove demonstrations. At the end of their sessions, they would solicit interest in purchase and record those interested in buying an ICS. RtB's implementation teams would regularly connect with the Anganwadi workers who would inform them of the leads generated. Anganwadi workers could also take the full amount or a part of the amount of the stove cost to confirm the order.
- The field workers would thereafter submit a weekly 'leads generated report' to the stove manufacturer who would then use their resources, either of the company or of a local distributor, to close the lead and the sale. On closure of the sale, the Anganwadi worker would be paid their incentive.

Estimated cost calculation (per reach, per stove)

Anganwadi workers reached out to 31,570 households (157,850 people based on five per household) during the course of the three month programme and conducted 2,685 stove demonstrations to groups and households. The reach – 90%+ of households in an Anganwadi worker's patch – was very good. Converting this reach to stove sales was not straightforward however, with sales of only 290 stoves

Cost (US\$)	Cost / Reach (US\$)	Cost / Sale (US\$)	Conversion rate
12,848	0.08	44	<1%

Benefits of expanded activity (i.e. moving from Low to High)

What benefit was seen from the different approaches undertaken and what was the optimal mix of approaches? Clearly some approaches, such as the door-to-door SAHs, achieved more in terms of reaching wide audiences with simple messages. Others achieved a greater conversion rate turning these contacts into sales such as the visits to the SHGs. and others more effectively achieved the linking up of the required steps in the distribution chain, such as the partnership with MFI GK, leading to a potentially more sustainable model of delivery.

Post-marketing research was conducted to investigate the impact of the key messages across the spectrum of activity. Fifteen villages in the low activity level, nine villages in the medium activity level and six villages in the high activity level were surveyed using a multistage sample.

Across all areas of activity - low, medium or high stove demonstrations were the best recalled activity with nine out of 10 respondents (90%) recalling them spontaneously. This was followed by static advertising (38%).

In medium activity level areas there was a very low incidence of respondents learning about the stoves through SHGs which suggests that their reach was primarily double counting those who had already been informed of the messages by static advertisements or active demonstrations. This may suggest that little value was added by SHG demonstrations in terms of reach. This route however was intended to overcome wider barriers such as price and trust in the product and this is reflected in the relatively higher conversion rate.

In the areas which received high behaviour change activities, specifically health workers approaching households, around three out of 10 (26-30%) residents remembered being approached and this deeper contact converted into a noticeable increase in intention to purchase stoves of 90%+ compared to two-thirds of respondents across all areas.

The top three messages recalled across all levels of activity were fairly consistent – that ICS produce less smoke, reduce fuel usage and cook faster. In the areas which received high activity there was mildly stronger recall of a wider range of messages but the differences were small.

It can therefore be seen that increasing intensity of social marketing beyond van demonstrations, SAH door-to-door visits and static advertising is not strongly supported by the evidence in terms of increasing reach. There is however some evidence that it improves conversion of that reach into sales. Ultimately the vans and demonstrations alone translated into few sales and a lower intention to purchase than those approaches such as the health workers or visits to SHGs which were able to close some of the gaps in the purchase decision. Finally we must acknowledge that these operations did not take place in a vacuum. It is possible that there was a knock-on effect from SF activities to local retailer sales. If so, this would support the idea of mass marketing generating sales across the market.



Reduce fuel usage Cook faster Save time Save money

APPENDIX 5 Detailed lessons learned from our activities

This appendix lists in detail the lessons learned from our different campaign activities, as outlined in the 'Results' section in the main body of the report.

Focusing on 'Price': Lessons Learned from our Partnership with MFI Grameen Koota

Lessons Learned

Signing Partnership Agreements

Financial returns

MFIs in India make more money from loans (and other paper products) to existing and new customers than from loans to customers for physical products like stoves. When we started RtB, aggressive new customer expansion – not product differentiation like adding stove loans – was the focus for most Indian MFIs. This focus has changed dramatically in the wake of the credibility crisis experienced in 2010/11 by the Indian MFI industry but at the time it was a key barrier for us. Out of around 10 major MFIs approached, only one firm partnership developed.

New territory

Selling physical products like solar lanterns and stoves through MFI memberships is a relatively new idea and those that have tried have had limited success . MFIs are wary of being associated with specific physical products. They do not want their customers coming to them if, for example, stoves break down. There are also some legal restrictions in India that prevent MFIs from acting as a sales channel or distributor for certain products.

Price point

The pricing point of stoves was a problem, being simultaneously too high and too low. The item is too expensive to be purchased without microfinance, but too cheap to provide a profitably serviceable loan. One solution offered to this barrier was the 'bundling' of social goods (water purifier, stove and solar light) for 5,000 Rupees (US\$100), a more easily administered figure, but evidence shows this has its own complexities.

So many of the MFIs SF approached showed limited interest that we quickly started targeting MFIs that were motivated 60-70% by social returns, 30-40% by financial returns and were therefore more likely to agree to a partnership.

Operations

Overall complexity

There are many moving parts and processes – MFI members, MFI teams, stove promoters, stove businesses - to coordinate. Each has their own back office systems that need to be dovetailed. In theory, RtB promoters held stove demos and convinced the buyer, then the stove loan application was made and approved in due course and the money was then passed to the consumer. The stove was then purchased and the receipt was returned to the Loan Officer. There is the potential, however, for many gaps in this chain. We experienced this directly through disappointing conversion rates between initial interest, loans and actual sales during the early stages of our GK partnership though these improved dramatically in the later stages.

Particularly difficult issues included

- **Incentivisation**: Identifying the right incentive structure for staff, particularly amongst the existing overstretched MFI branch teams was a challenge. In the latter phases, a sales target competition was initiated with all branches receiving a certificate on performance and with the best performing branch receiving a prize, which helped.
- MFI stove business link: As previously mentioned, many MFIs do not want (or are unable due to legal constraints) to stock stoves themselves. This puts a pressure on stove businesses to develop a sizeable network of stocking points or retail outlets that are often not cost-effective. Furthermore, if the MFI member is given a stove loan but cannot immediately exchange it for a stove, the temptation is there to spend it on other things (even when mitigating processes are put in place like giving the receipt to the loan officer). Finally, when the MFI member goes to a retailer to exchange their fixed loan for a stove, they often get exposed to a range of other stoves or special offers which confuses the process and can lead to the member not purchasing the stove.

Focusing on 'Promotion': Lessons learned from our activities in Shimoga District, Karnataka

Lessons learned from different mediums

an campaigns	Static (wall-paintings and hoardings)	Weekly market stove demos
 Expensive: Ultimately, it is hard to bring down the cost of vans per additional stove sold to sustainable levels but stove demonstrations are critical to sales (see below) and it is very hard to do these using cheaper forms of transport. It is possible to transport 1-2 stoves by motorbike but then there are no stoves available for purchase alongside the demo. Demonstrations: General promotional activities (like games) to drum-up interest and entertain the crowd are important but any activities must include stove demonstrations. People want to touch, feel and ask questions about what is a new technology. Where possible demonstrations should compare an ICS to a traditional three stone fire by, for example, boiling water simultaneously on both to demonstrate the faster cooking times and the fuel and smoke reductions. Timing: Selling to both the man and woman in the house is vital (as surveys show 94% of households see ICS purchase as a joint decision) so timing demonstrations for when both are available is essential. On an annual timescale the timing of the visits should not coincide with harvest where many people are away or seasons during which roads are impassable. Coordination with ICS partners: Visits must be coordinated with partners so that ICS are available both for immediate purchase and ongoing purchase in local retailers (which must be clearly identified by promoters and on promotional literature) as surveys show the average buying decision time is three weeks. Location: Demos must take place in high footfall areas like main streets or near bus stations to maximise reach. 	 Measurement: Statics scored very high on recall, with 38% of post-activity survey respondents spontaneously recalling them. In combination: It has limited (arguably almost zero) impact if done on its own – as it is promoting a new technology people do not understand – but its permanence (wall paintings can last for years in some villages) can reinforce stove demo messaging. Inexpensive: If planned properly static is relatively inexpensive. Footfall: They should ideally be located in areas of high footfall e.g. main streets or bus stations. 'Noise': There is no point having static that is competing for space with other better known brands and technologies e.g. in one instant our hoarding was just one amongst a range of others advertising mobile phones. It needs to stand out. 	 Reach: Weekly markets score well on reach due to the high foot-fall. Tea: Making tea on ICS during demos and handing out free cups was a good way to attract people (though local tea sellers were not always happy about the impact on their business). Consistency: Attending a market regularly and having your stall in the same spot is vital as surveys show the purchase decision can be three weeks plus. There is no point getting someone thinking about purchase only for them to return the following week ready to buy and the stall not being there.

SAHs

- **Constant Presence:** As local trusted women, the SAHs built significant confidence and the flexible 2-3 hour a day workload is attractive and viable.
- Independence: The SAHs were champions of a campaign run 'in the public interest' by Shell Foundation. This gave them credibility but it was also a major limiting factor because they could not negotiate on price or close sales.
- Financing: While some consumer financing was made available through SAHs targeting SHGs in the medium activities, in general the lack of financing was a major barrier to purchase.
- Distribution and coordination: It was only economical for ICS partners to deliver stoves to a village once 10 orders had been passed on by the SHG. This led to a lag between order and delivery, often leading consumers to change their mind. There were also plenty of opportunities for communication breakdowns.
- Quality: Performance management of the SAHs was challenging resulting in huge variations in performance; 20% were achieving 80% of sales.
- Incentivisation: It was felt at the conclusion of the SAH programme that improved performance management, with the right incentive structure up and down the chain, could make this model viable and SF continued to explore this option (through a more commercial approach see 'Future' section). But despite trialling a variety of structures, an economically viable, scaleable model was not achieved.

Health workers (Anganwadis)

- Credibility: Government health workers are highly trusted so can be a powerful 'sales force' for public health messaging regarding ICS.
- Inexpensive: They already receive a salary so adding a stove element is relatively inexpensive; 250 Rupees (US\$5) a month plus 50 Rupees (US\$1) commission per household (in their patch) buying a stove.
- Government sign-up: Permission (and ideally enthusiastic endorsement) is clearly crucial at the local level. District and state support is ideal. Rightly, the government also wants to make sure it promotes a range of quality stoves as it cannot back a single commercial provider.
- Coordination, negotiation and affordability: Although reach and increased awareness were both extremely successful, this did not translate into sales. A major barrier was the gap between the promotion and the closure of the sale, i.e. logistical complications of fulfilling the stove order once interest was raised through the health worker visit. Health workers are also unable to negotiate on price; all they can do is pass on specific agreed information. This is a limiting factor. In addition, the price of the stoves remained a challenge with numerous households expressing interest but only with consumer financing, which health workers cannot provide. Together, these barriers led to a drop in morale and motivation amongst the health workers. At the end of the three month campaign, only 38 of the 89 workers showed continued interest in the programme.
- Scaleable: If the above issues can be resolved, this route has the potential to be scaleable as there are wellestablished health workers' networks across India and it is a relatively cheap route-to-market.

APPENDIX 6

The need for donor-funded social marketing – an example of a non-stoves product

IDE KB Treadle Pump – Business Model

Sales and marketing costs are significant but are paid for by donors, thus the consumer pays for only production, distribution and installation/after sales service



Source: Monitor analysis, based on IDE India data, 2008.

600,000 IDE KB Treadle Pumps, used to pump water out of the ground, have been sold since 1991 (mainly in northern India) at a similar price point to ICS. The above diagram shows that the marketing and social marketing costs were paid for by donors. Without this support, which was deemed 'a primary driver of sales' the 'material cost of the pumps would rise from 690 Rupees [US\$14] to 1,190 Rupees [US\$24]' which would 'severely impact sales'.¹⁷

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¹⁷ Shell Foundation would like to thank *Monitor* for permission to use this example.

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