



Growing Inclusive Markets

Business Works for Development • Development Works for Business

CASE STUDY

Africa • South Africa

Mondi Recycling Outsourcing the Supply Chain

Prepared by • Pierre Coetzer
Sector • Waste management
Enterprise Class • Foreign Company/MNC



Executive Summary

In the developing world, recycling is essentially driven by economic necessity, with the associated environmental benefits being a useful and positive by-product. The main incentive for recycling waste, including paper, is its residual economic value. In a developing country like South Africa, businesses in the formal sector are experimenting with models that leverage the strengths of the informal sector in order to streamline their supply chains. Mondi South Africa, a very significant paper producer with a global presence, has created economic opportunities by outsourcing its supply chain of recovered fibre, the industry term for waste paper. Through an 'owner-driver' scheme, it has encouraged some of its former employees to create their own paper pick-up and delivery businesses, creating opportunities for empowerment, encouragement and economic development further down the value chain, with direct and indirect benefits for hundreds of people in the form of employment, increased income, skills transfers and enterprise development.

The case for recycling paper and leveraging the strengths of the poor in the recycling process is largely made. The main question beyond that is whether Mondi's model, in its current shape, is truly empowering, or whether it is first and foremost an elaborate cost-cutting and cost-control measure benefitting the business rather than its supposed beneficiaries further down the value chain. The beneficial side effects for the poor are certainly real in terms of increased incomes and opportunities, not to mention the overall environmental benefits. Mondi's owner-drivers supply a remarkable 16% of all recovered fibre in the country, and the average turnover of each of the owner-driver businesses hovers around the 1 million rand mark (ca. US\$133,000 at December 2009 exchange rates. There may, however, be further room to enhance the model in favour of the main actors in the supply chain of recovered fibre: owner-drivers, sorting and bailing companies, buy-back centres, and even more so, the estimated 12,000 hawkers who depend on paper recycling for their livelihoods.



Introduction

Converting waste into reusable material is probably one of the oldest forms of economic activity. When waste has intrinsic economic value, it becomes a commodity and can be recovered, sold, transformed and converted for re-use, adding value along every step of the process.

In South Africa, as is arguably the case in many other developing countries, recycling activities are driven more by their economic benefits than the environmental concerns, although protecting the environment is usually a positive by-product of recycling. The case for recycling, though, is not necessarily always a straightforward one: in some instances, recycling can end up causing more net damage to the environment, as may be the case when the process involves heavy use of chemicals, for example. In a rational environment, recycling will usually take place on two conditions: when it makes economic sense to do so, and when the environmental cost of not recycling is higher than the alternative. Many businesses all over the world, driven by a mix of legislation, public pressure, and economic rationale, are reconfiguring their value chains in order to make recycling more cost-effective and economically viable.

This case study looks at how Mondi Recycling, a stand-alone unit of Mondi Packaging South Africa (MPSA), has reconfigured its entire supply chain of recovered fibre, as used paper is known in the industry, by outsourcing an essential link of the recovery process to former employees through an owner-driver scheme, establishing independent sorting and bailing operations, relying on a network of buy-back centres and, further down the chain, a large network of individual hawkers. While this outsourcing model does not come without its own set of questions and limitations, it has provided substantial benefits to the actors involved, mainly for the owner-drivers and their employees, sorting and bailing companies and their employees, and to a lesser to a lesser degree the managers of buy-back centres.



Mondi Recycling General Manager, Roxley Ravuku (Photo credit: Pierre Coetzer)

The owner-driver scheme involves many hundreds of people and does not revolve around a particular personality. It is fair, however, to say that several key figures are instrumental in shaping the model: they include personalities such as Mr. Roxley Ravuku, the general manager of Mondi Recycling, and his small team who are in charge of the overall coordination. The 42 owner-drivers currently in operation (December 2009) are a mixed set of characters, but typical profiles, such as Sello Seko, would be former Mondi employees already well-schooled in the paper recycling industry. Such owner-drivers, while having



lost the relative security of permanent salaried employment with Mondi, have mostly grown into successful entrepreneurs, providing a living for a total of several hundred South Africans from poor or very poor backgrounds. Other key figures in the model include the owners and employees of sorting and bailing companies, owners and managers of the 117-odd buy-back centres, who are also typically from low-income backgrounds, and, in the shadows, the estimated 12,000 informal hawkers who play an important role in feeding Mondi Recycling's recovered fibre supply chain.

The story behind Mondi Recycling's owner-driver scheme is one of hard work in a very competitive and high-pressure environment. It is also, in many ways, a typically South African story, in which the informal and formal sections of the economy feed off each other's existence and form complex, and often ambiguous relationships of mutual dependency. In South Africa, perhaps more than in most other parts of the world, formal businesses are driven by necessity to devise original responses to challenges not found by their counterparts in more developed countries. It is in part this familiarity with the informal economy that lies behind the success of a number of large South African businesses in many parts of the emerging world, including the Mondi Group.

This case study is essentially structured around the *how* – Mondi Recycling's business model – the *who*, - i.e. the stakeholders who shape and influence the model - and the *what*, meaning the results obtained through the owner-driver scheme in terms of its social, economic and environmental impact. Contextual and background information about the market and South Africa's specific socio-economic conditions (see next section) serve to set the scene.

Market and Location Context

LOCATION CONTEXT AND GENERAL SOCIO-ECONOMIC CONTEXT

Mondi Packaging South Africa is based in the city of Johannesburg, South Africa's largest city and economic capital. Gauteng Province, around Johannesburg, is the largest industrial pole on the African continent: with its estimated population of 10.5 million people, it produces around 10% of the Gross Domestic Product (GDP) of the entire continent.¹ South Africa's economic structure could be described as a mirror image of its fractured and diverse society. Few other countries in the world present such a striking duality in its economic fabric, with a sophisticated, sometimes even advanced 'first economy' functioning alongside a so-called 'second economy' that shares many characteristics with other developing economies elsewhere in the continent. This duality occasionally makes South Africa look like a curious merger of Australia and Mozambique. The challenges faced by the industrial sector in South Africa, including Mondi, are therefore quite unique, as the duality of the economy is a reality that needs to be integrated into any decision-making process, including the developing of originals and new business models. At the same time, this characteristic is also an opportunity, putting South African businesses in a unique position to lead when it comes to

¹ Gauteng Development Agency GEDA, "Gauteng at a Glance". <http://www.geda.co.za/live/30/gauteng-at-a-glance/>



developing new models aimed at maximizing the social and economic footprint of the private sector.

There is much at stake: South Africa is only at the beginning of a massive socio-economic experiment, an honest attempt to shed a historical legacy of centuries of race-based discrimination and political and social oppression by the white minority against the country's black majority through the policies of legalized racial separation or *apartheid*, which culminated between 1948 and 1994. The task is daunting, and a decade and a half after its first post-apartheid democratic elections of 1994, South Africa remains one of the most unequal societies in the world, with a Gini coefficient of 0.67, higher than Brazil.² Just as worryingly, sustained economic growth in the 1990s and early 2000s has failed to significantly reduce unemployment, which hovers between 25% and 40% of the workforce.³ The private sector, including large companies such as Mondi, is keen to look for adequate responses to these challenges.

THE MARKET FOR RECOVERED FIBRE

South Africa consumed about 2.3 million tons of paper in 2008. Of that amount, about 1.03 million tons was recovered paper, just under half of the total at 44%. The overall paper recovery rate as a percentage of total paper consumption hovers around 45% per year, roughly in line with international levels, and has remained stable over the last few years.⁴



Mondi Paper Recycling recovery facility- (Photo credit: Pierre Coetzer)

Mondi Recycling is the biggest local recycler, with around 420,000 tons or 40% of the total. Its main competitors are Sappi, Nampak and US-based Kimberly-Clarke. With four significant producers of paper and packaging in the country, South Africa's market is unusually large relative to its size.

As pointed out by Mr. Srin Naidoo, Chairman of the Paper Recycling Association of South Africa (PRASA), "*the entire market for recovered fibre is driven by demand.*"

Indeed, the country's four large paper producers, none more so than Mondi, need recovered fibre in order to supply their paper mills and produce new paper products. This is an essential feature of the South African market: in contrast to many industrialized countries, where recycling (of paper and other waste) is arguably driven primarily by legislation and environmental awareness, the main driver for the recovery of paper and recycling in South Africa is demand for recovered fibre as a commodity. The reasons for this partly are historical: for several decades of relative economic isolation, South Africa's industries

² See for example Sparks Alister, "At home and abroad, losing the battle of the wealth gap", Business Day, Johannesburg, October 13th, 2009

³ South Africa Survey 2008/2009, South African Institute of Race Relations, Johannesburg, 2008, p183.

⁴ Source: Paper Recycling Association of South Africa. www.prasa.co.za



routinely reinvested their profits within the country rather than expand abroad. Added to the fact that large forest plantations in the country provided an easy source of raw material for the production of paper, the South African paper industry thrived and quietly built up expertise and large cash reserves. By the time apartheid was abolished in the early 1990s, at least three large South African paper producers, Mondi, Sappi and Nampak, were able to expand rapidly into newly opened markets around the world. All three are today corporate giants with extensive global interests and major players in the global market. Mondi itself is ranked 10th largest global paper producer ranked by sales, with Sappi at the 18th spot. In the European market, the largest in the world measured by sales, Mondi is in sixth position.⁵

South African Paper & Packaging Industry Companies, ranked by sales, global comparisons⁶:	
1. International Paper (US)	US\$24.8 billion
2. Kimberly Clark (US)	US\$19.4 billion
3. Svenska Cellulosa (Sweden)	US\$16.9 billion
10. Mondi Paper (South Africa)	US\$9.3 billion
18. Sappi (South Africa)	US\$5.8 billion
80. Nampak (South Africa)	US\$1.04 billion

As pointed out by a recent global study by Pricewaterhouse Coopers, (PwC), the global forest, paper and packaging (FPP) industry has been going through a serious downturn over the last two years, with prices collapsing as a result of the global financial crisis and a sharp decline in demand.⁷ While a recovery in global demand is expected for 2010, Mondi has not been spared by the global economic downturn and is, like the industry in general, under heavy pressure to control costs.⁸

Furthermore, as pointed out in the survey, competition for raw materials is likely to tighten as demand for fibre increases from industries such as renewable energies. It will therefore be a strategic competitive advantage for paper and packaging companies to have a secured supply of access to fibre, and in this regard, it states that “*closer fibre supply chain partnerships should also yield significant advantages over the long term.*”⁹ This throws a particularly interesting light on Mondi’s supply chain for recovered fibre.

⁵ Pricewaterhouse Coopers, Global Forest, Paper & Packaging Industry Survey, 2009 Edition – Survey of 2008 Results, PwC, London & Vancouver, 2009, p16 & 18

⁶ *ibid.*, p16

⁷ Pricewaterhouse Coopers, Global Forest, Paper & Packaging Industry Survey, 2009 Edition – Survey of 2008 Results, *op. cit.*, p7

⁸ *ibid.*, p7

⁹ *ibid.*, p 9



Description of the Business Model

HISTORICAL CONTEXT

Mondi Group's origins go back to 1967, when it was founded as a subsidiary of the South African mining giant Anglo American (commonly known in South Africa as 'Anglo'), at the time the country's largest corporation. During this period, South Africa had been experiencing strong economic growth: like many of its main trading partners in Western Europe and the United States, it was still surfing the wave of the baby-boom, post-war reconstruction and rising prices for commodities such as platinum, manganese, coal and gold, of which South Africa is a major supplier. However, the country was also exposed to growing international isolation as a result of its apartheid policies. Concerned by the risk of major capital flight, the white minority government imposed capital controls, restricting the possibilities of businesses to invest abroad. This partly explains why major local corporations, none more so than Anglo American, developed a strategy of reinvesting profits in non-core businesses within the country, as mentioned before. The effects of this approach led to Anglo American reputedly controlling up to 40% of the Johannesburg Stock Exchange in the mid-1980s, and the peculiar situation of a mining company with substantial interests in everything from office supplies to dog food, and even newspapers.

With the advent of full democracy in 1994, South Africa's economy and its businesses were no longer subjected to international sanctions and trade boycotts, and most large corporations had by then already started selling off their non-core businesses, as economic and trade barriers between South Africa and the rest of the world crumbled. By then, Mondi had become a major player in the local South African paper and packaging market, owning several paper mills and with a variety of product lines extending to office paper, cardboard (also called carton-board in South Africa), newsprint paper as well as packaging. It expanded overseas through acquisitions, mainly in Europe, seizing opportunities in other newly opened markets such as Russia and Poland. Mondi was finally demerged from Anglo American in 2007, and its shares now trade on both the London and Johannesburg Stock Exchanges.¹⁰

Mondi Recycling, which is currently a division of Mondi Packaging South Africa, came into being in its initial form in 1975, under the name Mondi Waste Paper. Anglo American, Mondi's parent company, had begun to buy up several independent recovered fibre suppliers who were supplying Mondi's paper mills.¹¹ This was the first step in an effort to consolidate the market of recovered fibre, and from a business perspective, to ensure a steady supply of raw material to Mondi's paper mills.¹² Mondi Packaging South Africa (MPSA) itself was formed in 2005 with Shanduka as a black economic partner (see explanatory box on BBBEE). Shanduka holds a 25% shareholding in MPSA whilst Mondi and Mondi employees hold the remaining share balance. Today, Anglo American no longer has any formal or legal ties with its former subsidiary.

¹⁰ Mondi, www.mondigroup.com

¹¹ Interview, Roxley Ravuku, Johannesburg, 10 September 2009

¹² Interview, Roxley Ravuku, *ibid.*, and www.mondigroup.com



Key figures for Mondi Recycling (as a unit of Mondi Packaging South Africa)¹³

Direct employees: 40 permanent positions

Outsourced employees: 1,050

Revenue for 2008: R 500 million (US\$67 million at December 2009 exchange rates)

Number of customers: 4 (Mondi Paper Mills)

In-house recovered fibre needs covered by Mondi Recycling: 95%

Number of suppliers: Thousands in the post-consumer channel: Offices, Schools, Homes, Community centres, hawkers, buy-back centres... etc.

Domestic Market share: 40% (about 420,000 tons / 1,100,000 tons total market)

Broad-Based BEE: A government and private sector-driven attempt to redress inequalities in South Africa

Based on the **Broad-Based Black Economic Empowerment Act of 2003¹⁴**, South Africa's Black Economic Empowerment programme is a government-driven scheme designed to accelerate transformation in the South African economy and partner with the private sector to redress three centuries of unequal economic development. The scheme is mainly a response to entrenched inequality in the South African economy and an attempt to increase 'broad-based and effective' black participation in the economy. The law is mandatory for state companies and any business wanting to apply for government contracts. It applies to all South African businesses with a turnover higher than 5 million Rand per year (ca. US\$670,000 at December 2009 exchange rates). A generic scorecard measures progress of businesses in 7 key areas:

Chapter 1: Ownership

Chapter 2: Management control

Chapter 3: Employment Equity

Chapter 4: Skills Development

Chapter 5: Preferential procurement

Chapter 6: Enterprise development

Chapter 7: Socio-economic development

Anglo's sale of 25% of Mondi to BBEE group Shanduka falls under chapter 1. While Mondi Recycling's owner-driver scheme started before the enactment of BEE measures and is therefore not directly linked to BEE, the owner-driver scheme would fall under Enterprise Development and Socio-Economic Development.

¹³ As provided by Roxley Ravuku

¹⁴ Republic of South Africa, Act 53 of 2003. Government Gazette, Cape Town, 9 January 2004. <http://www.info.gov.za/view/DownloadFileAction?id=68031>



THE OWNER-DRIVER MODEL: A RESPONSE TO SPECIFIC CHALLENGES

Mondi Recycling's core function

Mondi Recycling's core function is to supply, on a cost-recovery basis, different grades of recovered fibre to Mondi Packaging South Africa and Shanduka Newsprint paper mills. Mondi operates paper mills located at Springs (Gauteng Province), Piet Retief (Mpumalanga Province), as well as Merebank and Felixton (both in KwaZulu Natal). The Mondi mills forward their requirement targets to Mondi Recycling on a yearly basis, based on projections of market trends, overall economic conditions and factors such as the availability of wood for pulp. If targets are exceeded, as may sometimes be the case in certain years, the surplus is sold on the open market or exported outside of South Africa.¹⁵ The reverse may also happen, as was the case for certain types of recovered fibre in 2008; when shortages appeared in the local market, Mondi had to import certain quantities of recovered fibre to supply its mills with sufficient quantities of fibre. As mentioned already, Mondi Recycling has a 40% share of the recycling of all recovered fibre in South Africa, making it the largest paper recycler in South Africa. Mondi's dominant position in the recovered fibre market is directly related to its position as the major producer of certain types of paper in South Africa. According to Srinid Naidoo from PRASA, "*Mondi is the largest producer, and as such it also has the highest demand for recovered fibre.*"¹⁶ In order to understand the context of the owner-driver model, it is necessary to have a brief overview of the paper recovery channels and the challenges faced in these circuits.

Recovery channels: pre-consumer and post-consumer markets

There are two major supply channels for recovered fibre, the pre-consumer market, which is mostly captured already, and the post-consumer market, where most of the untapped potential remains:

The pre-consumer market refers to paper fibre *before* it reaches the consumer market. This includes mainly paper and cardboard discarded by the producers as waste or rejects. It also includes unsold newspapers and other printed material that never reached a final consumer. The suppliers of this category of recovered fibre include convertors, corrugators and printers. In most cases, says Srinid Naidoo, almost all of the recovered fibre available in the pre-consumer market is "*already tied up in contracts with the major paper producers.*"¹⁷ Some of the larger sources in the pre-consumer market (for example printers) would often even have on-site baling equipment when justified by volumes. The 'clean' paper is then directly supplied to the paper producers and paper mills through specialized transport companies.

The post-consumer market refers to recovered fibre *after* use by the consumer: mainly office paper, newspapers, discarded packaging, boxes and cardboard. There is a wide variety of sources and intermediaries in the post-consumer fibre supply channel: these include offices, shopping malls, schools, kerbside collection (i.e. pavement pick-ups in residential

¹⁵ Interview, Roxley Ravuku, Johannesburg, 10 September 2009

¹⁶ Interview, Srinid Naidoo, Johannesburg, 11 September 2009

¹⁷ Interview, Srinid Naidoo, Johannesburg, 11 September 2009



areas), agents and dealers, buy-back centres and individual hawkers. It is this, still partly untapped, market that Mondi and its competitors, are vying to capture in order to supply their mills. The current supply channel of post-consumer waste fails to capture all the available fibre, as roughly 41% of it ends up in landfill sites.¹⁸ Mondi's owner-driver scheme is part of its corporate strategy to achieve three main goals:

- Provide a transport service to deliver recovered fibre from all post-consumer sources to the baling and sorting facilities;
- Increase the uptake of waste paper from the post-consumer market;
- Increase its socio-economic footprint by assisting former employees to become small entrepreneurs.



Kerbside collection – (Photo credit: Pierre Coetzer)

In both the pre-consumer channel and the post-consumer channel, Mondi Recycling pays for the recovered fibre, except in the case of kerbside collection in residential areas. Mondi Recycling is also currently running separation at source projects in specific residential areas of Johannesburg and Durban. Typically, Mondi would place a container or collection bubble in supermarkets, office blocks, schools and some churches. These entities often have a

country-wide contractual relationship with Mondi, who will then arrange for owner-drivers to collect recovered fibre on a regular basis and pay for the recovered fibre on a weight basis. In the case of schools and churches, this arrangement actually constitutes a handy source of revenue which can help fund projects, charities, or running costs.

The prices of recovered fibre, says Roxley Ravuku, are essentially determined by supply and demand. Mondi Recycling, as a division of Mondi Packaging SA is not per se a profit-making entity but functions rather as a cost-recovery operation. This cost-recovery model is based on the margins Mondi Recycling makes between the buying price of recovered fibre and the selling price to Mondi's paper mills. The selling price is also referred to as the 'transfer price'. According to Ravuku, "*transfer prices are determined during plan period in the third quarter of the year for the following year. Previously the model was fixed for the year, but due to frequent variances and recent vagaries in the market these prices are reviewed on a regular basis during the year so as to provide accurate input costs to the mills for them to determine accurate input costs of finished products.*"¹⁹ The margin covers Mondi Recycling's operational costs such as handling and transport, among others, and would include²⁰:

- Baling costs
- Handling costs

¹⁸ *ibid.*

¹⁹ Interview, Roxley Ravuku, Johannesburg, 10 September 2009

²⁰ *ibid.*



- Transport expenses (including fees to owner-drivers)
- Acquisition and maintenance of heavy industrial equipment

According to Ravuku, the transfer prices would typically be around 20% higher than the price at which Mondi Recycling purchases its recovered fibre from suppliers. This margin allows for covering operational costs, investment and overheads. Asked if Mondi Recycling could possibly be run profitably as a stand-alone business, Ravuku says that they would probably be able to “*plod along for a while.*” Like any business, he says, there are good and bad years. Importantly, the business is sustainable. While Ravuku was unable for reasons of confidentiality to disclose Mondi Recycling’s actual profit and loss statement, he states that the business is economically sustainable and profitable most years. Mondi Recycling’s turnover, he says, was R 500 million in 2008 (US\$67 million at December 2009 exchange rates), and a typical material recovery facility (MRF), he says, would run an operational margin of around R 15 million per annum (ca. US\$2 million per year at December 2009 exchange rates).²¹

The challenges faced by the business

Mondi’s biggest external challenges include regulatory factors and market factors.

The main regulatory constraint cited by Ravuku was, until recently, the “*delay in implementing the country’s national waste management strategy. When the National Waste Management Act finally got promulgated in 2009 (see separate box), we were clapping hands,*” he says.²² “*We are actually lobbying government for more regulation in order to encourage separation at source, so that we can ease the shortage of recovered fibre and supply to our mills.*”

Srini Naidoo from PRASA explains that the paper industry in general, including Mondi, would welcome more binding regulation with regards to waste separation at source, because it would considerably facilitate the collection of paper and also likely increase recovery rates from private households.²³ Essentially for reasons of cost, the government in South Africa is not, at this stage at least, able to regulate separation of waste at source because the public purse does not have the necessary resources to fund the necessary duplication or triplication of kerbside waste collection on models similar to those found in wealthier countries, where waste is separated at source. As a result, very few South African households make any effort at separating waste. This, however, is likely to change in the next few years, as government and the paper industry are involved in a sector-wide consultation process, through a body called the Recycling Action Group (RAG), to increase regulation and determine how waste separation will be funded.²⁴

Officials at the Department of Environmental Affairs say that while government can set overall targets for recycling, its general approach is to consider that the different industries

²¹ Interview, Roxley Ravuku, 10 September 2009

²² *ibid.*

²³ Interview, Srini Naidoo, 11 September 2009

²⁴ *ibid.*



are better placed than government to decide *how* recycling targets are reached, so long, of course, as these industries remain within the relevant legal and regulatory framework.²⁵ From this perspective, the South African government could almost be described as a regulator of last resort, which would only have recourse to constraining regulation if industry fails to achieve recycling targets on its own.²⁶ Furthermore, from a general perspective, government expects industry to carry the cost of implementing waste separation and recovery at source.²⁷

Meanwhile, in the absence of specific regulation, Mondi has started to collect waste paper in residential areas in some of the large metropolitan areas of the country, including in Johannesburg. In this sense, it has taken over the role of kerbside paper collector from what in other countries is usually run by a public utility, for its own commercial interests and because it makes sense from a business point of view. In order to encourage higher recovery rates, Mondi also runs environmental awareness programmes in schools around the country, a campaign that is having some effect as children often spread the message further among their friends and families.

The regulatory framework: The National Waste Management Strategy and the National Waste Management Act²⁸

South Africa's overall waste management policy is governed by the National Waste Management Strategy of 2000, and the National Waste Management Act of 2009.

The Act sets the basic framework of waste management, including specific guidelines on recycling and recovery. It is results-oriented and focuses mainly on waste reduction and recycling targets for five core sources of waste: tyres, plastics, paper, cans and glass.²⁹ The Act further determines the levels of responsibility of local, provincial and national tiers of government and lays down basic rules of compliance and enforcement.

²⁵ Interview with officials at the Department of Environmental Affairs and Tourism (DEAT), Pretoria, 14 September 2009

²⁶ Interview with officials at the Department of Environmental Affairs and Tourism (DEAT), Pretoria, 14 September 2009

²⁷ *ibid.*

²⁸ REPUBLIC OF SOUTH AFRICA, Act nr. 59 of 2008, Government Gazette, issue nr. 32000, Cape Town, March 2008.

²⁹ South Africa Yearbook 2008/2009, Chapter 8, Environmental Management, Government Communications and Information System (GCIS), Pretoria, 2008, p 206.



Mondi recovery facility – (Photo credit: Pierre Coetzer)

The main external market constraint, according to Ravuku, is constituted by independent traders who “*recover fibre and sell to the highest bidder.*”³⁰ These traders, he says, “*do not necessarily buy recovered fibre for their own consumption but sell the paper in the domestic as well as the international market. If they were to buy every available ton and export to the highest bidder, all our machines would have to shut down and our people would be laid off.*” This statement

seems to indicate that the market for recovered fibre is perhaps not entirely free and determined solely by supply and demand. The market for recovered fibre could best be described as oligopsonistic as there are only a few buyers at one end of the value chain: Mondi and a maximum of two or three other competitors largely dominate the market and have a very strong influence on purchase prices by controlling most of the supply channels of recovered fibre through a network of buy-back centres, agents and dealers. This does not mean that the market is not competitive: theoretically anyone can trade in recovered fibre. But truly challenging the dominant position of the large paper producers would require significant levels of investment in infrastructure and networks, so the entry barriers are relatively high despite what seems on the surface to be a very fragmented market.

The main internal challenge was securing the supply of paper. Up until 2002, Mondi employed around 50 full-time staff to collect recovered fibre and supply its mills. But in a strongly competitive market, Mondi Recycling’s management was faced with a difficult challenge: as it paid its full-time collecting staff a fixed salary regardless of volumes recovered, there was little incentive for these employees to increase productivity. The answer, from a cost-control point of view, was to outsource recovery activities and shift from a fixed-salary structure to a volume-driven pay structure. The trade-off was that the 50 or so permanent staff would lose their employment contracts with Mondi, but they would then be equipped with capital and vehicles at a heavy discount, and be paid fees for a transport service that would pick up paper from all the main existing sources of the organized post-consumer channel (offices, shopping malls, schools, churches...) and deliver the recovered fibre to Mondi Recycling’s material recovery facilities, where they proceed to sort paper and bale it before sending it off to the mills.

The owner-driver scheme as a response to supply chain constraints

The owner-driver scheme was therefore developed as a response to this set of challenges. By outsourcing its supply chain, Mondi Recycling could reduce its costs and increase productivity by paying its transport service providers on a volume basis rather than a fixed salary basis. This makes sense from a business point of view, considering that Mondi Recycling primarily functions as a cost-recovery unit, and any profits the division makes

³⁰ Interview, Roxley Ravuku, Johannesburg, 10 September 2009



would be consolidated at group corporate level. Mondi was also at least partly inspired by similar owner-driver models pioneered by other South African companies in the late 1980s, such as brewing giant SABMiller.³¹

One of the primary additional advantages of an owner-driver scheme was that Mondi Recycling could increase its socio-economic footprint by helping the former staff members involved to create and manage their own small enterprises and grow as stand-alone businesses. This was an explicit goal for Mondi as, like most large businesses in South Africa, find themselves under pressure to create as many empowerment opportunities as possible. This is not necessarily only linked to Black Economic Empowerment, though the owner-driver scheme is a useful addition to Mondi's efforts in this regard, but also more broadly speaking a reflection of attempts by the private sector in South Africa to increase its socio-economic footprint at the base of the economic pyramid and build models that are inclusive of the poor while creating value for the business itself. It is important to state here that there is no explicit policy to aim the owner-driver scheme at only black South Africans, and that any individual can apply to become an owner-driver for Mondi regardless of race or gender. However, given the South African context, any model based on uplifting individuals from disadvantaged backgrounds will in practice largely employ blacks, and in the case of Mondi's owner-driver scheme, fewer than 10% of the drivers are white.

Overall, the Mondi's owner-driver scheme seeks to create value at two main levels:

For the owner-drivers, it is an opportunity to be empowered by establishing their own businesses, increasing their potential income, and ensuring further trickle-down effects by providing jobs and incomes to others.

For Mondi, value is created in the form of cost savings through outsourcing. Because the fee structure is volume-based, the owner-drivers are driven to supply as much volume as possible, which is one of Mondi Recycling's main priorities: source the recovered fibre and ensure that it is transported in the most cost-effective manner to the mills.

The Business and its Relationships

Mondi Recycling's supply chain rests on four key actors: the owner-drivers, bailing and sorting operations, buy-back centres and a range of individual collectors, mainly hawkers.

THE OWNER-DRIVERS

The owner-drivers form the main pillar of Mondi Recycling's supply chain, and almost all of the owner-drivers are former employees of Mondi. This makes sense as the original idea for Mondi was to outsource its supply chain without causing its employees to lose their

³¹ Kimon Phtidis, "SAB Case Study for The Sustainable Business Handbook", 4th edition, Draft 5, 23 May 2007. www.socialinnovations.co.za



livelihoods through possible retrenchment, and by creating economic opportunities rather than economic hardship. Another reason was that as former Mondi employees, the original owner-drivers also have a collective experience and a deep understanding of the industry, and of Mondi as a business. For the owner-driver, the main incentive to participate was the opportunity to become their own bosses and substantially increase their potential income. In addition, Mondi offered a further incentive in the form of a 30% discount on the vehicles needed to start the businesses.³² The owner-drivers interviewed all confirm that their income has increased considerably compared to the past – even though some also mention that the pressure to deliver volumes has become much higher.³³

Profiles of owner-drivers

Mr. Jan Harding Aged 44, this father of three has been working in the industry for 10 years. He was initially employed by a contractor that supplied Mondi with recovered fibre, before getting an offer to purchase the truck he was using and becoming one of Mondi's owner-drivers in 2001, an opportunity he says he grabbed "*with both hands.*" His business grew over the next few years, enabling him by 2006 to purchase a second vehicle in order to handle additional volumes of paper collected. Jan's take-home income varies depending on volumes, but in a "*good month*" he has earnings of around R 6,000 per month after expenses (roughly US\$800 at December 2009 exchange rates). For Jan, the business gives him just the exact amount of flexibility that he needs in terms of hours worked and he says he enjoys the challenge of performance-related income. Jan is, incidentally, the only white owner-driver participating in the scheme.

Mr. Sello Seko is 31 years old, and lives in Orange Farm, one of South Africa's largest informal settlements, about 45km south of Johannesburg. He joined Mondi in 2002, right after leaving school. Originally his uncle was employed by Mondi, and Sello worked occasionally with his uncle during school holidays. After his uncle passed away, Sello took over the owner-driver business. Sello supports an immediate family of two siblings and his mother. He now manages a fleet of three vehicles which are used on set routes. He employs nine people on a permanent basis and provides casual employment for another two to three people depending on volumes. In total, his business supports around 30 people from poor backgrounds when one takes into account all dependants. Sello's take-home income per month averages about R 5,000 per month after expenses (roughly US\$670 at December 2009 exchange rates). Sello definitely sees himself expanding the business and believes it will secure his future.

More recently, Mondi has begun to enter into owner-driver contracts with individuals who were not former employees. These individuals have varied backgrounds as small entrepreneurs, and unemployed truck-drivers.

³² World Business Council for Sustainable Development (WBCSD), "Anglo American's Mondi Recycling – Empowering Supply chains", Case Study, Geneva, 2005.

³³ Interview with owner-drivers, Cape Town, November 12th, 2009



Furthermore, successful owner-drivers, as they expand and grow, have started taking on employees. Jan Harding and Sello Seko, for example both mention employing an average about 12 people, some on permanent contracts and some as casual workers. Even if one considers that other owner-drivers have been less successful, a conservative estimate suggests that at least 250 jobs have been created through the owner-driver scheme. In addition, it is important to note that while in South Africa, an income of around R 5,000-6,000 per month, (the average income for owner-drivers) is not necessarily very high, it is significantly higher than average earnings levels for South African labourers, which have hovered around the R 2,870 mark in real terms over the last decade (US\$383 at December 2009 rates).³⁴

Key figures for owner-drivers:

Average monthly turnover per owner-driver: R 50,000-100,000 (US\$6,670 – US\$13,330)

Average monthly take-home income per owner-driver: R 5000-10,000 (US\$670 – US\$1,330)

Average number of employees: ca. 5-6

SORTING AND BAILING COMPANIES – SUPPORTING THE OWNER-DRIVER SCHEME³⁵

Almost a 'model within the model' is Mondi's enterprise development initiative to outsource its sorting and bailing operations in some of its regional plants to former employees, in support the owner-driver scheme. Just as the owner-drivers now function as independent entrepreneurs, other former Mondi employees now own their own sorting and bailing operations.

The breakdown in the three regions, namely KwaZulu-Natal, Gauteng and the Western Cape is as follows:

KwaZulu-Natal: 16 shareholders with a total staff complement of 62

Gauteng: 16 shareholders with a total staff complement of 34

Western Cape: 13 shareholders with a total staff complement of 13

³⁴ Rulof Burger and Derek Yu, "Wage Trends in Post-Apartheid South Africa: Constructing an Earnings Series from Household Survey Data Development Policy Research Unit", University of Cape Town, DPRU Working Paper 07/117 February 2007.

³⁵ Information supplied by Roxley Ravuku.



THE BUY-BACK CENTRES



(Photo credit: Pierre Coetzer)

help to maximize its own intake of recovered fibre in high-potential areas it identifies.³⁶

Buy-back centres function as central waste collecting points; paying cash to hawkers and other individuals for waste paper – and, in some cases, other types of waste such as glass, scrap metal and plastic. While thousands of similar facilities exist around the country, Mondi has invested around R 3.5 million (US\$467,000 at December 2009 rates) over the years in creating, equipping and upgrading a network of 117 buy-back centres around the country to specifically facilitate the collection of waste paper and

While each buy-back centre has its own history, many of these centres were established as joint-ventures between Mondi, local councils and small entrepreneurs.³⁷ The very first buy-back centres were established in the mid-1970s, as the recycling of paper in the post-consumer stream initially started taking hold in South Africa. The network of buy-back centres gradually expanded, as the industry's need for recovered fibre increased.

The buy-back centres have, today, become tools of empowerment in their own right, just as is the case for the owner-driver scheme. The small entrepreneurs running the buy-back centres typically come from low-income communities, often with backgrounds as traders in the informal economy. As a result, they can be vulnerable due to a lack of skills, especially in terms of financial literacy and general 'formal' business management skills. For this reason, many buy-back centres receive support from the South African Department of Trade and Industry (DTI) as part of a national programme to encourage enterprise development. Through its Small Enterprise Development Agency (SEDA), the DTI provides general management training, accounting, and short courses in order to help emerging entrepreneurs on their feet and increase their chances of success.³⁸ Mondi Recycling, for its part, provides equipment free of charge in the form of containers, scales, and trolleys for example.

According to Ravuku, the buy-back centres have no contractual obligation to sell its recovered fibre to Mondi, and are free to sell its paper to the highest bidder.³⁹ But even in the absence of a formalized contractual relationship, an 'unspoken agreement' seems to exist between the parties through which paper collected is sold on to Mondi Recycling and picked up on a regular basis by the owner-drivers. Considering that Mondi invests in the buy-back centres, there is a clear sense of loyalty towards Mondi on the part of buy-back centre owners.

³⁶ World Business Council for Sustainable Development (WBCSD), "Anglo American's Mondi Recycling – Empowering Supply chains", Case Study, Geneva, 2005.

³⁷ *ibid.*

³⁸ Interview, Roxley Ravuku, Johannesburg, 10 September 2009

³⁹ *ibid.*



Hawkers at buy-back centre – (Photo credit: Pierre Coetzer)

Buy-back centres also have another function, which is to facilitate the sorting process of recovered fibre. As white paper is easier to recycle (and less readily available) than cardboard, for example, it fetches higher prices on the recovered fibre market. Buy-back centres therefore have an incentive to sort paper according to grades and type (white paper, office paper, newspaper and cardboard) in order to increase their income.

This is also a source of employment creation, as many buy-back centres would employ people to sort paper according to grade and type. Currently, they employ an estimated 3,000 people as hawkers and sorters, mostly on an informal basis.

Clearly, the buy-back centres constitute the vital link between the informal network of hawkers and paper collectors and the formal network of Mondi's supply chain. They play an instrumental role in harvesting much of the recovered fibre that would otherwise end up in landfills, at an obvious environmental cost, as well as an economic opportunity loss.

THE HAWKERS

The hawkers are at the bottom of the supply chain of recovered fibre. It is difficult to make any precise estimates of their numbers, especially because hawkers typically diversify their sources of income and would rarely confine themselves to one single activity. Mondi estimates that currently a total of about 12,000 hawkers collect paper around the country.⁴⁰ With each of these hawkers typically having a few dependants, it can be safely asserted that tens of thousands of people partly depend on recovered fibre for an income. As mentioned above, the interaction between hawkers and buy-back centres typifies the revolving doors between South Africa's formal and informal economies. In this sense, buy-back centres function almost as reverse wholesalers: hawkers collect a commodity, and sell their product to a buy-back centre at going rates. The buy-back centres add value through bulking and sorting, which in turn makes it economically viable for owner-drivers to source recovered fibre from these collecting points.

There is no direct relationship between the hawkers and Mondi, except in the very few instances when hawkers are in the immediate proximity of a Mondi material recovery facility and can sell recovered fibre directly rather than through the buy-back centres.

An informal study of the recovered fibre market around the townships of Nyanga, Philippi and Khayelitsha in Cape Town shows what hawkers, buy-back centres and other independent dealers get for recovered fibre in South African cents per kilogram:

⁴⁰ Interview, Roxley Ravuku, Johannesburg, 10 September 2009



Selling price in SA cents PER KG	Hawker sells for:	Buy back centre sells for:	Agent / Dealer sells for:	Price paid by Mondi for direct delivery
Cardboard	20-30c	35c	35c	38c
Newspaper	30-35c	40c	40c	35-40c
Office paper	40c	60-70c	60-70c	80c
White paper	45c	70c	70c	80c

Note: Above prices as at November 2009 - prices fluctuate depending on the prevailing supply and demand dynamics.

The agents and dealers (independent collecting centres with no links to Mondi), as well as the buy-back centres, need, of course, to cover their operational costs and staff, as well as make a profit. As is clear from the above table, margins are very thin, except for white paper which trades at a premium due to its relative scarcity.

The majority of hawkers collect cardboard and newspapers from shopping centres and within residential areas. The more lucrative white paper and office paper is usually more difficult to come by as a large proportion of the office paper stream is already collected directly from offices through formal channels (of which the owner-driver scheme is one).

One dilemma that South Africa will have to face when it comes to implementing its national waste management strategy is how to integrate the hawkers into a future formalized process. If separating at source becomes systematic, as the ultimate plan would have it, it may in the process remove the livelihoods of thousands of hawkers who currently work in the shadows, but form an essential part of the supply chain. In a country so plagued with unemployment, this is hugely problematic, and perhaps typical of the challenges faced by emerging countries where economic necessity often drives people to eke out a living by fulfilling tasks that in developed countries are formalized and organized.

Mondi Recycling may have an opportunity at this level to play a bigger role, and could develop additional collecting streams that leverage the strengths of the hawker network. One example of how this could be done is to systematize paper collecting at schools across South Africa, especially in lower-income areas, where hawkers could pick-up recovered fibre and transport it to the nearest buy-back centre, a network that could also be further expanded.

Factors influencing the relationships

The relationship between owner drivers, buy-back centres and hawkers is mainly transactional and influenced by prevailing market conditions. However, it also is contractual in the case of Mondi and the owner-drivers. Owner-drivers are contractually tied to deliver monthly volume targets to Mondi, and keep a monthly log sheet of deliveries stating the date, time and volumes supplied. This log sheet will form the basis of monthly income, which will go up or down according to volume and targets. The owner-drivers' income is entirely dependent on whether or not they fulfil their targets. There are no 'penalties' as such if they



fail to achieve their targets, other than the fact that their income would drop accordingly. Some of the owner-drivers make no secret about the fact that they feel under very high pressure to deliver volumes and often work very long hours in order to reach these targets.⁴¹ Perhaps the key to understanding the nature of the relationship is that the owner-drivers do not sell the recovered fibre, but a transport service. In this sense, the paper they are told to collect and deliver has already been purchased by Mondi Recycling, which makes Mondi the legal owner of the recovered fibre before it is even picked up by the owner-drivers. This puts a question mark over the issue of how independent the owner-drivers truly are, and whether or not they are in a position to extract the best possible terms from what is, in effect, their only customer. Roxley Ravuku explains that “*Mondi has a dual relationship: first with the owner-driver, and then with the source of the recovered fibre. When the owner-driver picks up the recovered fibre it has already been paid for by Mondi to the respective convertor, corrugators etc. What Mondi pays to the owner-driver is the transport service, not the paper itself.*”⁴² While this does not in any way nullify the benefits and the overall positive impact of the outsourcing for owner-drivers, it does at the very least indicate that to a large degree, the owner-driver model is a self-serving one for Mondi. True empowerment will be arguably more complete if there was no contractual obligation for owner-drivers to deliver their produce to Mondi but if they would be entirely free, as suppliers of a transport service and procurers of recovered fibre, to sell to the highest bidder. Having said this, the contractual relationship also works in favour of the owner-drivers, especially in terms of obtaining finance: as Jan Harding explains during his interview, the existence of the contract with Mondi constitutes collateral for a bank in order to arrange vehicle-finance, for example.⁴³ This is a crucial advantage of the owner-driver scheme in its current form, as obtaining finance would be almost impossible without this collateral.

Furthermore, Mondi also provides assistance to the owner-drivers with accounting, administration and tax services, a major form of added value for emerging entrepreneurs who have limited experience and skills in terms of business management.

It could be argued, of course, that the relationship between Mondi Recycling and the owner-drivers is skewed in favour of Mondi’s needs, and that Mondi is the dominant partner in the relationship. But the alternative of having no contract at all would quite probably result in the collapse of the owner-driver businesses. There are clear benefits for both sides in this formalized contractual relationship. They include:

- A guaranteed market for the owner-drivers at pre-negotiated rates periodically adjusted for inflation and prevailing market conditions
- A secured stream of supply of recovered fibre for Mondi
- A source of income for the owner-drivers that would not be certain in the absence of a contract

⁴¹ Interview with 3 owner-drivers, Cape Town, 12 November 2009

⁴² Interview with Roxley Ravuku, Johannesburg, September 10, 2009

⁴³ Interview, Jan Harding



- Assistance and enterprise development support provided by Mondi in the form of management advice, accounting and tax services
- The contractual relationship serves as surety with banks to obtain vehicle finance and fund enterprise development

EXTERNAL STAKEHOLDERS

While the above quick chart includes all the direct actors involved in the owner-driver model, additional external stakeholders make an important contribution to its success. Such actors include:

Other businesses, which have an interest in providing support to Mondi Recycling as the initiative provides them with an opportunity to reduce their own environmental footprint. Such businesses include major South African retailers such as Pick n Pay, Woolworths, Checkers, shopping malls around the country, and essentially any large businesses using significant amounts of paper. These businesses contribute to both the pre- and post-consumer supply channels of recovered fibre (see chart).

State-backed actors, include for example, the Industrial Development Corporation (IDC), the publicly owned industrial development agency of South Africa. As an example of its support role, the IDC in 2005 provided Mondi with a small R 500,000 loan (US\$66,700 at December 2009 rates) to help provide vital start-up finance to the buy-back centres.⁴⁴ The South African government also is directly involved through the Department of Trade and Industry (DTI), as we have already mentioned in the previous section.

Results Created by the Business

ECONOMIC AND SOCIAL RESULTS

The main social and economic impact of Mondi's owner-driver scheme is the expansion of economic opportunity and significant enterprise development through the outsourcing of the supply chain.

The biggest single impact, arguably, is that owner-driver scheme has resulted in the establishment of over 40 small enterprises. By empowering former employees in the form of sorting and bailing companies, owner-driver schemes, and by supporting and investing in the buy-back centres, Mondi Recycling also makes a significant contribution to the creation of a new class of entrepreneurs, employment and skills transfers in a country suffering from high levels of unemployment. In 2009, Mondi paid a total of R 45 million in fees to the 42 owner-driver businesses, for a total volume of recovered paper of 160,000 tons.⁴⁵ This means that 42 small businesses supply close to 16% of *all* fibre recovered in the country, and 38% of Mondi's recovered fibre. It can also be inferred from these figures that the average payments

⁴⁴ World Business Council for Sustainable Development (WBCSD), "Anglo American's Mondi Recycling – Empowering Supply chains", Case Study, Geneva, 2005.

⁴⁵ Figures supplied by Roxley Ravuku.



Growing Inclusive Markets

Business Works for Development • Development Works for Business

made by Mondi per owner-driver business are situated around R 1.07 million (US\$143,000 at December 2009 rates), a significant level for businesses that are on average less than a decade old. In addition to that Mondi recycling paid a total of R 16.1 million to three sorting and bailing operations in the three regions covered for 2009 (US\$2.5 million at December 2009 exchange rates).

Further down the supply chain, as a result of its volume-driven incentive, the owner-driver scheme has helped to increase business and turnover for the buy-back centres as well, with a knock-on effect on overall income and employment, not to mention the naturally positive effect this volume-driven model has on recovery rates and therefore the environment.

The long-term economic and social results include indirect benefits such as increased incomes for hundreds of people, ultimately increasing the opportunities for people to send their children to schools and higher education, consolidating social and economic benefits for each new generation.

Together, the stakeholders, including government through regulation and legislation, form a complex ecosystem that helps to ensure progress in the recovery rates of paper in South Africa while creating economic opportunities and helping to uplift the poor.

Direct and some indirect benefits of the owner-driver scheme:

Owner-driver businesses created: 42

Total annual turnover: R 45 million (US\$6 million in December 2009)

Direct number of jobs created: ca. 250

Total volume of paper recovered: 160,000 tons

Sorting and bailing businesses created: 3

Total annual turnover: R 16.1 million (US\$2.15 million in December 2009)

Direct number of jobs created: 109

Buy back centres: 117

Indirect jobs created: 3,000 +

ENVIRONMENTAL RESULTS

Roxley Ravuku identifies five areas in which the recycling of paper is beneficial to the environment. All of the following figures are provided by Mondi:

- **Trees:** For every ton of paper recycled, Mondi estimates that 17 trees are saved and can be put to other uses. This has further environmental benefits as trees are indispensable for carbon retention and help mitigate the effects of global warming and climate change. Ravuku also adds that in South Africa, paper manufacturers have been commended for the responsible management of forest plantations, contending



- that the FSC (Forest Stewardship Council) has accorded certification to 80% of South Africa's plantations, the highest rate in the world.⁴⁶
- **Electricity:** Savings of up to 40% can be made to produce paper from recovered fibre, a benefit that also translates into financial terms as manufacturing costs to company is reduced.⁴⁷
 - **Global warming:** Every ton of recovered fibre leads to a reduction of carbon emissions of 1 ton, and a further reduction of 1.8 tons of CO² as a result of savings on electricity.⁴⁸
 - **Environmental cleanliness:** recycling leads to less waste being discarded in the environment.
 - **Landfill space:** The environmental benefits of recycling paper also become clear when considering the potential benefits of systematic separation of waste at source. According to a study by the World Business Council for Sustainable Development (WBCSD), over a million cubic metres of landfill space per year would be saved if all households recovered their paper.⁴⁹

Ravuku also mentions that while this is not specifically measured, paper sent to landfills releases methane, which is 20 times more potent than carbon dioxide and contributes towards global warming.⁵⁰

Tradeoffs

The above list of environmental benefits seems to constitute a very strong case in favour of recycling paper. But there are some tradeoffs, including lower quality of paper, and heavy use of chemicals in the de-inking process on used paper. Furthermore, the idea that recycling saves trees does not necessarily mean it benefits the environment as a whole; plantations for paper production can even be environmentally damaging as much paper is produced from eucalyptus trees and conifers which do not normally grow in many plantation areas and disrupt local biospheres.

Growth Strategy and Future Outlook

The biggest opportunity to increase recovery rates is in the post-consumer market. It is in this market that Mondi (and its competitors) still have room to increase its socio-economic and environmental footprint.

To start, says Ravuku, "*We want to roll out our kerbside collection of waste paper beyond Johannesburg and Durban and consolidate our presence in areas such as Cape Town.*" Such

⁴⁶ Interview, Roxley Ravuku, Johannesburg, 10 September 2009

⁴⁷ Interview, Roxley Ravuku, Johannesburg, 10 September 2009.

⁴⁸ *ibid.*

⁴⁹ World Business Council for Sustainable Development (WBCSD), "Anglo American's Mondi Recycling – Empowering Supply chains", Case Study, Geneva, 2005.

⁵⁰ Interview, Roxley Ravuku, Johannesburg, 10 September 2009



developments are fully in line with the industry and government's future plans for the recovery of paper and paper recycling in South Africa.

More specifically with regards to inclusive business models, Mondi Recycling is also exploring ways to keep an 'inclusive business' approach to the recovery process. This involves expanding its network of buy-back centres, and continuing its efforts to further integrate the hawkers into the supply chain and formalizing their contribution; providing equipment such as trolleys, wheelbarrows, scales, and facilitate delivery through local collecting points such as schools and other focal points for local communities.

From a strategic point of view, Mondi Recycling may also consider becoming a stand-alone entity, perhaps independent from Mondi Group but as an external supplier to its paper mills. For this to make sense, though, the new entity that would emerge from the current Mondi Recycling would possibly have to specialize as a general recycler of materials which include not just paper but other products such as glass, metal, or plastics, so as not to be dependent on a single commodity: *"At the end of the day, this is a commodity and we are trading in a commodity market,"* says Ravuku.

For now though, Mondi Recycling's model has been yielding encouraging results from both a purely business perspective as well as in terms of its social and environmental results. Mondi intends to expand the owner-driver model further, and continue to expand its supply network, especially at post-consumer level which carries the most potential.

Conclusion

Mondi's owner-driver scheme has certainly had measurable and tangible positive results for hundreds of people in the lower-income segment. On the flipside, it has shifted some of the risk from its own operations to a series of entrepreneurs who, for all their enthusiasm, remain vulnerable, mainly as a result of their dependency on Mondi as their only customer. Ultimately, what would make more sense is for these owner-driver businesses to diversify their customer base and perhaps even consider providing transport services of not just recovered fibre, but other products as well. They would maybe lose some of the advantages offered by the association with Mondi, such as easier access to finance, but would arguably be better protected against client risk and sectoral risks. True empowerment also comes with full independence. One of the other issues is that in its current form, Mondi seems to set very high volume targets for its owner-drivers. They could perhaps create more owner-drivers by reducing individual volume targets, leaving the owner-drivers enough time and leeway to diversify their offering and client base and truly evolve into viable stand-alone businesses if they wished to go down that route. However, Ravuku cautions, *"they would then need an appropriate set of skills to manage a diversified portfolio of services and products, exposing them to harsh vagaries in the different sectors and market."*⁵¹

⁵¹ Interview, Roxley Ravuku, Johannesburg, 10 September 2009.



The market for recovered fibre in South Africa is essentially oligopolistic, as it is driven by demand coming from the three or four main players in the industry. Mondi and its competitors have, over the years, built and consolidated their hold on the supply channels. Because of high entry barriers, such as the cost of infrastructure, few investors would bother entering the market in today's environment.

As a result of this oligopolistic structure, the relationship between Mondi and the actors involved in its supply chain is not without ambiguity: Owner-drivers are dependent on Mondi for their survival. Some among them (and a number of the buy-back centres) are real winners, but perhaps the main challenge for the future is also to integrate the army of hawkers into this chain in a more formal way. Mondi, as one of the major players in the paper industry, could partner with its competitors and government to combine the objectives of maximizing waste separation at source, while ensuring that a maximum of job opportunities are created in the lower income segments. This would increase the socio-economic impact of recycling at the base of the pyramid and help extend the benefits of the current supply chain model far beyond a few hundred people. It will be interesting to see what trade-offs will eventually emerge from greater separation at source: if it becomes systematic, there may be much more paper to recover through formal channels, but possibly less through informal channels currently based on independent hawkers. Such changes will eventually lead to an entire reconfiguration of the supply stream of waste paper, with far-ranging consequences for hawkers, buy-back centres and owner-drivers alike.



Bibliography & References

INTERVIEWS

- Mr. Roxley Ravuku, Managing Director, Mondi Paper Recycling
- Mr. Jan Harding, Owner Driver, Johannesburg
- Mr. Sello Seko, Owner-driver, Johannesburg
- Mr. Srinii Naidoo, Chairman, Paper Recycling Association of South Africa (PRASA)

INFORMAL INTERVIEWS

- Officials at the Department of Environmental Affairs and Tourism (DEAT), Pretoria
- Hawkers and recovered fibre dealers, Cape Town metropolitan area

PUBLICATIONS

- Burger Rulof, YU Derek, “Wage Trends in Post-Apartheid South Africa: Constructing an Earnings Series from Household Survey Data”, Development Policy Research Unit, DPRU Working Paper 07/117, February 2007.
- Kimon Phtidis, SAB Case Study for The Sustainable Business Handbook, 4th edition, Draft 5, 23 May 07.
- Pricewaterhouse Coopers, Global Forest, Paper & Packaging Industry Survey 2009 Edition – Survey of 2008 Results, PwC, London & Vancouver, 2009.
- Republic of South Africa, Act nr. 59 of 2008, Government Gazette, issue nr. 32000, Cape Town, March 2008.
- South Africa Yearbook 2008/2009, Chapter 8, Environmental Management, Government Communications and Information System (GCIS), Pretoria, 2008.
- Sparks Alister, “At home and abroad, losing the battle of the wealth gap”, Business Day, Johannesburg, October 13th, 2009.
- World Business Council of Sustainable Development (WBCSD), “Anglo American’s Mondi Recycling – Empowering Supply chains”, Case Study, Geneva, 2005.

WEBSITES

- Gauteng Development Agency GEDA. <http://www.geda.co.za>
- Mondi Paper Recycling : www.paperpickup.co.za
- Mondi Group: www.mondigroup.com
- Paper Recycling Association of South Africa: www.prasa.org.za



Annexes

- Recycling statistics for South Africa
- Sample Contractor Services Agreement is available from Mondi on request

PAPER RECOVERY IN SOUTH AFRICA – 2008

(all values in metric tons - '000)

Source: PRASA (Paper Recycling Association of South Africa)

Paper production and consumption

	Paper Production	Paper Imports	Paper Exports	Paper Consumption
Newsprint	347	2	(49)	300
Printing/writing	719	392	(520)	591
Corrugating materials/containerboard	1,208	89	(365)	932
Tissue	220	8	(2)	226
Other paper, board and wrapping papers	251	21	(18)	254
Total	2,744	512	(954)	2,302

Recovery of recyclable paper

	Paper Recovered in SA	Recovered Paper Imports	Recovered Paper Exports ¹	Consumption of Recycled Paper in SA
Newspapers	124	-	3	121
Magazines, office, graphic papers	265	(5)	5	265
Corrugated, solid cases, kraft papers	554	(37)	34	557
Mixed and other papers	87	(2)	11	79
Total	1,030	(43)	52	1,021

Recoverable paper

Paper consumption	2 302
Less paper exported in agric products ²	177
Less paper unsuitable for recovery ³	368
Recoverable paper	1,757

Recycling rates

Recyclable paper recovered as % of paper consumption	44.75%
Recovered paper used in SA paper production	37.22%
Recovered paper as % of recoverable paper	58.64%

Notes: -

1. Import / export production data provided by PAMSA
2. The amount of paper exported in agricultural products data per Sappi
3. It was assumed that 16% of paper consumed is not suitable for recovery - tissue and sanitary products, cigarette paper, archive material etc.
4. Tissue capacities supplied by SATMA discounted saleable production 20%
5. Fibre imports / exports supplied by PRASA members
6. Stock movement of Paper production and fibre unaccounted for



Growing Inclusive Markets

Business Works for Development ● Development Works for Business

January 2010

The information presented in this case study has been reviewed and signed-off by the company to ensure its accuracy. The views expressed in the case study are the ones of the author and do not necessarily reflect those of the UN, UNDP or their Member States.

Copyright @ 2010

United Nations Development Programme

All rights reserved. No part of this document may be reproduced, stored in a retrieval system or transmitted, in any form by any means, electronic, mechanical, photocopying or otherwise, without prior permission of UNDP.

Design: Suazion, Inc. (NJ, USA)

For more information on Growing Inclusive Markets:

www.growinginclusivemarkets.org or gim@undp.org

United Nations Development Programme
Private Sector Division, Partnerships Bureau
One United Nations Plaza, 23rd floor
New York, NY 10017, USA