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## **Textile reuse and recycling as an environmentally and socially responsible practice**

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## Introduction

According to the 2009 Secondary Materials and Recycled Textiles (SMART) Report, twelve million tons of textile waste is generated each year in North America amounting to on the order of sixty-eight pounds of waste per household per year. Of this amount, around 93% can be reused in some fashion. However, only 16% of this usable material is reclaimed from the waste stream, despite overwhelming demand from consumers and industry. (Desbarats, 2010) (Chalupa, 2010) Diverting this waste of resources helps to remedy a number of environmental and economic problems. The purpose of this paper is to discuss these problems, and effective and responsible solutions to them. In addition, concerns over the impact of clothing imports in developing countries will be addressed.

## Problems

### *Environmental Harm*

The depositing of waste in landfills has numerous well-known negative effects on the natural environment. There are first of all direct ecological effects, including pollution and loss of natural habitat. While it is clear that textiles in the landfill present less of a pollution problem than certain classes of waste such as toxic chemicals, the pollution liabilities of textiles are not negligible. Textiles in the landfill, in common with many other ostensibly biodegradable items, will decompose very slowly in the extant anaerobic conditions, and considering their large bulk, occupy a significant space in the landfill, contributing to landfill growth. What is more, to the extent that it does decompose, textile waste is converted into methane gas, which

must be burnt, releasing polluting combustion products, or released into the atmosphere, contributing to global warming and climate change. (Grace)

Beyond these primary detriments to the environment, dumping textile products in landfills creates even more important secondary impacts. The most obvious of these is the fact that serviceable clothing that is not reused must be replaced with new clothing. The production of this clothing is energy-intensive, creates its own pollution, puts pressure on virgin resources, & calls for the use of large quantities of dyes and fixing agents which are harmful to the environment. The transportation of both the raw materials and finished product constitutes a considerable environmental burden in terms of energy consumption as well as pollution. Just to give one example, the clothing company Patagonia has calculated that a single cotton tee shirt involves a trip of 14,100 miles, beginning as cotton is harvested in Turkey, spun and sewn in Thailand, and then shipped to a distribution hub in Reno, Nevada. During its travels the shirt will generate twenty-seven pounds of carbon dioxide, use enough electricity to power an eighteen-watt compact fluorescent bulb for seventy-two days, and produce ten ounces of waste, leaving aside its likely fate as landfill waste itself. (Monosson, 2010) This from a company that takes pains to adopt more sound production practices: the impact of more heedless companies can only be guessed at.

### *The Needs of the Poor*

The majority of textiles that are reclaimed will ultimately find their way to populations enduring economic hardship, predominantly in developing countries. There is a strong need amongst these peoples—who must subsist in the best of times on an income that is only a small fraction of that enjoyed by citizens of wealthy industrialized nations—for affordable clothing, shoes, and other common items such as books and household items.

In addition to the consumer needs of citizens of developing countries, there is a pressing need for sustainable, well-paying jobs. In this connection it has been suggested that the trade in second-hand clothing may itself have a deleterious effect upon local economies within developing nations. This paper will respond to this important question below.

### **Solutions**

Textile reclamation has an important role to play in combating each of these problems. It offers indisputable environmental advantages over the currently predominant system of disposal, it eases the cost of living for poor peoples, and on whole it is a boon to the economies of developing countries.

### *Environmental Benefits*

One of the central axioms of environmentally-conscious practice is the formula 'Reduce > Reuse > Recycle'. While putting the first and most important of these tenets into practice on a large scale will require a wholesale change in patterns of consumption in the wealthy countries that generate the majority of the waste, the textile reclamation industry excels at the second two. For textile 'recyclers', the primary emphasis is on reuse. All

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clothing and other items that can be reused for their intended purpose are made available for that purpose. This is in contrast to some sectors of recycling, such as plastics, where market forces and the nature of the products themselves—readymade to be disposed of—make it difficult even to recycle the raw materials without some type of subsidy. (Fairlie, 1992) The demand for second-hand clothing, on the other hand, is large. Moreover, in developing nations in the present economic climate, the markets served by second-hand clothing would in large part be filled in its absence by cheap shoddy clothing from East Asian factories, where environmental standards are lax. (Barber & Baden, 2005)

Also in keeping with the recycling axiom mentioned earlier, whatever cannot be reused is recycled as reprocessed fibers for use in such applications as insulation or upholstery padding, or converted to cloth wipes or rags. No more than 7% of diverted textile waste ends up in a landfill, and this is only the case when the material is damaged beyond repair (mold growth, tainted with hazardous chemicals, etc.). (Desbarats, 2010)

Together, these practices fill a demand that would otherwise require the environmentally harmful process of manufacturing and distributing new products, while also keeping tons of perfectly good material out of the landfill.

#### *Affordable Goods for Poorer Nations*

Textile reclamation has an undeniably salutary effect on the lives of consumers in developing countries. The clothing and other items made available by the trade in second-hand clothing in those countries is more affordable than either domestic or imported new clothing. (Barber & Baden, 2005) A number of studies have demonstrated that all socio-economic groups are aided on the consumption side by the second-hand clothing trade, but especially the rural poor. (Barber & Baden, 2005) All data suggest that textile reclamation improves the quality of life in developing countries, especially for the poorest amongst them. In this way it operates similarly to thrift and second-hand stores in wealthy nations.

#### *Jobs on Both Ends*

In general, reuse and recycling industries sustain a great many more jobs within the United States than the 'traditional' waste-disposal industry. For instance, while a landfill and incineration facility will sustain one job per 10,000 tons of waste per year, and a conventional materials recovery facility will need ten workers for the same volume of waste, textile reclamation will put eighty-five people to work. (Institute for Local Self-Reliance, 1997) Textile reclamation ranks third behind only computer reuse and plastic product recycling in job creation within the recycling industry. (Institute for Local Self-Reliance, 1997)

There is another consideration with respect to employment, however, and that is opportunities for employment that the second-hand clothing trade either adds to or subtracts from the domestic economies of importer nations. It has been suggested by various parties that second-hand clothing imports might have a harmful effect on local

industries and workforces in developing countries. This is a matter of deep concern for Collective Recyclers, so we have attempted to get the clearest information possible on this.

The available data is more complex than that for the benefits to consumers, but it tends to support the interpretation that on balance the second-hand clothing trade has a positive influence on domestic economies, including employment factors, in developing countries.

The best work on this subject has been done by Sally Barber and Catherine Baden for Oxfam. Below we outline some of the findings from their thorough report 'The impact of the second-hand clothing trade on developing countries' (all citations are from that work).

- ❖ The likelihood is that the second-hand clothing trade does exert some pressure on the formal domestic garment industries in primarily West African countries. However, even authorities with relevant governmental organization inside those countries acknowledge that it is a very small factor, piling in comparison to both internal supply-side problems, poorly-regulated vigorous cost competition from East Asian exporters, and macro-economic 'globalization' of trade policies often mandated by organizations such as the International Monetary Fund and the World Bank.
- ❖ Second-hand clothing is also likely to have a minimal effect on domestic production because, in the opinion of 'the majority of tailors and garment makers' in Zimbabwe, for instance, 'second-hand and traditional clothes are two distinct markets'.
- ❖ Alongside the minor pressure put on domestic clothing manufacturers, there exists the broad field of opportunity created by second-hand imports both for entrepreneurs and labor. In Ghana alone, for instance, 150,000 people work in the second-hand clothing sector.
- ❖ These tend to be better-paying jobs. For example, in Rwanda 'budgets obtained from both tailors and used clothing retailers indicate that self-employment earnings in used clothing retailing exceed those in tailoring by 10 to 50 percent'. Again, 'all the data suggest that operators' net incomes tend to be significantly above the average in urban Zimbabwe'.
- ❖ The most rigorous attempt so far to weigh jobs lost versus jobs created found that the second-hand clothing trade exerted a net benefit on employment. The findings were that 'to the extent that SHC [second-hand clothing] displaced new imports, it was thus beneficial in employment terms'. Furthermore, a comparison of value addition 'suggested that used clothing was the most beneficial, generating \$702 per \$1,000 of final sales, compared with \$504 in tailoring and \$640 for imported garments'.

The evidence suggests that concerns over the second-hand clothing trade's harmful effects upon local economies are largely misplaced, and that on the whole the trade plays a positive role in the economies of developing countries.

## Implementation

In light of the numerous ways in which textile reclamation helps people and their environment, Collective Recyclers has undertaken to build an infrastructure that extends the benefits as far down into the local communities of Montana, Wyoming, North Dakota, and South Dakota as possible. We are currently expanding a network of recycling hubs throughout the region. These hubs will allow us to dig as deep into the waste stream as possible, reclaiming waste from smaller communities and organizations than has been possible before. In addition, and unlike most other textile recyclers, Collective Recyclers is set up to accept more than just apparel: we also take books, household items, pots and pans, linens, bric-a-brac, toys, and more.

## Summary

Textile reclamation reduces the primary and secondary environmental impact of sending usable material to the landfill. It eases the burden of clothing families for poor people in developing countries. It creates good, stable jobs for people in our own country and abroad. Collective Recyclers is committed to helping communities large and small be a part of it.

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