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## **OF USERS, PROVIDERS AND THE STATE: SOLID WASTE MANAGEMENT IN PUNE INDIA**

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### **ABSTRACT**

Of Users, Providers and the State tells the story of the SWaCH (Solid Waste Collection Handling) Coop. SWaCH was conceived and birthed by a trade union of waste pickers to challenge the dominant paradigms of privatization of municipal solid waste management, technology worship and the consignment of waste in landfills in Pune, India. The Waste Matters Consortium that nurtured the idea during gestation comprised the waste pickers trade union; a national Centre for environment education; a University department; and a social initiative of the Chambers of Commerce and Industry.

The initiative commenced in 2005 and was formally institutionalised in 2008. It completed the first cycle of five years in October 2013. At this juncture, the author critically reflects upon this unique endeavour that sought to rewrite how the waste of a growing city could be managed in a decentralised manner through the active involvement of citizens, those providing and using services; technology providers and the municipal government that was obligated to provide the service. The attempt to effect a paradigmatic shift not only in waste management but also in governance is what distinguishes this experience.

SWaCH is a wholly owned co-operative of informal waste pickers that bridges two separate systems of waste management, the formal municipal solid waste system and the market driven informal secondary materials recovery system. Two thousand three hundred waste collector members of SWaCH provide daily door to door waste collection services to 375,000 households, offices, businesses and shops covering 54 per cent of the city. The members' earnings are generated through revenue from user fees and the sale of recyclable materials. The municipal government supports the administrative, infrastructure and equipment costs.

The author relies upon data, reports, documentation, media reports and voices from different constituencies to argue that the SWaCH (the acronym means clean in the local language) is both an example of *transformative resistance* and *co-production of services*.

## INTRODUCTION

The call for papers specifically referred to the fact that it would bring together academics, activists, labour representatives, development practitioners and policy makers to promote progressive public services. Although my affiliation as mentioned in the conference document is academic, activism occupies a larger space in my life. This paper is reflective, and draws upon my experiences of organising informal waste pickers as also my engagement in conceptualising and implementing a transformative agenda in solid waste management. I speak as an insider-outsider, actively engaged from within and trying to look back and draw lessons from without, with particular reference to *transformative resistance* and *co-production of services*.

The story of SWaCH is the story of *making space* for informal recycling workers and for the idea of *solid waste resource management* as different from solid waste disposal, within the municipal system. The bulk of the waste generated in India can be reused or reprocessed and yet disposal in landfills remains the most common method of dealing with the waste that is generated. Although informal waste workers constitute an overwhelming proportion of the waste handling workforce, the mainstream refers to municipal workers in formal secure employment. The informal scrap trade is not represented in the chambers of commerce and industry even though it handles post consumer secondary commodities that constitute raw materials for manufacturing industries. Waste is a product of consumption but the manufacturers of the products that are consumed and land in the waste stream bear no responsibility for their afterlife. Every human being, every resident of the country generates waste but ceases to have any connection with or even denies any connection with it, thereafter. The management of municipal solid waste is a critical component of public health, vector control and disease prevention. It is however, relegated to the backrooms and fringes of municipal administration, ranking way below construction, roads, water and other infrastructure and services. It is evident from these examples that *what and who constitute the mainstream* is a matter of perspective and that needs to be unpacked, examined and changed. In the case of solid waste management, the waste hierarchy of reduction, reuse, recovery and recycling must take precedence over disposal. The story of SWaCH begins with the change in the ways of seeing (Berger, 1972), the change in perspective from which flows the change in the ways of doing, waste management and recycling. Recycling is not just fashionable, it is an economic activity that brings discarded materials back into the production chain via waste pickers and itinerant waste buyers who earn their living from recovery and collection. The survival of recycling workers and others who live on planet earth depends on it.

The paper is divided into three sections. Section I examines the major drivers of change during the past two decades in solid waste management in Pune. The transformation in process and the alternative service delivery model is detailed in Section II. In Section III the author reflects upon the process and outcomes taking Wainwright's (2012) articulation of *transformative resistance* and Boyle and Hariss's (2009) *co-production of services* as reference points.

### Introduction to Pune City

India's ninth largest city Pune, has a population of 3.1 million (Census of India 2011) and is administered by the Pune Municipal Corporation. It constitutes part of the Pune Urban

Agglomeration that has an overall population of 5.5 million administered by four municipal governments. Referred to as a sleepy pensioner's town till the early nineties, Pune grew into a medium sized metropolitan city during the last couple of decades. The city and its environs harbour industrial and manufacturing hubs. The main economic drivers are automobile and ancillary industries, information technology and enabled services, biotechnology and education (Economic Survey of Maharashtra 2012-13). Post expansion, Pune's population has become increasingly heterogeneous in social composition. It has a large floating population of students and young workers. The average literacy rate is 95% for men and 87% for women (Census of India 2011). Per capita waste generation is 364 grams across economic classes<sup>1</sup> and the estimated waste generation in Pune is 1400 Metric tonnes per day<sup>2</sup>.

## **SECTION I**

### **THE MAJOR DRIVERS OF CHANGE IN SOLID WASTE MANAGEMENT IN PUNE**

In any Indian city the municipal government is responsible for refuse clearance and other public cleansing services. The Constitution of India provides the overarching framework for solid waste management as well as for environment protection and specifies the powers, authority and responsibility of the Municipalities. Municipal laws that empower municipalities to carry out the functions listed in the Twelfth Schedule of the Constitution are enacted by the state governments. The functions of the municipal government include public health, sanitation, conservancy and solid waste management. In addition, poverty alleviation is also its responsibility.

India does not have a solid waste management and recycling act. The legal framework in respect of solid waste is broadly contained in the Environment Protection Act, 1986; the Water Prevention and Control of Pollution Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981. Severe floods in Mumbai and the fact that drains and waterways were clogged with plastic prompted the Maharashtra government to bring in the Maharashtra non-biodegradable Garbage (Control) Act as an ordinance in 2006. The Act mandates source segregation of waste and places the onus of responsibility for waste segregation, on the waste generators.

Municipal solid waste handling in Pune, right up to 2005, typically extended to collection, transport and disposal of refuse in dumps or landfills. The Municipal Solid Waste (Management and Handling) Rules, enacted in 2000<sup>3</sup> had significantly altered this perspective and detailed what municipalities were expected to do. The rules for the first time introduced into the legal framework, the ideas of direct collection from waste generators (primary collection), waste segregation at source, recycling, diversion of waste from landfills, and mandated waste processing and landfill management. The Rules prescribed standards but allowed for incineration and pelletization with or without energy recovery to be labelled as recycling. Several years after their enactment, the Pune Municipal Corporation continued to be in violation of the rules.

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<sup>1</sup> Report on Centrally Sponsored Scheme for Solid Waste Management and Drainage for IAF Airfield Town of Pune , as referenced from [http://www.cpcb.nic.in/pcpdiv\\_plan4.htm](http://www.cpcb.nic.in/pcpdiv_plan4.htm)

<sup>2</sup> Assessment of Status of Municipal Solid Waste Management in Metro Cities and State Capitals. MPCB and NEERI, as referenced from [http://www.cpcb.nic.in/pcpdiv\\_plan4.htm](http://www.cpcb.nic.in/pcpdiv_plan4.htm)

<sup>3</sup> MSW Rules were enacted under the Environment Protection Act, 1986

All India Institute of Local Self Government (2005) in its study found that the Pune Municipal Corporation was barely able to service 7 per cent of households for door to door waste collection; 86 per cent of the municipal solid waste was collected from community bins placed in public areas. Fleet utilization was poor and just 42 per cent of the municipal community bins were emptied daily. The PMC had not been to meet the December 2003 deadline set by the court for implementation of the MSW rules. The PMC did not have a solid waste management (SWM) department. Neither did it have a plan. Only 10 per cent of the total costs of secondary waste collection were met from conservancy tax levied as a proportion of property tax.

During the last decade, change in the waste handling and management scenario in Pune has been driven by movements of three groups of residents that focussed upon different aspects of the problem. The survivors of the landfill, villagers directly affected by end of pipe issues, waste dumping and processing protested the injustice perpetrated upon them by the city government. Waste generators, also contributors to the waste problem, sought a cleaner city. Informal waste pickers and waste handlers dealing with beginning of pipe issues sought better conditions of work and workers rights.

### **Landfill Affected Villagers**

The residents of the village of Uruli and Fursungi, located around the Pune landfill have sustained their agitation since the year 2000 when they first moved court to demand cessation of garbage dumping in their vicinity<sup>4</sup>. The agitation's most recent eruption was from January 2014 when the villagers' blockades prevented any dumping at the landfill. It was triggered by the temporary closure of the waste processing plant at the landfill, following a major fire. The newspapers are periodically filled with stories of thousands of tonnes of uncleared garbage lying on the streets for weeks (Times of India 28/1/2014, Pune Mirror 20/2/2014). The landfill started in 1981 but serious dumping came much later. Originally covering 43 acres of grazing land of one village, it was expanded to include another 120 acres belonging to another village in 2003. Confronted with destruction of their farm livelihoods, pollution of their ground water sources, devaluation of their lands and degradation of their living environment, the residents of these two villages have effectively used blockades to push for remediation and rehabilitation measures. They have not always been successful though, having to be satisfied with promises rather than actual resolution of their problems. The stories of the resistance of the Uruli-Phursungi farmers have spread far and wide, such that even the whiff of the possibility of landfill reservation sparks immediate resistance in the region. The overriding powers of the state government to reserve and acquire land for what it deems to be 'public purpose' are now a seriously contentious issue. Process the city's garbage in the city is the message that the villagers have been broadcasting. Apart from this they also demanded that the municipal government enforce source segregation of waste to facilitate processing. The anti dumping resistance of the villagers forced the municipal government to establish waste processing plants.

### **Residents Associations, Neighbourhood Groups and Civil Society Organisations**

*"Mai baap sarkar"*, a popular phrase in India quite literally means, the patron, a paternalist government, with the mother playing the nurturing maternal role and the father, that of the

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<sup>4</sup> Writ Petition WP/2746/2000 Gram Panchayat Uruli vs the Pune Municipal Corporation

strict disciplinarian. It evocatively illustrates the relationship between the State and its subjects, rooted in the feudal history of the Indian State and the subordinate relationship of the citizen to the State. Politically, India is a representative democracy with universal franchise. For the most part, the role of the citizen has been limited to exercising that franchise.

The enactment in 1993, of the 94<sup>th</sup> Constitutional Amendment was part of the countrywide attempt to devolve powers to local self governments. Municipal governments were expected to function as the third level of administration after the central and state governments. The powers of the municipal governments were mostly limited to implementation, the revenue continued to be controlled by the national government to the state from the state to the local body. The enactment of the Right to Information Act in 2005 to increase transparency and accountability in governance encouraged residents to demand information related to municipal services and functioning. The Act was used extensively by individuals and organisations interested in and concerned with governance issues, corruption, transparency and accountability. Conventional forms of representation and accountability were found wanting. The demand for governance reforms has become louder during the past couple of years with the emergence of political formations that refer to deepening democracy.

Pune has historically had more alert and assertive citizenry, questioning and challenging the State in respect of social issues and service provision. The early challenges in the 19<sup>th</sup> century and 20<sup>th</sup> centuries were movements against caste oppression, for women's education and emancipation and freedom from colonial rule. More recently, specific to civic services there were attempts to by-pass the State to create alternate systems; to legally challenge the State as also to engage with the State. The Kanchan Galli experiment as it came to be known was one of the early examples of civic engagement in solid waste in the 1980s. Two residents campaigned and convinced a neighbourhood to start source segregation of waste and hired a waste picker for waste collection. They also initiated city farming using organic compost processed from their organic waste (Mansata 2009:51-53). In the early 1990s, residents in the newly developing underserviced neighbourhoods of the city formed Associations and started their own waste collection services. They did not have any official standing and many were not even formally constituted entities. The services ceased after municipal services reached the neighbourhood or after the leaders passed on. Issues related to landfills first came to the fore in the mid nineties at which time waste was still being dumped at a landfill south west of the city. The demands for closure of the landfill became increasingly strident as residential areas grew around it. The stand-off between the municipal government and aggrieved residents led to Public Interest Litigation by the residents association and subsequent court ordered closure of the landfill<sup>5</sup>.

The Pune Municipal Corporation invited citizens' participation through a public notice in the newspapers in 1996. Kagad Kach Patra Kashtakari Panchayat, the trade union of waste pickers was among those that responded. The outcome of one study group was A Citizens Report on Solid Waste Management that called for the recognition and integration of waste pickers in door to door waste collection and strengthening the informal waste recycling sector. The group morphed into a non statutory Apex Sanitation Committee that interacted formally and regularly with the municipal administration for some years. Progressive implementation of the constitutional amendment has led to the creation of municipal administrative wards and statutory ward committees in which residents of the ward are

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<sup>5</sup> 1999 Kothrud Area Residents Forum vs the Pune Municipal Corporation

represented. The committees are chaired by municipal councillors and the nomination of political appointees in these committees is common although there is a process of selection by inviting public to apply (Times of India, 7/4/2011)

The municipal government engaged civil society organisations in a series of consultations in formulating the City Development Plan in 2006, a mandatory requirement for sourcing infrastructure development funds from the government's Jawaharlal Nehru Urban National Urban Renewal Mission (JNNURM)<sup>6</sup>. The discussions around the solid waste management model for Pune incorporated informal sector inclusion, decentralised waste management, recycling and low carbon low capital waste collection systems and processing technologies. JNNURM leveraged financing for infrastructure development to cash strapped municipal governments to push through governance reforms. Cost recovery for services (operations and maintenance), provision of basic services to the urban poor were among the mandatory reforms for municipal governments. Decentralisation, enacting public disclosure and community participation laws and creating accountability platforms for all service providers were some of the state level mandatory reforms. The Pune Municipal Corporation was also persuaded by civil society organisations to introduce and institutionalise participatory budgeting from 2006.

Menon (2013) in her study of participatory budgeting processes in Pune finds that elected representatives actually resent the fact that such processes encroach into what they consider their space. The numbers of people participating has declined because of inadequate publicity, municipal councillors were seen to have hijacked the process but two thirds of the budgeted works were completed. Slum dwellers were mostly excluded from the process and less than ten per cent of budgeted projects pertained to slum issues. The city also being a work space, KKP members had participated in budgeting for material recovery centres for classifying recyclables. Engagement of city residents in participatory processes has been driven by civil society organisations and the municipal administration rather than by elected municipal councillors. Residents' access to the municipal system, particularly in the case of low income populations is mediated by municipal councillors and their hired staff or volunteers. Even such small things as leaking pipes and garbage collection are resolved via the councillors. Councillors are often suspicious of and threatened by independent assertions of residents to secure services or to resolve civic issues. They try to address the threat by challenging the process or by subverting it by organising their own conclaves of residents in the case of middle and upper income groups. The municipal administration is not necessarily responsive to the urban poor who in any case have competing claims on their time, so they continue to access the system through the patron municipal councillor.

Solid waste management has been on the agenda of neighbourhood groups, residents associations and civil society organisations since the mid – nineties. In recent years the monthly meetings of the City Sanitation Committee have become a general grievance redress forum between neighbourhood groups and the municipal administration. This apart, the system of monthly meetings between neighbourhood groups and the municipal ward administration has been institutionalised. Non enforcement of source segregation of waste; inadequate monitoring of processing plants and their products such as compost; user fees; inadequate leachate collection systems; non disclosure of reports on the municipal website; e waste disposal; routes of waste collection vehicles have been some of the issues raised by

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<sup>6</sup> For more information on JNNURM please see <http://jnnurm.nic.in/>

citizens organisations (Pune Mirror, 17/2/2014; Times of India, 29/8/2013, 5/4/2013; DNA 6/1/2014).

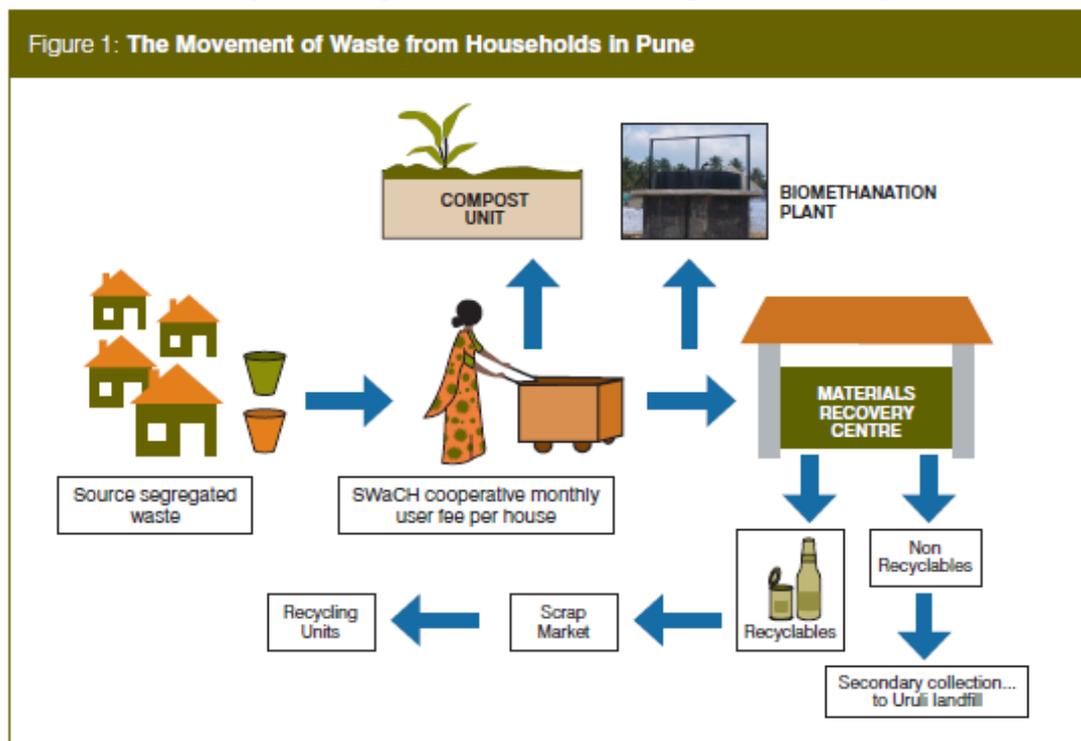
### **Trade Union of Informal Waste Pickers and Itinerant Waste Buyers**

In 1993 self employed waste pickers and itinerant waste buyers in Pune organised into a trade union, the Kagad Kach Patra Kashtakari Panchayat (KKPKP). The union raised the issues of recognition of and legitimacy for, informal waste pickers and other segments in the recycling value chain. Quantification of the contribution of the work carried out by informal waste pickers was a significant focus area for the union, on the basis of which it was able to push policy recommendations as also to argue for investment in and welfare benefits for workers. Much of the actual research was carried out in association with academic bodies and other agencies such as the International Labour Organisation, GTZ, WASTE and All India Institute of Local Self Government. It also drew attention to the conditions of work, occupational health issues, caste and gender as occupational determinants and essayed a lead role in articulating and implementing a decentralised and sustainable model of solid waste management that incorporated informal waste pickers.

Chikarmane *et al* (2001) found that Pune was a robust recycling market where materials trading and processing operations were carried out. Caste and gender mediated entry into all levels of the scrap trade. Recyclable materials were not handled by the formal municipal system but by the market driven informal sector. The markets consisted of sub-markets that operated at different levels of trading activity. The lowest end was the retail segment, in which waste pickers – who constituted the base of the pyramidal market structure – and itinerant waste buyers were the sellers. The sub-market at the middle level comprised buyers and sellers among the traders. Transactions were complex in this sub-market, with buyers and sellers changing places for different commodities. There was progressive commodity specialization towards the apex of the pyramid. Recyclable materials transited to manufacturing industries through the higher levels of trade enterprises. Informal recovery and trading in recyclable materials is entirely market driven and flourished without any subsidies. Waste pickers and itinerant waste buyers comprised 76 per cent of the workers in the recycling market and generated 49 per cent of the income earned. They also contributed \$5 worth of free labour each month to the municipality. The study also quantified the waste transport costs saved by the municipal government (Chikarmane *et al*. 2001: 148). A 2006 study (Scheinberg *et al*. 2010:15) estimated that in Pune alone nearly 118,000 tonnes of material was recovered by the informal sector annually, diverting 22 per cent of the recyclables away from landfills. In money terms the net environmental benefit accruing from the informal sector is calculated as € 2.830.333 (US\$3,615,900) for the same year.

The recommendations of the Citizens Committee on Waste Management on source segregation of waste and the integration of waste pickers as service providers were not implemented till 2005 when the SNDT Women's University along with Kagad Kach Patra Kashtakari Panchayat implemented Swachateche Warkari (Harbingers of Cleanliness). The project pilot authorised by the Pune Municipal Commissioner helped to dispel scepticism regarding the ability of an entrepreneurial workforce of waste pickers to deliver efficient, equitable and accountable services and recover user fees. The Pune Municipal Commissioner organised and personally addressed public meetings in all municipal wards to assess the response and the reservations of prospective service users, the municipal administration and municipal councillors. In eighteen months, 1200 waste pickers were servicing 120,000 households through recovery of user fees.

The Steering Committee constituted by the Pune Municipal Commissioner in 2006 had representation of citizens, environmentalists, workers and academics. Tasked with proposing changes, the committee examined primary and secondary data and identified gaps in the system and proposed user fee based door to door collection via a waste pickers cooperative, transfer stations, optimisation of skip placement and fleet utilisation, decentralised processing plants, specialised waste collection, landfill management and organisational restructuring to create a solid waste management department. The model is presented in Figure 1.



The results of the pilot project, the findings of research studies and the recommendation of the Steering Committee on Solid Waste Management, an enabling policy environment and the support of the municipal administration encouraged the Municipal Commissioner to table a proposal to institutionalise the effort in the form of a worker owned cooperative. The proposal was approved by the municipal general body. The alternate model of solid waste management and SWaCH Coop, the wholly owned workers cooperative that provides front end waste management services is presented in Section II.

## SECTION II

### TRANSFORMATION IN PROCESS: SOLID WASTE MANAGEMENT IN PUNE

#### Door to Door Waste Collection Services: SWaCH Coop

SWaCH Coop was formally constituted in October 2007. The Pune Municipal Corporation and SWaCH entered into a five year memorandum of understanding in October 2008 that ended in 2013. The terms of the MOU and the salient features are presented in the table below.

Duration of MOU 1 October 2008 to 30 September 2013
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Nature of arrangement: Pro-poor Public Private Partnership Mode of collection: Manual push carts (small motorised vehicles driven by women introduced in difficult terrain) Collectors recover user fees. They are not paid by the Pune Municipal Corporation or SWaCH Collectors have rights over recyclables and retain income from the sale of recyclable scrap	
<b>Responsibility of PMC</b>	<b>Responsibility of SWaCH Coop</b>
Provision of collection equipment and safety gear to waste pickers as per the specified ratio and schedule. Maintenance of the office, infrastructure and resource recovery centres (sorting centres). Operational grant to cover management and operational costs Provision of sorting space in every electoral ward and office infrastructure Provision of worker welfare benefits. Partial subsidy of costs of user fee for waste collection from slums.	Daily door to door collection of source segregated domestic waste. Maintenance of separate streams of waste (dry/wet/etc.) Collection of garden waste, construction and demolition waste, e-waste on payment of additional user fees. Collection of road sweepings and Biomedical waste excluded. Direct collection of user fees from all classes of service users. Operating and maintaining the complaint and customer care helpline.

Source: MOU between Pune Municipal Corporation and SWaCH Seva Sahakari Sanstha Maryadit 2008

Structurally, SWaCH is an autonomous workers' cooperative and powers vest with the members. All members are working members, not merely shareholders. SWaCH bylaws require three fourths of the SWaCH members and two thirds of the Governing Board members to be women. The Governing Board has 14 members, along with 2 representatives each of the Pune Municipal Corporation and KKPKP. There are layers of representation such as Kothi Councils (geographical administrative units) and a Ward Council comprising member representatives who meet monthly to facilitate worker participation in operations and decision making. Decision making is deliberative and consensual and accomplished in monthly meetings of council representatives.

The Chief Executive Officer heads the executive function, assisted by teams of managerial and field staff. Operational decisions are taken by executive functionaries. The management of SWaCH works to reconcile two key objectives, providing good daily waste collection services that are compliant with waste management rules and protecting and upgrading the livelihoods of SWaCH members. SWaCH employees are "barefoot managers" whose capacities are developed through in-house training while on the job. Those engaged in operations are usually drawn from socio-economic backgrounds similar to those of members. In fact, a significant number are from the families of members.

### **Secondary Collection, Transfer, Tertiary collection Specialised Waste Collection**

Bio-medical waste collection was outsourced to a contractor from 2002 and three tonnes of biomedical waste are collected daily from 2297 clinics/dispensaries, 17 blood banks, 226

pathology laboratories and 765 hospitals by a private operator contracted by the PMC. The generators have to pay annual advance user fees fixed by the municipal government on account of which less than half the clinics are availing the facility. The separate collection from bulk institutional generators such as hotels, vegetable markets and institutions commenced only after SWaCH was assigned the work of domestic waste collection. Waste collection from bulk waste generators such as wedding halls, restaurants, refectories and educational institutions is carried out by the PMC. User fees are recovered from the generators at commercial rates (Times of India, 30/10/2013). The responsibility for transporting and disposing, construction and demolition waste in designated areas, rests with the generators but practice is indifferently followed. Waste is transported to the transfer stations and to the processing sites or the landfill by municipal vehicles. Transfer stations, some with weighbridges were introduced in 2005, prior to which all municipal vehicles had to perform go to the landfill. The municipal body now has seven transfer stations with ramps where waste is transferred into bulk refuse carriers. The fleet includes vehicles with larger carrying capacity.

### **Processing**

Bio-medical waste is incinerated. The PMC has started bio-methanation plants through private sector participation on build operate transfer (BOT) basis since 2010. Land, capital cost and operations costs are provided by the PMC. Twelve plants collectively process 58 tonnes of organic waste collected from vegetable markets and bulk generators. Another 15 are under construction. The other waste processing facilities carried out by the PMC with private sector participation include three 100 MTPD vermi-compost projects, and two large processing plants that use co-mingled waste as feedstock, a 1000 MTPD refuse derived fuel (RDF) and compost plant and a 700 MTPD which is supposed to generate 10 MW of electricity. The PMC is required to pay the large processors a tipping fee of 300 per tonne depending upon the technology. Many of these contracts are long term contracts extending up to 30 years (Pune Municipal Corporation, 2014). Both of the large plants are functioning below capacity and collectively process around 500 MTPD. So it appears that the PMC is in fact promoting both centralised and decentralised processing systems. It offers concessions in property tax to apartment blocks that process their own waste.

### **Restructuring**

The PMC established a separate department of solid waste management in 2008. Waste collection, transport and processing are handled or overseen by the department which is headed by a senior official. The department has been allocated a separate budget which is reflected in the municipal budget and has independent offices and staff. At the administrative ward level, the cutting edge level for the municipal government the Ward Officer is responsible for all service provision.

## **Section III**

### **REFLECTION ON PROCESS AND OUTCOMES**

In this section the author examines the experience of the SWaCH Coop and transforming waste management in Pune using the Wainright's articulation of *transformative resistance* and Boyle and Hariss's paper on *co-production of services*.

### **Equity, Accountability, Quality of Service and Efficiency**

Prior to the institution of a system of door to door collection, residents were required to deposit their waste in municipal skips located on the streets. Under the present system, 2300 SWaCH members usually operating in pairs collect waste from 375,000 non slum and 28716 slum households each day, covering 54 per cent of the city of 703,486 households. A total of 600 tonnes is collected daily, of which 90 tonnes of recyclables are diverted to recycling. Another 90 tonnes of non recyclable materials and those with poor market value are sent to the municipal facility. On site composting in 80 housing colonies accounts for another 6-8 tonnes diverted from the landfill.

Source segregation of waste; door to door collection; maintaining the integrity of different waste streams and decentralised waste processing are all core elements intended to increase efficiency and they are linked in a sequential process and require appropriate equipment and infrastructure. In the waste management value chain, waste generators are expected to maintain two receptacles for organic and other waste to be collected by SWaCH collectors/primary collectors equipped with adequate buckets and push carts who are then expected to cart the organic waste to the composting unit or deposit it in the municipal skip or in the municipal vehicle depending upon the system in that pocket. The other waste is to be carted to a material recovery centre in the neighbourhood where she is supposed to separate, bag and store the non recyclables to be collected by the municipal vehicle according to a notified schedule. The SWaCH collector is expected to sort and sell the recyclables in the market for which she incurs the transport costs that are offset from the revenue that she gets from the sale. According to a group of SWaCH collectors,

Each goes in a separate stream – organic to the municipal truck, the non-recyclables to the skip and the recyclables to the scrap dealer for recycling. The non recyclables include tyres, broken tube lights and other stuff the scrap dealer will not buy from us. Today citizens are very careful about segregating this waste and keeping it separately. They tell us not to open the black bag – as it has all these [non-recyclable] materials. Fixed collectors, Focus Group Report 14 (IEMS Pune city report 2013)

Equity in service delivery is a core principle in the conceptualisation of SWaCH. The MOU extends to the whole city and the principle of user fee recovery from all classes of residents is part of the Memorandum of Understanding (MOU). However, it was accepted and understood and specified in the MOU that doorstep waste collection services to slum dwellers would be subsidised by the municipal government. The twin reasons were that slum dwellers would not be able to pay, relative to other classes of residents and that waste pickers would have to be compensated for loss of income from the sale of recyclables, since the consumption and subsequent generation of recyclable waste is directly proportional to income levels. Apart from actual slums, chawls, usually one or two room tenements that house low income populations and slum like conditions in the older and densely populated areas of the city were also to be included for purposes of the subsidy. The subsidy provided for in the MOU was never implemented by the municipal government. As a result SWaCH was able to service only about 19 per cent of slum households where users are paying the fees. Pune has 564 slums out of which 353 are ‘declared<sup>7</sup>’ slums. There were 99,000 slum households in declared slums 2001 and with the decadal increase the estimated slum households in 2011 was 150,000. Slum dwellers not serviced by SWaCH are not serviced by municipal workers, an option that was proposed to the municipal government. Citing inadequate manpower as a reason, the municipal government did not provide doorstep collection services to slum dwellers. They do however continue to be serviced free of cost by

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<sup>7</sup> Notified as slums by law and therefore eligible for services and protected against summary eviction

the PMC which provides secondary waste collection services in the form of municipal skips placed in slum areas. Incidentally, the MSW 2000 rules are flexible rather than prescriptive in the case of options for door to door collection and provision of community skips is considered to be compliance.

SWaCH presently services 54 per cent of the entire city. Expansion has been constrained on account of several factors. The PMC has not been able to enforce user fee payment and neither has it ensured the timely release of equipment or payment of grants. What is worse is that for a period of four years municipal councillors were permitted by the municipal general body to allocate some proportion of their discretionary ward budgets towards the purchase of small one to three tonne vehicles for offering free doorstep waste collection services in areas where user fee was possible to recover or was already being recovered. The number of tippers increased from 41 in 2008 to 90 in 2013 and the pressure to provide The practice has been stopped from 2014-15 because the municipal administration found the operations and maintenance costs to be prohibitive and unsustainable.

According to Goetze and Gaventa (2001), conventional public accountability systems, in tandem with democratic institutions, are designed to ensure that public service does respond to citizens in a fair and impartial way. They however add that in actual fact, the response is differentially in favour of socially, economically or politically powerful interest groups rather than poorer, excluded groups. This holds true in the case of Pune where a few of the wealthiest pockets are serviced by the municipal government at no extra cost. The attempts by SWaCH to counter free provision to middle and upper income group residents has been difficult because of the municipal administration's reluctance to confront elected representatives. There are differing views on how the disconnect between the poor and the democratic institutions of the State should be addressed. One approach suggests reduction in the role of the State where the changes typically involve structural adjustment, deregulation of the economy, privatisation of State assets, reduction in social services and curtailment of State spending. Others argue against dismantling of the State and for deepening democracy and seeking new forms for its expression, greater responsiveness and more effective forms of State intervention. I subscribe to the latter view.

Gaventa (2002) proposes that rebuilding relationships between citizens and their local governments means working both sides of the equation - that is, going beyond 'civil society' or 'State-based' approaches, to focus on their intersection, through new forms of participation, responsiveness and accountability. He elaborates that the processes of citizen participation, that is the ways in which poor people exercise voice through new forms of inclusion, consultation and/or mobilisation designed to inform and to influence larger institutions and policies are one side of the equation. On the other, it is necessary to strengthen the accountability and responsiveness of these institutions and policies through changes in institutional design, and a focus on the enabling structures for good governance.

KKPKP and now SWaCH are the institutional entities through which waste pickers exercise voice and it could be argued that the tripartite ward committee meetings are also similar fora for a different class of citizens.

The polluter pays principle is a core principle in the conceptualisation of SWaCH. Payment for services was fixed at a minimum of Rs.10 per month for households, Rs 5 per month for slums and left to negotiation between the service provider and commercial enterprises in the

MOU. That there was no escalation clause indexing user fees to inflation was a lacuna in the MOU. SWaCH collectors however were able to increase the user fees annually through negotiation with service users. Prior to integration waste pickers' earnings depended solely upon the quantity and quality of recyclables collected and were therefore geographically and seasonally variable. Most of them were integrated into their prior beats, unless they specifically requested a change. Although there is equality of opportunity, their earnings continue to be variable even today. Attempts to reorganise and reassign beats did not really work because of resistance from the members.

Direct accountability to the service user is a core principle in the conceptualisation of SWaCH. This is operationalised through several methods. Service users can call or email a widely publicised telephone number and email address. Calls and emails are recorded, attended to, and resolved. Quite often managers or office bearers of apartment associations and neighbourhood groups also have the contact details of the field staff or even the collectors and contact them directly. Feedback forms recording the quality of service are also periodically collected. On two occasions during the past five years, SWaCH has sought endorsements of the service using citizenry. In January 2014, 39844 households from 14 municipal wards endorsed SWaCH. SWaCH members and field staff attend neighbourhood groups meetings and the ward meeting routinely or by invitation. During the period of the MOU, SWaCH submitted monthly reports to the PMC as per the terms. Thereafter, SWaCH has maintained that its accountability is only to service users till the dues payable to SWaCH are cleared and the MOU is renewed. Although the MOU ended six months ago, the municipal administration has yet to table its proposal for renewal of the SWaCH MOU. The municipal government is accountable to service users for the entire solid waste management value chain. There has been Information regarding location of municipal skips<sup>8</sup>, collection timings of skip loaders and garbage tippers<sup>9</sup>, route maps of waste collection vehicles<sup>10</sup> and online registration and tracking of complaints<sup>11</sup> are all displayed on the website.

Some of the preconditions for improving efficiency in the present system depended upon the municipal government and were not met to the extent required. The PMC provided 1200 bags for storage of recyclables in 2009-10, no bags have been provided thereafter. Correspondence between SWaCH and the PMC shows that the municipal government has not adhered to the schedule in the MOU for the provision of collection equipment. Further only about 10 material recovery centres have been provided by the municipal government. In many instances SWaCH members or field staff directly negotiated with apartment blocks or neighbourhoods for such centres. Having said that, the examination of the efficiencies in door to door collection indicate that the working hours of waste pickers have reduced from 10 hours to 7 hours. It has also facilitated reduction in the number of municipal skips from 2066 in 2005 to 936 in 2012 (Source: Pune Municipal Corporation) and non recyclables are separated out where material recovery centres have been provided. SWaCH actively promotes source segregation of waste but although it is a prerequisite for all the other stages, it is meaningless unless the other enabling factors are in place. The change is perceptible when the system functions as it should.

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<sup>8</sup><https://maps.google.com/maps/ms?msid=214088794230317079173.0004d4bc5c59b8fe05def&msa=0&ll=18.558798,73.803749&spn=0.042636,0.084543>

<sup>9</sup> [http://www.punecorporation.org/pmcwebn/informpdf/swm/ghanta\\_gadi\\_12\\_11\\_12.pdf](http://www.punecorporation.org/pmcwebn/informpdf/swm/ghanta_gadi_12_11_12.pdf)

<sup>10</sup> [http://www.pmc.gov.in/pmcwebn/Ghantagadi\\_Route.aspx](http://www.pmc.gov.in/pmcwebn/Ghantagadi_Route.aspx)

<sup>11</sup> <http://www.pmc.gov.in/GRS/Complaint/LaunchComplaintCitizen.aspx>

The author found that SWaCH members were among those that perceived the greatest threat from contractors and waste management companies. The placing of municipal and state policy among the most important negative driving forces was a stinging comment on the ambivalence in policy making and planning (IEMS Pune city report 2013). Efficiency directed towards what is an important question to ask here. It could be argued that motorised collection, mechanical segregation and incineration are more *efficient* methods of managing waste. The social (employment), financial and environmental (carbon footprint) costs of efficiency are important considerations in privileging efficiency over other factors.

### **Quality of the workplace**

SWaCH was conceived to enable informal waste pickers to protect their rights to recyclables and their livelihoods, get legitimacy, improve and upgrade conditions of work. Decent work as conceptualised by the International Labour Organisation (ILO, 2002) was at the core of the model. The road side skip, the garbage dump, mounds of putrefying waste are the traditional work area of the waste picker. Waste picking is stigmatized work and caste is a significant determinant of occupation. In Pune as in many parts of India, waste pickers are drawn from Dalit<sup>12</sup> communities and there is a preponderance of women, and significant presence of women headed households in the occupation. Chikarmane et al (2001) found that 45 per cent of women waste pickers contributed more than 50 per cent of the household income.

Guru (2000) refers to occupational segregation and the reproduction of untouchability even within the modern Indian state where Dalits found themselves limited to sanitary work, scavenging, tanning and lately ragpicking, occupations that are considered defiling and socially inferior. Unionisation and upgradation into service provision through SWaCH changed to some extent the waste pickers perception of their own work and social perceptions of their contribution. Like many workers engaged in devalued, 'tainted' work, prior to their unionization, waste pickers had not conceived of themselves as workers. Waste picking was just something that they did to subsist it was not a real *job*, which usually meant secure waged employment and a workplace. The ethnographic work of Drew et al (2007) brings out workers relationships with each other for self value and the necessity of relating to the 'other' in the world. Caste and occupation kept waste pickers in an excluded world, segregated in pockets within slums, unaccounted for in local community processes and the self perpetuating cycle of low literacy, low skill and informal occupation. SWaCH enabled waste pickers to come face to face and interact with different classes of city residents and to demand to be treated with dignity (Rally for dignity DNA 31/1/2011). Boyle and Hariss (2009) refer to recognising people as assets, mutuality between provider and user, valuing work differently, promoting reciprocity and building social networks as important elements in the co-production of services. I take pause here to refer to the situation in India where caste and other countries where race determines occupation and confines subordinate, marginalised excluded groups to what are seen as low status, low remuneration and undesirable occupations. In societies where birth defines ones place in social and economic hierarchies, work is valued unequally and mutuality becomes a term to white wash exacerbation of inequality. The project of recognition to and upgradation of waste pickers livelihoods is conceived as an emancipatory project that opens up opportunities and enables transition of the next generation into other occupations. Action against the social practices of child labour and child marriage and the promotion of elementary and subsequently higher education and skilling has been a key intervention area for KKPKP and now SWaCH.

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<sup>12</sup> The term Dalit means broken people and refers to erstwhile untouchable groups who were treated outcastes. It is a politically charged unifying term imbued with the meaning of resistance.

Formal integration into the municipal system has also enabled SWaCH members to access a set of entitlements, push carts, buckets, sacks, uniforms, raincoats, footwear, material recovery centres and welfare benefits from municipal resources. In actual fact, not all of these have materialised in entirety, but the very fact of entitlement to municipal resources where formerly there was no claim on the municipal budget, is a step forward. The municipal government now has to allocate resources from its budget. The formal relationship has enhanced the negotiating power of informal workers with the municipal government. However, the fact that the endeavour needs municipal endorsement and financial support itself creates some power imbalance that favours the municipal body, relative to free floating waste pickers who would have more 'freedom' to agitate for their rights.

Relative to free collectors, SWaCH members report recognition of their contribution, assured access to waste and other household discards, regular incomes, better hourly rate of return on labour, regular work hours and more leisure time to spend with their children.

### **Participation, Transparency and Sustainability**

Participation of workers, service users and ordinary residents is a core principle in the conceptualisation of SWaCH. The conceptualisation drew upon the work of Cornwall, Gaventa, Goetz and Fung and Wright. Goetze and Gaventa (2001, p8) present a framework for linking citizen voice and responsive government in the form of three processes that represent broad steps in citizen-State engagement. Consultation is the first level that involves opening up arenas for dialogue and problem solving; presence and representation involves institutionalising regular access for certain social groups in decision making and influence brings citizen engagement to the point where citizens can translate access and presence into a tangible impact on policy making and the organisation of service delivery. In section I, I had detailed the progressive engagement of the KKPKP with the municipal government that finally led to the formation of SWaCH Coop. For the first three years wastepickers were engaged in what Goetz calls a "barking dog" position on the margins, publicly demonstrating and demanding for recognition of their informal though meaningful contribution in the management of urban solid waste. The representation on the Apex Committee followed and thereafter medical insurance from the municipal budget and SWaCH.

The Government of India pushed private sector participation in municipal services as part of its neo-liberal agenda. Public Private Partnerships (PPP) have been the most favoured form in the case of solid waste management. The 12th Finance Commission observed that urban local bodies spend 60 to 70 per cent of their budgets on solid waste management and lack capital infrastructure; that local bodies are over staffed, having to pay for a large but idle workforce and in fact recommended that at least 50 per cent of grants provided to states should be earmarked for solid waste management through PPPs. Civil society organisations stepped into the service provision space vacated by the State. Cornwall and Gaventa (2001) draw attention to the fact that the neo-liberal paradigm emphasises user participation not only in project design but also in bearing the costs of service delivery. Enabling groups of citizens to act as agents means that citizens themselves play a role in defining and gaining better access to services that may include self provisioning, SWaCH was positioned as a pro-poor public private partnership to occupy the space of a new service, since door to door waste collection was never provided by the municipal government. The changing residential landscape of apartments and gated communities also created in a way a market for such specialised services. SWaCH enabled the municipal government to meet its twin obligations of poverty alleviation and primary waste collection. For the KKPKP it offered an opportunity to

legitimise and upgrade the work carried out by waste pickers and to stake a claim on State resources.

The embargo on recruitment of conservancy workers and the job inheritance rights enjoyed by the existing municipal workers meant that regular employment was a difficult demand to sustain. The alternative of contracted employment had its own attendant problems of non payment of minimum wages, harassment and violation of worker rights by contractors. KKPKP has been grappling with that legally in the neighbouring municipality of Pimpri Chinchwad where waste pickers are employed by contractors for door to door waste collection. Practical and strategic considerations apart, it is a fact solid waste management by municipal systems was wanting. The status prior to the formation of SWaCH has been covered in Section I of this paper. Going beyond the binaries of public and private, a worker owned and operated cooperative that combined elements of the private and the public seemed to be a third option. In formulating and implementing an alternative, KKPKP attempted what Alvarez (1999, p.182 ) refers to as *hybrid political strategies and identities (italics in original)*, for feminist groups that developed policy advocacy expertise while retaining a commitment to movement oriented activities.

Intra organisationally, the tensions between the members – workers and the employee-management, so evident in the first year of operation have considerably reduced and there is a commonness of purpose and ownership by members and the employees. This is particularly true in the case of member leaders who have progressively taken the responsibility at the negotiating table with the municipal administration as well as the political representatives. What did not take off as planned is the constitution of the neighbourhood solid waste management committees that were part of the SWaCH design. The imperatives of service delivery and negotiating the political landscape have detracted from the agenda of working closely with citizens, not just as service users but as agents for improving neighbourhood solid waste management. The emergence of waste pickers as agents, claimants of the city, as active citizens, has been the most important gain from the point of view of informal workers who represent themselves individually and collectively at local, national and international events. While they have gained in visibility, actual gains in terms of benefits from the State are relatively limited, in terms of implementation. Long years of struggle have seen the inclusion of waste pickers into a national medical insurance scheme, the national food security act, the socio- economic caste census and national education schemes for their children, but for various reasons these are still to be implemented.

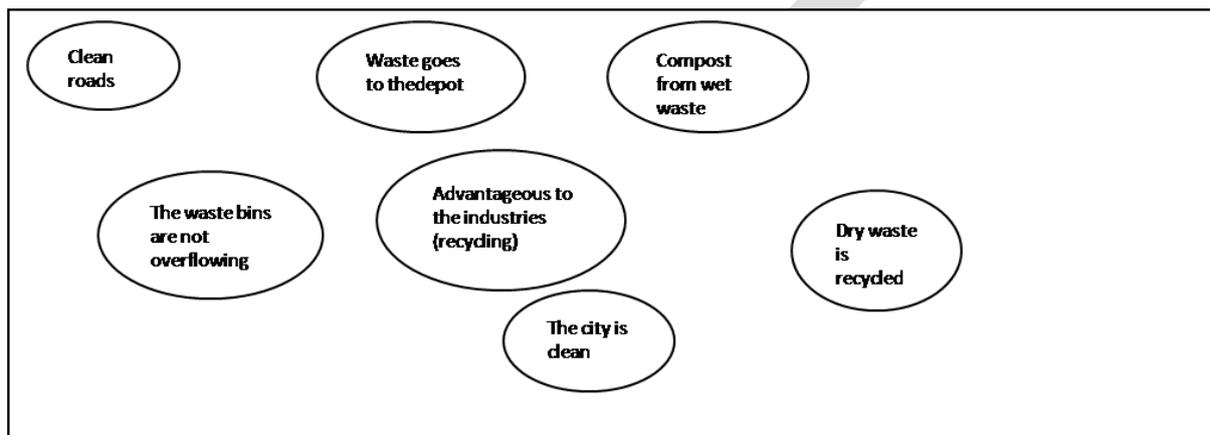
Financial and operational transparency is a core principle of SWaCH. Since it receives grants from the municipal government, it is an entity that is covered under the right to information act. The website of SWaCH Coop ([www.swachcoop.com](http://www.swachcoop.com)) displays all important documents including the MOU, governing board members and employees. The organisation also brings out a newsletter that is widely circulated.

### **Sustainability**

In conceptualisation of “transformative resistance”, Wainwright (2012, p.72) refers to alternatives that extend beyond merely defending members jobs, wages and benefits to the very purpose of the labour of workers and taking responsibility, along with citizens organisations for the wider public benefit. She finds that all workers struggles for transformative resistance to privatisation involve social movements beyond the workplace. She also refers to workers consciousness and that of their organisations to the nature and purpose of labour and the creative element therein to propose an alternate way of organising

the service so that it is responsive, equitable, accountable and transparent. Workers in this case participate as knowing subjects with agency not as wage earners (p.73). Drawing from Marx, she states that in this situation labour is self determined rather than alienated and subservient to domination by capital for profit maximisation. It is this space that has transformative potential and the source of agency that waste pickers have come to occupy. Barring the fact that KKKPKP is an own account workers' trade union and not a public sector workers union, almost everything that Wainwright refers to applies. It is also significant is that the initiative was taken by a union of precarious workers.

A zopp diagrammatic representation of how waste pickers look upon their work and their contribution to the city is provided in Diagram 2 below (Chikarmane et al, 2013).



Waste pickers saw themselves as contributing to the cleanliness of the city, “So much difference we make! They get a clean city without paying us a paisa. The gutters would be blocked with their damn plastic bottles without us. Then everyone would come running to the municipality to shout and complain”; to public health at the cost of their own, “The city gets healthier, but we get sicker. Big needles, glass, rose thorns, all those things injure us. We fall sick”; to cost savings for waste handling, by recovering recyclables at the source of generation, they were saving costs on transportation, labour required for the process and the administration costs to manage the additional work; “The (municipal) corporation gets the city clean for free. And we, people like us, die working. Corporation gets the name. The work is done by some poor person like us. Who gets the profit of all our work? The corporation. All the value of our work should come to hard working labourers like us not go to the corporation. They’ve profited on our work...”. They also saw themselves contributing to the scrap trade, They buy cheap and sell expensive. Unless it was profitable, they wouldn’t buy it. Then they sell it to companies to make new materials.” and to the recycling industry, “the scrap market runs because of us...”. “The entire recycling industry depends on us. However they are not ensuring their profits reach us in equal measure”

In one focus group, the participants also identified the importance of the work they did in creating employment for other people in the informal and formal recycling industry. The fact that waste pickers recover recyclable materials creates work for drivers who transport waste, sorters who work with scrap shops to further segregate recyclables, workers at formal recycling companies, workers at bio gas plants and other organic waste recycling plants. Besides creating jobs in the recycling sector, waste pickers also see their role in reducing the burden on the government which would have had to create jobs for people if they weren’t

employed in their existing work. A male itinerant waste buyer asked, "...how would the government employ 15,000 people?"

Their environmental contribution also featured "From the wet waste, compost is made, gas is generated, biogas is made, compost is made, we take out the plastic, the glass, the paper – It's all benefits..." (FGR15). The groups also spoke about biogas being used to light street lamps. Although a small initiative, this reduces the burden on the grid.

Waste pickers justifiably peppered their comments about their contribution to the city with the impact that it has on their own health. It was interesting however that in the same study, they ranked waste generators as the most important positive factor and the scrap market and worker autonomy tied at second rank. As Wainwright observes, the struggle against privatisation is not only about public versus private ownership but also about democratic control over the labour process and the purposes of labour. It is the relationship between the SWaCH service provider and the service user, and the workers ability to recover user fees to the tune of a minimum of INR 7.5 Million (US\$125,000) each month that ensures the sustainability of her work. As specified in the bye laws, SWaCH collectors also contribute 5 per cent of their monthly earnings to the kitty so that the organisation is not completely at the mercy of the municipal government for resources. The average annual collection of 5 per cent is provided in Table 1 below. About half the members pay the amount and a campaign for recovery is ongoing. It is the buffer that enabled the organisation to run for one year after the municipal government defaulted on the payment of grants. SWaCH has been paid less than 50% of the total amount due to it as per the MOU. Financially, the SWaCH model has cost the municipal government Rs 2.20 per household per month, approximately a tenth of the national average. In purely financial terms it can be argued that the labour of SWaCH members subsidises the municipal government. Chikarmane et al (2001) had quantified this subsidy at US\$5 per worker per month in transport costs alone. The experience in the neighbouring Pimpri Chinchwad Municipal area shows that the labour of waste pickers subsidises the contractors who are paid for service provision, inclusive of the minimum wage component by the municipal government. There is no denying that the labour – State relationship is more straightforward than the labour – contractor – State relationship, which is extremely disempowering. During the past two years the Pimpri Chinchwad Municipal Commissioner, while agreeing that work was extracted from labour, did not ensure the payment of minimum wages. The evidence points to the fact that a worker owned and operated model is more empowering of workers than a contracted model, in the absence of direct employment by the municipal government.

Annepu (2012) estimates that every ton of recyclables collected informally, saves the urban local body Rs. 24,500 (\$500) per year and avoids the emission of 721 kg of carbon dioxide per year (Annepu 2012). The Pune Municipal Corporation estimates that recyclable paper, plastic, metal and glass constitute 270 metric tonnes of the total waste in the city (City Sanitation Plan, 2012). Using these estimations, the savings to the Pune municipal government are in the region of US\$50.2 million and avoided carbon dioxide is 71 millions tonnes.

## **CONCLUSION**

Perspective colours the view of change and the direction that it has taken. There are those who will commend SWaCH as an alternative that in-sources the private in order to transform the public and others will critique it as feeding into and furthering the neoliberal agenda,

depending upon their frames of reference. I argue that whatever the perspective, SWaCH in terms of scale, is the largest example of integration of waste pickers into municipal solid waste systems and user fee based waste collection in India. The Kagad Kach Patra Kashtakari Panchayat, the trade union of informal recycling workers led reform of the municipal solid waste management systems and municipal service provision. In doing so it partnered with others as a co-driver. At its core, was the emancipatory project that sought to transform the work and living conditions of socially excluded, economically marginalised and politically disempowered informal recycling workers. It carries lessons for formalisation of the informal as it does for more accountable, transparent and responsive governance. The script is a work in progress and it seems like governance reforms will be an area of focus in the near future.

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