

CHAPTER 21

GREEN IRELAND? WASTE IN ITS SOCIAL CONTEXT

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INTRODUCTION

At the micro-level, the problem of waste is self-evident. Households are producing more waste with higher levels of packaging and toxicity. If we do not dispose of the waste we confront the instant problem of waste as a pollutant within the household. One waste official, conscious of the ever increasing individual and household output of waste, remarked once how he longed to get thirty householders together to daily dump all their waste in a closed shed, over a month period¹. He claimed that for educational purposes if they had to come to that shed, to see and smell the amount generated, and live with that amount, and take responsibility for it, and the pollution generated therein, then they would become revolutionised on the issue of waste almost overnight. In fact the 'reality check' that the civil servant wished to impose already exists for those living beside landfill sites. And yet it is also a reality that individuals and households still must dispose of their waste, the amounts and costs of which are increasing in developed countries including Ireland. However, the problem of waste as pollutant is not being fully confronted but is instead being transferred to the local and national landscape, as well as to impoverished communities in the global landscape.

This chapter addresses the principal parameters of the problem of waste having regard to its social context with respect to Ireland and Europe. Waste is identified in terms of the social structures and practices within which it is produced; and it is argued that unless prevailing conceptions of productivity, profit and consumerism 'build in' the waste

component, it will continue to be an obscure and avoidable issue for most stakeholders in the process. The chapter also considers the international dimensions of waste governance and explores some of the policy outcomes, national and international, of the production and disposal of waste in terms of the principle of sustainability. It concludes by looking at waste alternatives and points to a potential role for Ireland in the wider evolving green revolution that could contribute to a progressive, post-consumerist phase of globalisation.

WASTE IN ITS SOCIAL CONTEXT

Waste is part of global networks that are material, technical, social and discursive, but in simple terms it can be defined as the remnants from production and consumption that is deemed unproductive. It is probably best conceptualised as a global fluid (Urry 2000: 5), and as a substance that is usually kept out of sight, its invisibility a marker of the success of economic growth. Strategies to hide it are constantly deployed, such as burying it underground through landfill, dumping it on seabeds, 'land-filling in the air' through incineration, or exporting it from the centre to the periphery of the world economy. At the national level, waste is directed from urban rich areas to rural or poorer urban areas and at the global level it is 'hidden' through transportation from the richer countries to the poorer countries. A recent study on globalisation and the environment argues for environmental flows as always/already global:

[t]his is particularly true for flows related to the environment: greenhouse gases, ozone threatening gases and toxic wastes move from more developed to less developed countries; raw materials and commodities, produced a huge environmental costs flow from less developed to more developed countries. (Urry 1999)

The patterns of waste flows are particularly uneven, with waste disproportionately produced in the richer countries where there are far higher rates of production and consumption per capita, and disproportionately dumped in poorer countries. US waste generation has grown from 2.7 pounds per person in 1960 to 3.3 pounds per person in 1980 and up to 4.4 pounds per person in 1993 (Krogman, 2005: 266). Over 1.8 billion tonnes of waste is generated each year in Europe equivalent to 3.5 tonnes per person. This is mainly made up of waste coming from households and a wide range of other human activities including commercial services, manufacturing industry, agriculture, construction and demolition, mining and quarrying, and energy production. With such vast quantities of waste being produced, it is of vital importance to society and to sustainable development that it is managed in such a way that it does not cause any harm to either human health or to the environment. On the basis of available evidence, it is hard to contest the claim by poor Southern nations that it is the uncontrolled consumption trends of the wealthy nations in the North that lies at the heart of the devastating health and environmental problems of the South.

One thing that has changed radically in the past twenty years (along with the massive increases in quantity and quality of waste) is that the pollution caused by its 'disposal' has now been widely recognised - keeping waste out of sight at global or local level is no longer a convenient option. Initially, the concern about waste pollution was confined to manufacturing industry and governments concerned with promoting and regulating national economic development. However, in the 1980s the ecological debate shifted from the national to the global terrain. This debate focused on the 'limits to growth', the need for production to be 'sustainable' and the curtailment of consumption. As Robin Murray puts it:

As environmental concerns came to the fore in the 1990's, all roads led to waste.

From centuries of obscurity the waste industry found itself at the hub of environmental argument. (Murray 1999: 20)

Waste was centre stage in its own right as a localised pollutant, but also as a regional and global pollutant because of its link to key environmental questions such as climate change and resource depletion.

The prioritisation of economic growth by governments has led to a total array of structural conditions that support production for profit regardless of the lack of sustainability of such patterns of production and consumption. In market economy systems, economic development depends on growth in consumption to increase profits. This short-term approach of always seeking to 'improve on last years profits' does not take into account the long-term and real environmental costs or the finite stocks of many resources. Arrangements that increase production and create economic growth tend to be supported and prioritised by governments because they yield significant public sector revenues as well as private wealth. A political economy analysis is deployed in this chapter. This approach focuses on the sustainability of the waste process and aims to: (a) identify those interests that are disproportionately served by, or benefit from, current arrangements; and (b) highlight the actions needed in the political and economic systems to achieve sustainable changes.

IRELAND'S WASTE IN EU CONTEXT

Waste Generation: Type and Sector

Many EU countries use different methods to calculate waste generation so that data is not always exactly comparable. However, taking this into account, comparisons produced by the

European Environmental Agency (EEA) rank Ireland as the largest per capita generator of municipal waste in the EU (EEA 2005). The Irish Environmental Protection Agency (EPA) estimates that at the individual (micro) level, each person in the Republic of Ireland in the year 2000 'produces' practically double the European average of one kilogram of municipal waste per day. The EPA (2002) estimates for 2000 show that every citizen of the Republic produced an average of 600kg of waste a year. They also calculated the average generation of household waste per person to be 398 kg per capita in 2003, increasing on the 2002 figure by 2% rate (EPA 2003: 8).

Table 1 summarises the amounts and proportions of waste generated by different activity sectors in Ireland in 2004. It shows that agricultural waste, at 70% of the total, constitutes the largest proportion of waste, although it is decreasing from previous years. Construction and demolition waste constitutes the next biggest proportion at 12% of the total. The bulk of the 15% increase in total generation of waste between 2001 and 2004 is attributed to the trebling of the waste produced in this category. Municipal waste always gets a disproportionate amount of media attention, but constitutes only 4% of the waste produced. However, it is also fast increasing, having risen by 1% between 2001 to 2002, it rose again by 10% between 2002 to 2003 when, for the first time, municipal waste exceeded three million tonnes (2003 EPA: 6)². While municipal waste increased by 4% in 2004, a new statistical calculation on the part of the EPA leaves the overall figure still at just over 3 million tonnes (EPA 2004: vii).

Table 1 Total waste generation in 2004

Waste category	2004	
	Tonnes	%
Construction and demolition waste	11,167,599	13.1
Manufacturing waste	5,044,243	5.9
Mining and quarrying waste	4,044,511	4.7
Municipal waste	3,034,566	3.6
End-of-life vehicles and scrap metal	491,860	0.6
Hazardous waste	366,291	0.4
Contaminated soil	307,340	0.4
Energy, gas and water supply waste	284,647	0.3
Dredge spoils	238,565	0.3
Drinking water sludges	59,741	0.1
Urban wastewater sludges	42,298	0.0
Sub-total non-agricultural waste	25,081,660	29.4
Agricultural waste	60,175,025	70.6
Total	85,256,685	-

(Source: EPA, 2004)

Waste Disposal and Sustainability

In all European Union countries, the quantity of waste is continuously increasing, however, in the Republic of Ireland there was an above average growth rate in its production due to the economic boom of the ‘Celtic Tiger’. Between 1995 and 1998, waste flows in Ireland increased by a phenomenal 89%. Most of this waste (91% of municipal waste and 85% of industrial waste in 2000) was ‘disposed’ of through landfill, which is clearly the most environmentally risky option (EPA 2002: 9). With the implementation of recycling policies there has been a shift in the flow and since 2001 municipal waste landfill has decreased by 8.7% (EPA 2004: vii). Regardless of the policies on how to deal with waste - such as whether to divert it from landfill, recycle it, or incinerate it - the overall trend of increased waste generation remains an unresolved issue and a key matter of concern that will require concerted effort over the years to come. Sustainability is about meeting the needs of the present without compromising the ability of future generations to meet their own needs, in

economic, social and environmental terms and the reality is that we are far from achieving this objective in Ireland, or elsewhere in Europe.

The main organizing principle of waste is that it is 'put out' (a colloquial but significant term for placing bins outside the household for collection) where it is dealt with at regional and national level.³ The growing scientific evidence, along with the environmental arguments that waste has broken down the 'sustainable limits' of natural earth and that its risk factors are multiplying, has brought communities and governments into the management of waste equation. This raises crucial questions about who governs, regulates and strategises waste flows in Ireland? Political Economy analysis suggests that the debris of consumerism and development is managed through governance networks and that these networks require critical exploration.

WASTE GOVERNANCE IN IRELAND⁴

The Republic has been in the grip of what has been commonly referred to as a 'waste management crisis' (Fagan *et al* 2001) in the late 1990's and the early 2000's. There are two aspects to this crisis. First, there is the problem of waste in itself and, second, the interlocked problem of its management. Policies developed to manage the problem of increasing waste levels propelled local and national government into political crisis, as the public strenuously opposed proposals for both waste disposal facilities and increased costs.

Waste may be a global flow and therefore a global issue, but it is also clearly a local issue. Latour has referred to the notion of the hybridity of the global and the local. Dirlik expresses this as the concept of glocal: 'What it forces us to think about is a double process at work in shaping the world: the localisation of the global, and the globalisation of the local' (Dirlik, 1999: 158). That is to say, waste is at one and the same time global and local. It is

created in someone's locality and dumped or burned in a locality, yet it also flows around globally. The political economy of waste can thus be seen as embedded in multiple and interlocking locales. When we look at waste production and its management, it is useful to think in terms of multi-scalar processes, where rescaling of waste production in the era of glocalisation has occurred and where its successful management relies on governance at multiple levels - global, regional, national and local.⁵ For this reason, the situation in Ireland has to be seen in wider context when examining its 'management practices.'

EU and National Actors

EU directives on waste have been the key driver of waste management policy in Ireland (Fagan *et al*, 2001). The European Economic Community (EC) Act of 1972 gave direct precedence to European acts over domestic laws and constitutional provisions in the Republic and in Northern Ireland. The ratification of the Single European Act (1986), the Treaty of Maastricht (1992), and the Treaty of Amsterdam (1997) further ensured the supremacy of EU law over domestic law. The EU legislative programme for dealing with waste includes Directives on: dangerous substances, waste oils, groundwater, urban waste water, licensing regulations, the disposal of PCB/PCT, toxic waste, sewage sludge in agriculture, emissions from waste incineration plants, the disposal of animal waste, and batteries containing dangerous fluids. It also sets targets for reduction in all waste streams, and sets very specific timeframes for national governments to meet these reductions. For example, for the Republic of Ireland's municipal waste stream there is a national target for recycling of 35% (currently at 34%) by 2013 and a household waste diversion from landfill target of 50% (currently at 19%) by 2013.

From Government to Governance: New Priorities

With the EU able to enforce sanctions on the nation state and the national government needing to radically change the direction and composition of waste flows, the drawing up and implementation of strategy quickly became an issue of governance at a national level. Stoker argues that governance recognizes the blurring of boundaries and responsibilities for tackling social and economic issues' (1998: 21). Governance approaches patterned on consensual politics and multi-agency partnerships have replaced government by central decree over recent decades (see Chapter 13). This applies to the waste management issue where self-governing networks were very much favoured by the Irish state. In order to reach the EU set targets it was considered necessary to involve key players such as 'private enterprise' into partnerships. The capacity to 'get things done' did not simply rest on the power of government to command, and commands would only be invoked in a last instance scenario.

Financial considerations were also a factor in the application and governance of the new EU criteria. In 2001 there was a need for an estimated investment of one billion euros, over a 3-5 year period to implement the waste development plan (Forfás 2001: vi) and the National Development Plan envisaged this coming mainly from the private sector. Clearly, Ireland faced a gruelling task to organize a strategy to divert waste away from landfill, to reach targets set at a five-fold increase in recycling and to find the finance for the infrastructure, especially if the objective was for the private sector to answer this call. Private capital was thus seen a necessary 'node' in the governance of waste management (Fagan 2004). In particular, the government's gaze focused on the private sector and on the waste industry's multi-national giants, and sustainability concerns became secondary to costs. Waste governance, from this perspective, could not be resolved at its most radical level - that of sustainability. The plans relied heavily on the treatment of waste through 'thermal treatment plants' and on recycling to be funded primarily through private enterprise.

While governance necessitated a consultation process and the introduction of key players into the process, the unequal balance of power in the consultations and the fact that some partners were ‘more equal than others’ resulted in outright contestation of the plans. Environmentalists and local communities threatened by incineration plans in Ireland were deeply critical of what they perceived as the ‘façade’ of consultation that had been put in place (Fagan *et al* 2001: 18). There was a widespread perception at community level that government ‘consultations’ (often dictated by EU regulations) on the development of incinerators were simply empty rhetorical exercises for communities to ‘let off steam’ and were not designed to change decisions already taken on technical grounds (Fagan *et al* 2001: 19).

Ignoring Resistance

Environmentalists and environmental scientists, who contested waste management plans worried about the growing influence of commercial interests, specifically waste companies coming into the Irish globalised waste market. The key concern from the environmentalist’s point of view was the role of ‘big business’, i.e. incineration companies, in the implementation of the plan. They argued that there had been aggressive attempts by incinerator companies to lobby the government (Fagan *et al* 2001: 17) and to lead strategy. This concurs with O’Brien’s observations at a global level where he comments on waste industrialists:

This is a market whose rational economic actors are begging, cajoling, threatening and coercing the states of Europe to intervene politically into the circulation of wastes

precisely because the 'spontaneous' emergence of markets does not generate the values they want out of the rubbish heap. (O' Brien 1999: 292)

Environmentalists concerns about local authorities acquiring and mismanaging landfill sites (i.e. the so-called 'planning' of 'dumping'), therefore, was supplemented by concerns about private sector pressures to build incinerators. They believed that in both cases the government was 'being wooed by, or was wooing', large international companies and taking little responsibility for negative impacts on localised communities (Fagan *et al* 2001:16-17). Those in opposition to the plans felt that they failed to contextualise waste in anything other than a framework for industrial 'competitiveness' and profitability.

Bypassing Resistance

Rising opposition to the proposed location of incineration plants drove the waste management strategy into political crisis in 2000-2001 as local communities through their locally elected representatives blocked the sub-regional plans. In order to by-pass the political blockage mechanism at local government level, the Minister for the Environment and Local Government removed local councillors from the decision making process by assigning the decision-making powers to the county managers, who as state employees were obliged to implement state policy and law. Thus, in response to challenge from 'below', a central decree (government as opposed to governance) was used to achieve the localising or embedding of waste management. However, the state did not move entirely back to traditional government or rejected the principal of consensus politics and failed to involve itself in multi-agency partnership. Instead, they removed the locality from involvement in the decision-making process. The Environment Minister stated quite openly that the planning

process on waste management was ‘over-democratized’ and that he did not believe it was ‘adding anything to it by having so many layers involved’ (*Irish Times*, 12 August 2002:1). The so-called ‘fast-tracking’ for waste management plans had to be implemented, and An Board Pleánala (The Planning Board) became a ‘one-stop shop’ for assessing all plans for new waste management facilities. The Minister insisted that he was not removing from any groups or individual the rights to express their views: “That is sacrosanct, but I don’t see a need for these views to be expressed at so many different levels” (*Irish Times*, 12 August 2002:1). In other words, a repeat of oppositional views at multiple levels in a multi-layered process of governance was a source of irritation for government.⁷

Complex Interactions: Discernible Outcomes

The account of the new initiatives and resistance outlined above illustrates the multi-faceted and shifting dynamic of actors in the governance process in which some gain more power and others lose it in a complex political process. That local communities were important players in the dynamic is without question, but there were ebbs and flows in their political power. Historically, the only social groups who had problems with waste were local communities living beside landfills. Alerting government to issues of pollution arising from industry had been an uphill struggle and local concerns received very limited acknowledgment from the state. It had taken the intervention of EU Directives in the 1980s to resolve conflicts between communities and local government authorities on ‘waste disposal’. The fact that national government had not previously been responsive to local pollution was remembered well by communities when it came to the later disputes over waste plans (Fagan 2004).

In terms of governance, the EU is a key player in that it regulates waste and sets the scene for its regulation at national level. However, EU policy emerges from a network of

actors and competing agendas and is translated into national policy through a similar network. While we can clearly see the European agenda informed by sustainable environment concerns we can equally see the market-driven notions of development being played out when it comes to its implementation at national level. Waste legislation clearly takes cognisance of networked green politics, but at the implementation stage the contradiction between the concepts of development (market-driven in its capitalist form) and sustainability (the earth as limited resource) are in constant contention with each other.

EFFECTIVENESS OF POLICIES IN EUROPE AND IRELAND

The Failure of EU Policy

One way to measure the effectiveness of a policy is to compare its outcomes with its intended aims. On this basis, it is fair to say that waste situation is deteriorating in the EU and that its policies for waste disposal are ineffective. The cornerstones of European policy on waste were established as hierarchically organised objectives:

- Prevent waste in the first place;
- Recycle waste;
- Turn waste into a 'greenhouse neutral' energy source;
- Optimise the final disposal of waste, including its transport.

But, despite these objectives and targets set by the EU, the Environmental Agency by the year 1999 presented a chaotic scenario unfolding:

The expected waste trends during the outlook period [up to 2005] suggest that existing policies, although providing some degree of success, will not be sufficient to stabilize waste arising, meet policy objectives, or progress towards sustainability. (EEA 1999: 215)

Thus, EU waste policies were seen to be clearly failing by the end of 1999. Moreover, the environment action programmes were unable to stem the generation of waste and thus were failing to meet their foremost objective – the prevention of waste in the first place. The sheer material quantity of waste in circulation was extraordinary. The EEA statistics on the European Union for 1999 showed that 2000 million tonnes of waste were being generated per year and that the amount had increased by ten per cent per annum over the previous six years. It was estimated that *all* waste streams would continue to increase steadily (EEA 1999: 215). Essentially waste generation was spiralling out of control. Waste disposal methods were not coping with the increased loads. Efforts to respond to the increases in waste could not keep pace with increased rates of production and consumption. Many countries had adopted increased recycling initiatives, but according to the European Environmental Agency, this development “has been only a partial success, because the total amount of waste paper and waste glass (container glass) generation has also increased in the same period (EEA 1999: 203). Landfilling, the least favoured option from an environmental perspective remained the most common treatment for waste (EEA 2005: 32).

In the light of the failure of previous policies a further phase of policy making began in the early 2000s. Most importantly it was officially recognised that waste generation was strongly linked to economic activity, meaning that, if Europe’s economy grew, so too would the waste problem. It was also established that there was a particularly close link between economic growth and waste from the construction industry (EEA 2000). While the waste

hierarchy was not removed as a general solution, further emphasis was placed on the first point, the prevention of waste and the sustainability principle of decoupling (breaking the link between) economic activity and waste production became the focus of further policy. Thus, the EU's 6th environment action programme called for 'absolute decoupling', that is an overall reduction in the volumes of waste generated. Decoupling occurs if the growth rate of waste amounts is less than the growth rate of the economic driving force over a certain period of time. Relative decoupling occurs when waste amounts continue to grow, although at a slower rate than the underlying economic driver. Absolute decoupling is when environmental pressure is decreasing during a period of economic growth. (EEA 2005: 27). Projections drawn up for the years 2000 to 2020 on the basis of current policy in place, indicates that in the EU, most waste streams are expected to decouple relatively, but not significantly, from GDP by 2020 (EEA 2005). None are expected to decouple absolutely and it appears that the further waste target of absolute decoupling will not to be met in the foreseeable future (EEA 2005). This review of EU policy and its 'application' suggests that current trends in waste management are recognised as being unsustainable but that increases are not being counteracted effectively. In short, waste policy is failing to achieve its principal objectives.

Sustainability and Effectiveness in Ireland

There are disastrous eco-social consequences arising from recent economic development trends when we view those trends from a perspective of environmental sustainability. Have real achievements been secured by the policy adopted for Ireland in response to the spiralling increase in waste production and the increased pressures from the EU to regulate waste?

Table 1 provides major waste indicators figures for the latest waste produced, recovered, and disposed of in landfill for those years during which waste management policy has been

implemented. While the figures highlight huge efforts to manage waste, particularly at the three lower levels of the waste hierarchy, it is nevertheless evident that these efforts are not effectively counteracting waste increases. In summary, Irish policies and EU regulations are failing to stem the increasing flows in waste.

Indicator	2001	2002	2003
Municipal waste			
Municipal waste collected/person	0.59 tonnes	0.61 tonnes	0.65 tonnes
Municipal waste arising/person	0.69 tonnes	²¹ 0.69 tonnes	0.77 tonnes
Disposal rate for household and commercial waste collected	86.7%	79.3%	71.6%
Recovery rate for household and commercial waste collected	13.3%	20.7%	28.4%
Number landfills accepting municipal waste	48	39	35
Number of bring banks	1,436	1,636	1,692
Household waste			
Household waste collected/person	0.34 tonnes	0.36 tonnes	0.36 tonnes
Household waste arising/person	0.37 tonnes	²⁰ 0.39 tonnes	0.41 tonnes
Disposal rate for household waste	94.4%	90.7%	86.9%
Recovery rate for household waste	5.6%	9.3%	13.1%
Commercial waste			
Commercial waste collected/person	0.25 tonnes	0.25 tonnes	0.29 tonnes
Disposal rate for commercial waste collected	76.2%	62.5%	52.7%
Recovery rate for commercial waste collected	23.8%	37.5%	47.4%
Packaging waste			
Best estimate of total quantity arising	872,917 tonnes	899,125 tonnes	1,006,287
Packaging waste arising/person	0.223 tonnes	0.229 tonnes	0.267 tonnes
Best estimate of packaging waste recovered	221,266 tonnes	296,389 tonnes	419,600
Packaging waste recovered/person	0.056 tonnes	0.076 tonnes	0.107 tonnes
National recovery rate	25.3%	33%	41.7%
Hazardous waste			
Quantity of hazardous waste exported	275,309 tonnes	249,439 tonnes	389,199 tonnes
	226,904 recovery	203,136 recovery	224,749 recovery
	47,929 disposal	42,419 disposal	162,821 disposal
	476 unspecified	3,864 unspecified	1,629 unspecified

Table 1. Waste Indicators, 2001-2003 (Source: EPA 2004: 28)

In addition to this policy failure, there has been in Ireland considerable illegal waste activity recorded since the introduction of the Waste Management Act in 1996. Large scale dumping occurred in Wicklow from 1997 to 2002, and in 2005 there were still 25 unauthorised landfills and 15 unauthorised waste handling facilities (EPA 2005: 1). There has also been considerable cross border illegal movement of waste and fly tipping is a growing problem as new charges are introduced for waste disposal. In view of this propensity in Ireland for illegal activity, the EPA strongly advocates enforcement as key to progress on waste management (EPA, Sept. 15th, 2002: 2).

FUTURE DIRECTIONS

Ireland is at a turning point in relation to waste management. Efforts to manage waste, with or without enforcement, are no longer seen as sufficient unless integrated with processes of production and consumption. Discussing waste amounts and striving for the waste management hierarchy of more recycling and less disposal is still a necessity. However, there is also need for a more integrated approach that would examine:

- where and from what mechanisms the waste comes;
- what types of waste should not be produced;
- what resources go into the waste stream; and
- what resources can successfully be lifted out of the stream altogether.

An evidence-based understanding of waste flows can help to shape better waste regulation; but informed legislation still needs to be integrated into the wider debate on production and consumption patterns and resource management. This approach to waste, according to

Murray, 'promises to be, along with the information and knowledge revolution, one of the defining features of the post-industrial era' (Murray, 2004: 17).

Structural conditions encourage wasteful consumption and unsustainable patterns of production that lead to waste. Sustainable production and consumption are the only viable long-term options for society, but we have a long way to go to get there. Factoring in the production of waste to economic growth, and providing a waste costing system where the allocation of waste costs to producers and consumers would be conducted fairly, would provide part of a structural solution. Scientific innovation is also a necessary component of the switch to sustainability. Building on resource productivity is one of the key ways the scientific community can transform structural conditions. Of relevance here is the new 'materials revolution' being proposed by environmental engineers and scientists some of whom argue that materials productivity as opposed to labour productivity will form the basis of the post-industrial era. (Weizsaker et al., 1997)

While natural scientists and politicians have a role to play in regards to environmental sustainability, the role of the social sciences and humanities are also vital. Changing the social practices around consumerism should be part of developing sustainable consumerism. A social practice approach would address lifestyles in relation to wasting and could be used to would work towards a waste future where attention is focused on the changing patterns of behaviour around consumerism. The environmental pressures of consumption are generally lower than those of production, but are expected to grow significantly. Consumption patterns around eating, housing, travel and tourism are, as in the recent past, growing significantly and this marks a shift in the environmental burden away from production to consumption. Given this shift, it is necessary to develop innovative governance strategies for dealing with sharply rising patterns of consumption. The development of appropriate governance strategies would be designed by citizens and governments together, inspired by the critical need to organise

sustainable patterns of consumption. Shifts in lifestyles and societal preferences can make a huge difference in a world organised around consumerism (Spaargaren 2000). Restructuring various consumption patterns can be crucial in the future, and it is possible to organise if the focus is on the intersection of the structure of production with the lifestyle of the citizen/consumer, and not on the individual or the structure alone. The artists and the literary scholars, likewise, have their role to play in creating the imagery that will inspire the innovative generation of green environments and repulsion for the environmental destruction that currently confronts us.

To return to the present and the micro-level - where this chapter began, the citizen is actively engaged in relating to a social process and social relations of 'wasting' through their pattern of consumption. Customers purchase what has been produced in the format in which it is being produced. Citizens have some choice in this area as some ways of consuming, and some forms of consumption, are more environmentally 'friendly' than others. However, at present, consumerism is generally organized along lines concerned with profitability rather than a sustainable environment. Can the individual consumer be interpellated as an environmentally concerned consumer and can some or all markets respond to this trend?⁸ On average the number of waste bins continue to grow, there is more in them, and there are things in them that are worse for the environment than ever before. While the individual may not be producing the hair spray canister, the plastic tractor or the so-called 'disposable' nappies (a misnomer for something that takes years to decompose) they are playing a role in their wasting. In other words, the consumption pattern of the individual results in the waste bin, acknowledging that this could be a very different waste bin if the forces of production were regulated into producing less wasteful and environmentally damaging commodities. It could, in the future, be a bin of good waste. By that we mean it could be full of recyclable materials - particularly if bad waste has been phased out of production. Currently, however,

our purchasing and consuming needs to be informed by a recasting of an old opposition, one presented to us by the environmentalists: 'Where we used to think of good things and bad waste, we need think of good waste and bad things'. (Murray 2004: 19)

CONCLUSION

In conclusion, in Ireland waste is generated at a series of spatial levels or scales, both long term and in short-term attendance on the recent accelerated growth created by the Celtic Tiger economy. While benefiting greatly from globalisation, there have been environmental downsides to Ireland's economic success. To deal with this issue and reinvent the 'Green Ireland' of song and tourist board nostalgia, a genuine conceptual paradigm-shift is called for in relation to the waste process. This will entail a multiplex response in terms of the structures of production, governance, consumption patterns, scientific advances, national mindset and personal attitudes. The challenge is to plan and implement a waste future where Ireland takes up a leading position in the wider evolving green revolution. Its future depends on the ability of its politicians, citizens, scientists and business leaders to plan a more progressive Irish role in the green revolution. It would be a shame if the globally renowned cultural and social capital that has contributed to Ireland's success story was not now turned towards innovation for environmental sustainability in the approaching post-consumerist phase of globalisation.

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¹ From interview data held as part of the research carried out for the publication by G. Honor Fagan, Denis O Hearn, Gerard Mc Cann and Michael Murray *Waste Management Strategy: A Cross Border Perspective* (Maynooth: National Institute for Regional and Spatial Analysis, 2001).

² The EPA cannot account for this 10% increase other than to say that local authorities believe that the dramatic increase from 2002-2003 is likely to be because of increased quality of data as well as increased resource use and waste generation on the part of consumers and business (EPA 2003: 7). In 2004 they calculate that the municipal waste is at just over 3 million tonnes although there has been a 4% increase, because they have produced the figures based on a new methodology.

³ For further discussion on waste networks see Sociological Reflections on Governing Waste in *Irish Journal of Sociology* Vol.12, 1:67-85'.

⁴ For further discussion on opposition to government's strategy in Ireland see 'Waste Management and its Contestation in the Republic of Ireland' in *Capitalism, Nature, Socialism*, Volume 15, No.1, March, 2004 pp.83-102.

⁵ For further discussion on the multi-level nature of waste management governance in Ireland see Boyle, M. 2002. 'Cleaning up after the Celtic Tiger: Scalar 'Fixes' in the Political Ecology of Tiger Economies' in *Transactions of the Institute of British Geographers*, NS 27: pp172-194

⁷ For discussion on how the multi-level governance approach of waste management has impacted at the local level, see Murray, M (2003). *Waste Management in Ireland: A Case Study on the Impact of Transnationalisation on Governance*, Ph.D. Thesis: NUI Maynooth

⁸ See the debates in Timothy Luke "Green Consumerism: Ecology And The Use Of Recycling", in *Ecocritique*, (University of Minnesota Press, 1977).