Polluting the poor:
an emerging environmental justice agenda for the UK?

Gordon Walker and Karen Bickerstaff

ISBN: 0 902986 70 8
PRICE: £2.50 (p&p)

First published in Great Britain 2000 by Goldsmiths College, University of London, New Cross, London SE14 6NW.

Further copies of this publication are available from CUCR, Goldsmiths College, London SE14 6NW.

Polluting the poor:
an emerging environmental justice agenda for the UK?

Gordon Walker and Karen Bickerstaff

This paper was given at the conference on Environmental Justice in a Divided Society, held at Goldsmiths College, University of London, 25 February 2000

In May this year Friends of the Earth released a report identifying a relationship between the location of polluting industrial sites and low income communities in England and Wales (FOE 1999). It has rightly been seen as an important and significant study. It represents the first time that a mainstream environmental group in the UK has addressed the social dimensions of exposure to environmental risks. The finding that 662 of the sites coming within the Integrated Pollution Control (IPC) system in England and Wales are located in areas with household income of less that £15,000, whilst only 5 are in areas where average household income is above £30,000, provides powerful evidence of a far from equitable distribution of important point sources of pollution. The report is full of striking, if maybe unsurprising, statistics; for example that in London over 90% of IPC factories are located in areas with below average household income; and that the average household income of £17,640 in areas with no sites, steadily falls as the number of sites per area increases. As the report argues *'this is the sharp end of social exclusion. On top of unemployment and crime these families and communities face the grime of industrial pollution. Here pollution is as far from a middle-class concern as it can get'.*

In the United States, such a report would hardly cause a stir. As reported by Bob Bullard in a recent issue of this journal (Bullard 1999), for over 15 years there has been an accumulating mountain of research investigating the social and, in particular, racial distribution of various forms of environmental risk. Many of these studies have found similarly compelling evidence of hazardous sites disproportionately located in areas with a high minority population and/or high levels of poverty. A vocal environmental justice movement has emerged in the US, adding social dimensions to what had hitherto been the 'nature and wilderness' dominated agenda of American environmental NGOs and making major impacts on environmental policy and regulation.

In contrast, in the UK what attempts there have been to introduce social justice issues into domestic environmental politics have been low profile.

Environmental justice has not explicitly reached the mainstream political agenda or impinged in any way upon the practice of environmental institutions and regulatory bodies. Andrew Dobson has observed that in comparison to the the emphatic arrival of justice on the environmental agenda in the US, there has been no '*direct equivalent*' in Britain (Dobson 1998; 26); Jonathan Porritt similarly comments that *'in stark contrast to the US there is no real environmental justice movement in this country'* (Porritt 1997, 72). There have been a number of UK-based environmental groups adopting an overtly social dimension to their work, such as the Black Environmental Network (Agyeman 1991), but they have achieved nothing like the impact of environmental justice groups in the US. The more mainstream environmental groups in the UK have typically been 'socially blind' in addressing home-based environmental concerns, although the formation of the Real World Coalition in 1996 marked a significant step away from this position. Partly as a consequence research needed to substantiate claims of environmental injustice has not been undertaken, whereas in the US work on environmental justice has been seen as one of *the* major contribution of the social sciences to the environmental literature.

Various reasons for the contrasting situations on each side of the Atlantic can be put identified. First, the civil rights movement in the US has provided much of the impetus behind the environmental justice agenda. The UK lacks the intense civil rights politics and history evident particularly in the southern States of the US, where the environmental justice movement first emerged and where marked ecological disparities were evident between black and white communities. In the UK the pattern of distribution of ethnic communities is less distinct and evidence of 'environmental racism' in facility siting less immediately apparent (although this is not to say that it does not exist in more subtle forms).

Second, the focus of the movement in the US has been on particular kinds of pollution - toxics, landfills and dangerous contaminants - which have not been as high on the British agenda. As Harvey (1996) points out the high profile of toxics in the US after Love Canal loaded accusations of environmental inequity with intense political symbolism. The US movement drew on powerful icons, achieving substantial moral force and capacity for moral outrage. There has been some grassroots focus on toxic risks in the UK, through for example the Community Lobby Opposing Unhealthy Tips (CLOUT) and Communities Against Toxics (CAT), but a substantial national profile has never been achieved.

Third, and at a more practical level, restrictions on access to information in the UK have until recently constrained the mapping and analysis of the social distribution of sources of risk. In the US the protection of information access rights and requirements for the production of toxic release inventories enabled environmental justice research to be far more readily carried out.

The Friends of the Earth study could in this context mark the beginning of a significant new dimension to environmental debate in the UK. However, it is important to recognise that claims of environmental injustice raise a series of difficult questions - what actually do we mean by environmental (in)justice and therefore how do we measure it, how can differential patterns of risk exposure be explained, what forms of policy response should be made to findings of inequity? Experience in the US has shown that accusations of environmental injustice are far from uncontroversial or uncomplicated, and that there is an involved set of issues to be addressed.

Measuring Injustice

For a start, there is the question of how environmental injustice or inequity is to be identified. One of the earliest major studies in the US to identify inequitable patterns in the siting of hazardous facilities, was commissioned by the United Church of Christ (UCC) Commission for Racial Justice (1987). This found that race was a more significant predictor of where licensed commercial hazardous waste facilities were located in the United States than a variety of measures of income and property values. This landmark study provided the benchmark for a flurry of follow up research and made a major political impact through accusations of 'institutionalised' environmental racism in processes of facility siting. However, as with epidemiological research into patterns of ill-health, assessments of the social distribution of risks are fraught with problems of spatial scale, data selection and statistical significance, providing more than sufficient ammunition for disagreement and challenges to study results. This was clearly demonstrated by research published by Anderson and colleagues (1994) reanalysing the data used in the earlier UCC study. They argued that the finding of the UCC study were an artefact of geographic scale. The UCC study had used large spatial units (zip codes) to analyse demographic variables. Reanalysis using smaller spatial units (census tracts) found no significant

relationship between minority populations and toxic waste sites, with the authors asserting that *'evidence of racial and ethnicity inequity in the location of hazardous waste facilities is almost non-existent'*. Anderson et al were in due course accused of manipulating the data in their research, with critics knowingly pointing to the fact that the study was funded by a private chemical waste company.

A range of other problems with environmental justice research have been identified. These include the deficiencies of databases of hazardous sites, the difficulties involved in taking account of the accumulative impacts of different types of risks, and the presumption, in much of the research, that simple geographical proximity to a hazardous sites will actually lead to exposure to the pollution it is releasing. On this last point the distribution of emissions from chimney stacks, for example, are often complex, with meteorological conditions leading to patterns of pollution exposure which are spatially irregular. The closer you live to a source of air pollution does not therefore necessarily imply a higher level of exposure. Similarly a hazardous waste site may have a complex pattern of impacts which have little to do with simple geographic proximity. An excellent review of the US literature recognises these complexities, but still argues that patterns of inequality appear to stand up to scrutiny in the findings of a diversity of research studies:

> *'As the studies accumulate, interpreting the findings becomes increasingly challenging. The relationship between demographics and unequal exposure to environmental risk is most elusive in national-level studies, but shows up consistently in smaller-scale studies. At those scales , sometimes race is the main finding, sometimes income or occupation, sometimes another social category such as age'* Szasz and Musser (1997)

In the light of the weight of research and critical analysis undertaken in the US, the FOE study inevitably sits a little precariously. However the full FOE report, to its credit, explicitly recognises the limitations of the analysis undertaken and identifies the need for verification and further research (although the press release and summary were inevitably less cautious). It, for example, acknowledges the need for a finer scale of analysis to reveal patterns that may be concealed at a regional level, and for an approach which categories IPC sites by their nature and/or scale rather than treating them all equally. It is also clear about the difficulties involved in using proximity as a surrogate for exposure and about the limitations of the data on IPC sites and processes provided by the Environment Agency. What is less apparent in the report is the need

to use statistical tests to establish the significance of the relationships it has identified. Whilst in some cases the disparities between areas of different income appear so strong as to undoubtedly be highly statistically significant, in others the data is more finely balanced and in need of closer investigation.

The Causes of Injustice

The second major question raised by evidence of inequity in the distribution of risky sites is one of causation. The FOE study briefly suggests two possible explanations for the patterns it has found - siting policies which are actively directing hazardous facilities towards low-income areas, and the dynamics of housing markets leading to a decline in property values subsequent to the facility siting. These two explanations (and more besides) have been the subject of much debate within the US literature. Early studies failed to really address the question of causation, pointing the finger rather simplistically at siting processes which, in response to well organised NIMBY campaigns against development in more middle class areas, were taking the easy route of targeting less powerful and empowered low income and minority areas (generating in the process a new acronym, 'PIBBY' - Put it in Black's Backyards). Some compelling, if rather limited, evidence of cynical targeting of vulnerable communities was identified, including, for example, a consultants report in 1984 to the California Waste Management Board which explicitly recommended that companies locate new waste sites in lower socio-economic neighbourhoods in order to avoid the opposition typically encountered in higher-income areas (PinderHughes 1996).

Recently the environmental justice literature in the US has, however, pointed out that studies of the contemporary pattern of population tell us nothing about the social make up of communities when facilities were first established, in some cases decades before the research into demographic characteristics was undertaken. Again a reanalysis of the data used in one of the classic studies on environmental racism, examining the locations of waste sites in Houston, revealed that at the time the landfills were first established there was little evidence of a bias towards siting in areas with high proportions of African-Americans (Been 1994). By 1990, the character of the communities near to the sites had shifted markedly, so that at eight of the nine sites, the city average proportion of African Americans was exceeded. Such historically-sensitive evidence suggests that it is the social and spatial dynamics of the housing market which has led to inequitable distributions of risk,

rather than the facility siting process. Again this is contested territory with for example, the original author of the Houston study arguing that the reanalysis had omitted a number of waste facilities and had failed to pick out concentrations of minority populations in closest proximity to the waste sites (Bullard 1996).

In a UK context, it is clearly necessary to take account of the long history of industrial and urban development when considering questions of causation. Many of the sites in the FOE study have been in existence for a long time. For example, the FOE report highlights the situation on Teesside, where a large number of sites are located in areas of low income. Many of these sites are part of the chemical and petrochemical industry which has existed on Teesside since the turn of the century, with a major expansion into the reclaimed Seal Sands area occurring during the 1960s and 70s. Understanding how the contemporary association between polluting sites and poverty was created, needs to take account of this history and the relationship between industrial, demographic and urban change over the intervening period (Pulido 1996). However, even if much injustice in risk distributions can in this way be attributed to historic processes, this does not mean that contemporary siting policies are not serving to maintain and/or intensify inequalities that already exist - for example, by directing new hazardous developments to areas that already have similar sites (Walker 1998). There are also policy issues to be addressed if the operation of housing markets and the allocation of social housing places are continuing to push the poor and vulnerable towards more risky places to live.

Responding to Injustice

The third major question is one of response. If unjust patterns of risk exposure are identified what then can and should follow? Experience in the US shows that for low income or minority communities resisting hazardous developments, evidence of macro-level inequity in the distribution of risks can provide powerful ammunition (Bullard 1999). For environmental groups in the UK then, environmental justice may become a new dimension of the politics of siting processes and local relations with existing site operators. The FOE research has the potential to empower local protestors - the data is available on the internet with an interactive mapping system allowing individuals to examine the relationship between income and the location of polluting factories in their area. However, one of the fundamental arguments of the environmental justice movement is that marginal groups in society have often not been empowered, but rather excluded from conventional

participation and decision-making processes. In this respect, a necessary policy response is the scrutiny and reform of participatory mechanisms to ensure that they are inclusive in allowing and achieving equal opportunity of participation by different social groups. Decisions also need to be properly informed about the social characteristics of communities potentially to be exposed to new sources of risk. This could be achieved through, for example, the extension of the remit of Environmental Impact Assessments and local development plans to include the collection of data on the social distribution of risks.

In terms of more strategic planning policies, environmental justice raises some very thorny questions about where we should be directing and allowing new hazardous developments. If we are seeking greater equity in the outcomes of decision making, should there be a positive policy of pushing new hazards towards higher income areas, to address the imbalance of current risk exposures?. According to recent evidence from Micheal Meacher given to the Select Committee on the European Communities we will need to build between 50 and 177 new incinerators in the UK over the next 10 years to comply with European Directives on landfill and incineration (ENDS 1999). Should these incinerators be purposefully directed towards the leafy suburbs and away from the council estates? This is difficult to envisage given the current politics surrounding new development proposals, but has been a policy adopted at least in principle in some parts of the US. Should there similarly be a policy of resisting any further intensification of risk in poorer areas already sharing an inequitable risk burden, even if the communities involved are prepared to take new sources of risk because of the economic gains to be made? Does this amount to a form of 'toxic economic blackmail' that should be resisted? These are difficult questions and ones that have not been happily resolved in the US. To an extent campaigners have attempted to avoid prescriptions which simply reallocate risks, by arguing for an across the board reduction in the use of hazardous technologies and the production of toxic chemicals. Whilst a laudable and vital longer term aim, in the shorter term there will still be risks to be faced and siting decisions to be made, and for this reason questions about the justice of decision outcomes do need to be addressed.

These are all, to an extent, responses for the future. At this point in time, what is most clearly required is to build on the FOE study with a programme of further research. The FOE study examines the spatial patterns of only one category of installation (IPC sites) in relation to only one social variable (income). Further research needs to examine

whether other categories of facilities, such as landfill and major accident hazard sites are similarly located in predominantly poor areas. Differential exposures might also exist (as they do in the US) for more diffuse forms of risk such as air and pesticide pollution, and lead in drinking water. The social distribution of each of these forms of risk needs to be carefully examined taking account of the various methodological complexities discussed earlier. As the US experience demonstrates there are other social variables beyond income to be considered - how about, for example, the distribution of risk in relation to ethnicity, gender and age? FOE also make the case for more epidemiological research to examine the health impacts of living in proximity to hazardous sites. The whole question of causation merits detailed analysis, as does the fairness of processes of decision-making. There are also questions to be asked about the 'impartiality' of environmental regulation. Research in the US has identified evidence of a bias in frequency of inspection by regulatory bodies towards waste sites in white, high income areas. Can the Environment Agency or Health and Safety Executive in this country be sure that the more vocal protests of middle class communities are not distorting the supposed 'level playing field' they operate in directing their scarce regulatory resources?

Whilst the UK is unlikely to ever realise the civil rights dynamism which has driven the environmental justice movement in the US, there is clearly an agenda ripe for attention which links closely with the broader imperatives of social inclusion stressed by the current government. As Agyeman and Evans (1999) point out there is a broad range of environmental concerns that can be approached from a social justice perspective, extending far beyond the focus in this discussion on toxic risks. In this light the FOE study, despite its limitations, could provide a key landmark from which a challenging environmental justice agenda emerges in the UK.

References

Agyeman, J. (1987) Black people in a white landscape: social and environmental justice, *Built Environment*, 16(3), pp 232-236

Agyeman, J and Evans, B. (1999) Sustainability, equity and environmental justice, *Local Environment*, 4(1), pp 3-4.

Anderton, D et al (1994) Environmental Equity: the demographics of dumping, *Demography*, 31, pp 229-48.

Been, V. (1994) Locally undesirable land uses in minority neighbourhoods: disproportionate siting or market dynamics?, *Yale Law Journal* 103(6), pp1383-422.

Bullard, R. (1996) Environmental justice: its more that waste facility siting, *Social Science Quarterly*, 77(3), pp 493-499.
Bullard R (1999) Dismantling environmental racism in the USA, *Local Environment*, 4(1), pp 5-20.

Dobson, A. (1998) *Justice and the Environment* (Oxford, Oxford University Press).

ENDS, EC proposals on incineration may scupper several UK plants, *ENDS Report*, 291, pp38-39, 1999.

Friends of the Earth (1999*) Pollution Injustice: the geographic relation between household income and polluting factories*, (London, FOE) (www.foe.co.uk/pollution-injustice)

Harvey, D. (1996) *Justice, Nature and the Geography of Difference* (Oxford, Blackwell).

PinderHughes, R. (1996) The impact of race on environmental quality: an empirical and theoretical discussion, *Sociological Perspectives*, 39 (2), pp 231-248.

Pulido L et al (1996) An archaeology of environmental racism in Los Angeles, *Urban Geography*, 17(5), pp 419-439.

Szasz, A. and Meuser, M. (1997) Environmental inequalities: literature review and proposals for new directions in research and theory, *Current Sociology*, 45(3), pp100-120.

United Church of Christ Commission for Racial Justice (1987) *Toxic wastes and race: a national report on the racial and socioeconomic characteristics of communities with hazardous waste sites*, (United Church of Christ, New York).

Walker, G. P. (1998) Environmental justice and the politics of risk, *Town and Country Planning*, 67(11), pp 358-360.