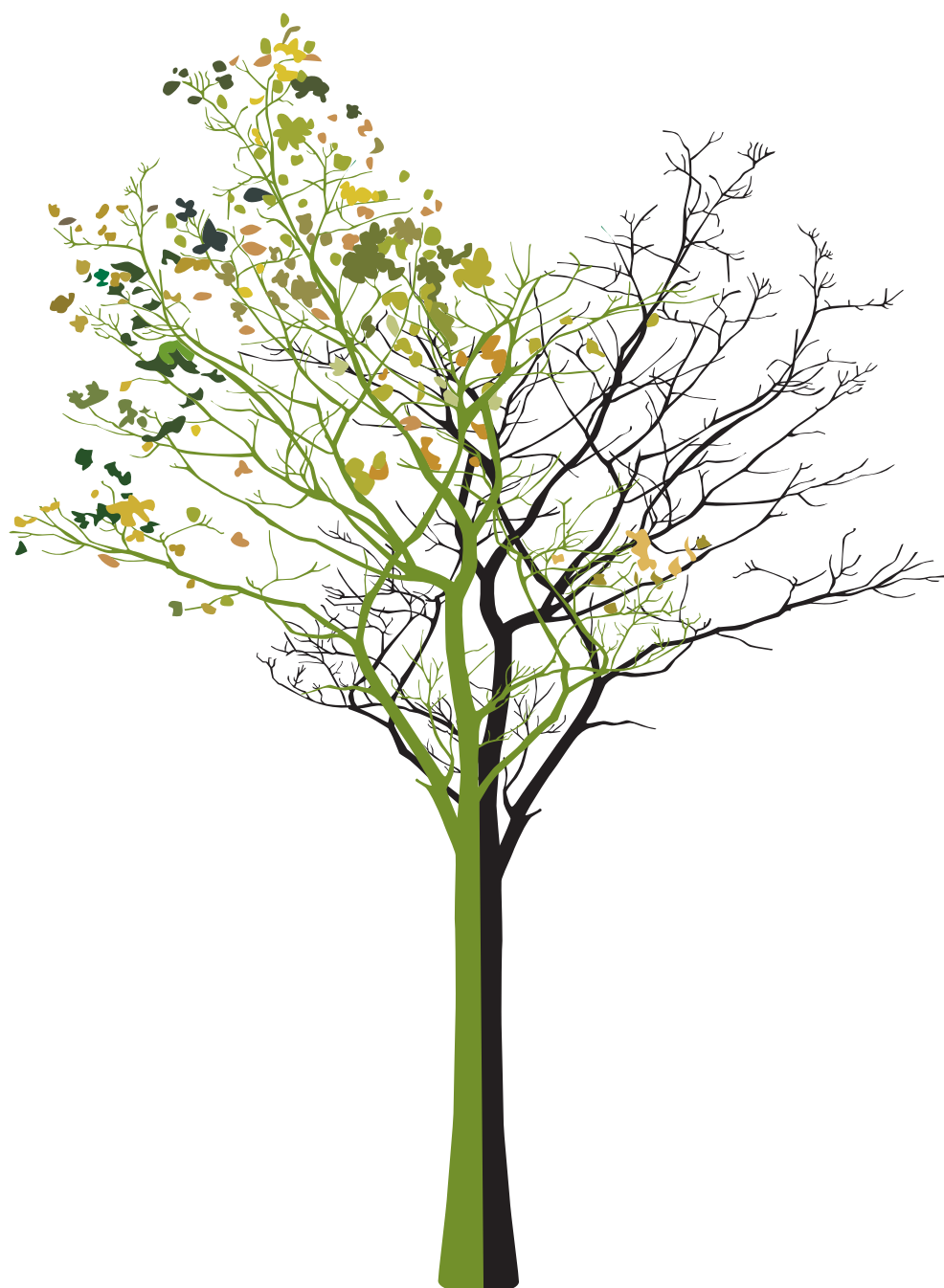


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Making the case for environmental and social justice in Central and Eastern Europe

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MAKING THE CASE
FOR ENVIRONMENTAL
JUSTICE IN CENTRAL
& EASTERN EUROPE



MAKING THE CASE FOR ENVIRONMENTAL JUSTICE IN CENTRAL & EASTERN EUROPE

- . CEU Center for Environmental Policy and Law (CEPL)
- . The Health and Environment Alliance (HEAL)
- . The Coalition for Environmental Justice

Editor: Tamara Steger / Design: www.farm.co.hu

MARCH, 2007 – BUDAPEST, HUNGARY

Dear Colleagues and Friends,

As part of a collaboration between the Health and Environment Alliance (HEAL), the Central European University, Center for Environmental Policy and Law (CEPL), and the Coalition for Environmental Justice, we bring you groundbreaking research on environmental justice in Central and Eastern Europe. This collaboration, supported by the Open Society Institute, the European Commission, DG Environment, and the CEU Department of Environmental Sciences and Policy, further affirms the importance of the relationship between environmental conditions and human health. It ultimately takes this relationship to a new level by stressing the role of discrimination and racism in the distribution of environmental harms and benefits and the impacts on community health.

How did we get here? In 2003, CEPL embarked upon an important effort to promote environmental justice in Central and Eastern Europe. Through two intensive workshops financed by PHARE and the Open Society Institute, lawyers, activists, and academics from environmental and human rights backgrounds in Central and Eastern Europe came together and launched an initiative to address environmental injustice. As a result, the Coalition for Environmental Justice (CEJ) was created (http://groups.yahoo.com/group/coalition_environmentaljustice).

This initiative was later joined by activists, lawyers, and academics working on environmental justice in the United States culminating in the Transatlantic Initiative on Environmental Justice (http://calcultures.ucsd.edu/transatlantic_initiative/Final). This initiative was launched by CEPL in collaboration with the California Cultures in Comparative Perspective at the University of California, San Diego and the Institute for Culture and Ecology and supported by the Trust for Mutual Understanding and the Roma Participation Program of the Open Society Institute.

In 2006, HEAL and CEPL joined forces to investigate the health aspects of environmental injustices and generate a policy framework for environmental justice in Europe. This report is hence a culmination of ongoing efforts to promote environmental justice as well as a compilation of evidence that demonstrates the need for the work ahead to build environmental justice in Europe. Our goal, and the purpose of this report, is to raise public awareness on the role of discrimination in degrees of exposure to environmental harms and access to environmental benefits, and to assist and encourage policymakers, civil society and citizens to remedy environmental injustices.

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TABLE OF CONTENTS

Contributing Authors and Researchers	4
Acknowledgements	6
SECTION I. Introduction	9
WHAT IS ENVIRONMENTAL JUSTICE?	10
THE BIRTH OF THE ENVIRONMENTAL JUSTICE MOVEMENT.	11
Environmental Justice in the United States	11
Environmental Justice: Is it a Race or a Class Struggle?	12
Defining Environmental Justice	12
Environmental Justice for All	13
SECTION II. Environment, Health, and Human Rights: A Framework for Environmental Justice in Europe	15
Discrimination in the Distribution of Environmental Risks and Benefits	15
Exporting Environmental Risks to Developing Countries	16
Right to a Clean Environment	16
Environmental Protection, Poverty Reduction, Social Inclusion, and Civil Rights	17
Environmental Justice and the Roma	19
SECTION III. Exposure to Pollution	22
Case Study: Internal Displacement Camps in Mitrovica/e, Kosovo	23
Case Study: Romania	25
Case Study: Pätoracké, Eastern Slovakia	26
Case Study: Veles, Macedonia	29
Case Study: Durres, Albania	29
SECTION IV. Flooding	31
Case Study: Ostrava, Czech Republic	32
Case Study: Hermanovce, Jarovnice, and Svinia, Slovakia	33
SECTION V. Denied Benefits: Access to Water, Waste Management, Sewerage, and Natural Resources	37
Case Study: Fakulteta Settlement in Sofia, Bulgaria	38
Case Study: Deponija, Serbia	43
Case Study: Zabijanec, Eastern Slovakia	44
SECTION VI. Environmental Justice: The Unique Circumstances of Women and Children	47
SECTION VII. Occupational Hazards	49
SECTION VIII. Promoting Environmental Justice in Europe	50
POLICY ACTION FRAMEWORK FOR ENVIRONMENTAL JUSTICE	50
Establishing a Working Group and Coordination Bodies on Environmental Justice	50
Conducting Research on Environmental Justice	51
Developing Mechanisms and Financial Instruments for Action	51
Strengthening EU Laws to Promote Environmental Justice	51
SECTION IX. Conclusion	53

APPENDIX	54
Appendix Environmental Justice Framework	54
Distributive	54
Procedural	54
Capacity and Agency	55
Entitlement	55

SECTION I. INTRODUCTION

In recent years, a number of countries have begun to address a phenomenon known as “environmental injustice” or “environmental racism”. These terms represent the observation that members of ethnic minorities, communities of lower socio-economic status, the least educated and otherwise marginalised segments of society disproportionately: 1) suffer from exposure to environmental hazards due to their proximity to hazardous waste sites, incinerators, factories, and other sources of pollution, and/or 2) are denied environmental benefits such as water, sewage treatment facilities, sanitation, and access to natural resources. This assertion has been supported by research in the United States, the United Kingdom, South Africa, New Zealand, and now in Central and Eastern Europe.

With the recent and upcoming Eastern enlargements, the time to confront the problem of environmental injustice in Europe has arrived. The crisis of environmental injustice in Europe is becoming increasingly evident. This report, a compilation of case studies and examples demonstrating the need for environmental justice in Central and Eastern Europe and the Balkans, focuses on community health impacts associated with such injustices. One of the most explicit manifestations of environmental injustices is the status of the health of the affected communities. More egalitarian states have better health.¹ The health status of Roma, a minority group within Europe that frequently experiences discrimination and marginalization, is generally worse than non-Roma populations, and this disparity can be attributed partly to poor living conditions.² Refugees and displaced persons also tend to suffer disproportionately from poor environmental conditions. Environmental abuses often result in various exposure-related illnesses, and bring about significant increases in the rate of cancer, asthma, chronic bronchitis, emphysema and other respiratory diseases, reproductive and birth defects, immunological problems, and neurological disorders. These health risks are often coupled with limited access by marginalized groups to adequate health care facilities and services that specialize in, or even recognise, health effects resulting from environmental exposure. The “environmental justice” movement seeks to remedy these inequities.

This research is based on a review and analysis of data from field studies, journals, internet sites, environmental, human rights, and health organizations, and media coverage about groups and communities in Central and Eastern Europe subjected to environmental hazards where they live, work and play, and/or denied access to environmental benefits such as clean water, air, and soil, sewerage, and sanitation. We compiled available case study data, and convey the environmental living conditions and community health status of those who are most vulnerable in Central and Eastern European society.³ They are vulnerable for many reasons including a lack of access to meaningful information, exclusion from or lack of capacity to participate in the political process, discrimination by the majority population, and marginalization from the mainstream activities and institutions of society (e.g., job market, social services, citizenship, etc.).

¹ Wilkinson, R. 1996. *Unhealthy societies: The afflictions of inequality*. Routledge, London.

² Koupilova, Ilona; Epstein, Helen; Holcik, Jan; Hajioff, Steve, and Martin McKee. 2001. Health Needs of the Roma Population in the Czech and Slovak Republics. *Social Science and Medicine*, 53(9):1191-1204.

³ Note that the cases presented in this report were not chosen using random sampling techniques or specifically chosen due to degrees of intensity of environmental injustice, rather they simply reflect data accessibility and expertise of the contributing authors.

While environmental justice has to do with preventing and overcoming discrimination and racism in general with regards to the distribution of environmental harms and benefits, we have found that the Roma present a striking case in Central and Eastern Europe. They make up one of the most prominent ethnic minority groups in Europe, and also are amongst the poorest and least educated. Further, it is widely known that they face systemic discrimination. Many Roma communities are located in polluted areas, causing “serious and irremediable effects on their immune system” and high rates of infection and risk of disease.⁴ In Hungary, for example, Roma predominantly inhabit the eastern and north-eastern part of the country where the socialist industrial legacy is most prominent.⁵ Hence, while this report is not only about the Roma, the Roma population is stressed, revealing some of the most blatant cases of environmental injustice in Europe, and perhaps the biggest opportunity to promote environmental justice in Europe.

DEFINITION OF ENVIRONMENTAL INJUSTICE

An environmental injustice exists when members of disadvantaged, ethnic, minority or other groups suffer disproportionately at the local, regional (sub-national), or national levels from environmental risks or hazards, and/or suffer disproportionately from violations of fundamental human rights as a result of environmental factors, and/or denied access to environmental investments, benefits, and/or natural resources, and/or are denied access to information; and/or participation in decision-making; and/or access to justice in environment-related matters.

DEFINITION OF ENVIRONMENTAL JUSTICE

A condition of environmental justice exists when environmental risks, hazards, investments and benefits are equally distributed without direct or indirect discrimination at all jurisdictional levels and when access to environmental investments, benefits, and natural resources are equally distributed; and when access to information, participation in decision-making, and access to justice in environment-related matters are enjoyed by all.

What is environmental justice?

The environmental justice movement came about as communities struggled against unequal treatment and discrimination in the distribution of adverse environmental effects. As a concept, it helps to unveil the relationship between environment, health and human rights, challenging environmentalists, health workers, and human rights advocates to reevaluate the traditionally delineated boundaries of their work.

Environmental justice is about the distribution of environmental harms and benefits, and access to and consideration in procedures dictating their distribution. Justice is usually defined as a concept involving the fair, moral, and impartial treatment of all persons, especially under the law. Distributive and procedural justice is critical to environmental justice. Distributive justice is the doctrine that a decision is just or right if all parties receive what they need or deserve. It is often contrasted with procedural justice emphasizing equal access to forums and procedures where important decisions are made about people’s lives. Distributive justice concentrates on just outcomes, while procedural justice concentrates on just processes. The Coalition for Environmental Justice, made up of environmental and human rights organizations in Central and Eastern Europe, developed definitions of environmental justice and environmental injustice and generated a framework for assessing environmental justice (see Appendix Environmental Justice Framework).

⁴ Agency for Community Development. 2006. Roma Access to Social Services: 2005 Facts and Trends. See also Hajioff, S. and McKee, M. 2000. The health of the Roma people: a review of the published literature, *Journal of Epidemiology and Community Health* 54: 864-9.

⁵ Puporka, Lajos and Zsolt Zadori (Roma Press Center). 1999. The Health Status of Roma in Hungary. World Bank Regional Office Hungary, NGO Studies No. 2.

The Birth of the Environmental Justice Movement

At the beginning of the 1980's, what became known as the environmental justice movement grew organically out of local struggles and other social movements in the United States.⁶ Several key cases put the spotlight on environmental discrimination. Minorities and the poor began to voice concerns about how they were bearing the brunt of the industrialized world's pollution. It is important to note, however, that the cry for environmental justice to combat discrimination in the distribution of environmental benefits and harms is not new, nor does it strictly find its origins in the environmental justice movement in the United States. People all over the world, especially in a context of what is considered the North and South debate on environmental issues or postcolonial environmentalism, have experienced and fought against social injustice and environmental degradation for a long time.

Environmental Justice in the United States

Given the articulated inception of the environmental justice movement in the United States, a brief description of the development of the movement in the United States is still warranted. In addition to its strong connection to the civil rights movement, the US environmental justice movement also gained some of its momentum from past struggles regarding housing and labor issues.⁷ The movement, grassroots in nature, became known for applying direct action protest to effectuate demands. The case that is considered to have launched the movement involved a protest against a toxic waste dump by African Americans in Warren County, North Carolina in which African Americans organized for the first time to protest against the environmental damaging impacts of a toxic waste dump in 1982.⁸ Another case related to the movement's beginnings took place in Love Canal, New York⁹. Love Canal, a former industrial site, began to ooze toxic waste into the basements of homes and into the soil of a local playground in a low-income housing development built on top of the site. Organized by a neighborhood mother and housewife named Lois Gibbs, the working class community of Love Canal mobilized to pressure the Federal Government into securing them a safer environment. Despite the lack of administrative support, President Jimmy Carter eventually declared Love Canal a disaster area and evacuated the residents. This case serves as a landmark initiative in the fight for clean communities and the protection of public health at risk from environmental problems.¹⁰ This case also brought the anti-toxics movement into national prominence.

The Warren County and Love Canal cases among others demonstrated that those who are socially or economically disadvantaged suffer more from, and are more likely to be more exposed to, environmentally problematic infrastructure such as toxic waste dumps. Although race and class are

⁶ Cole, L.W., and Foster, S.R. 2000. *From the ground up: environmental racism and the rise of the environmental justice movement*. New York: New York University Press.

⁷ Novotny, P. 2000. *Where we live, work and play: the environmental justice movement and the struggle for a new environmentalism*. Westport, CT: Praeger.

⁸ Bullard, R.D., and Johnson, G.S. 2000. Environmental justice: grassroots activism and impact on public policy decisions making. *Journal of Social Issues* 56(3): 555-578. McGurty, E.M. 2000. Warren County, NC, and the emergence of the environmental justice movement: unlikely coalitions and shared meanings in local collective actions. *Society and Natural Resources* 13: 373-387.

⁹ A former toxic waste dump.

¹⁰ Robinson, E. E. 2002. Community frame analysis in Love Canal: understanding messages in a contaminated community. *Sociological Spectrum* 22: 139-169.

not the only factors contributing to the disproportionate distribution of pollution among the population, they were essential in animating the environmental justice movement.¹¹ Still, however, there is ongoing debate as to whether it is race or class that more accurately dictates the nature of the discrimination.

Environmental Justice: Is it a Race or a Class Struggle?

Whether environmental injustices are predominantly driven by race or class inequalities continues to be explored, especially in scholarly circles. Hockman, for example, came to the conclusion that:

...in a comparison among those studies [on environmental injustice] where the effects of race were also included, race was, in six studies, the more dominant factor in predicting exposure to toxins, while social class had, in three studies, the greater impact.¹²

The 1987 breakthrough study, *Toxic Waste and Race*, sponsored by the United Church of Christ concluded, however, that “race was the central determining factor in the distribution of chemical hazard exposure in the United States.”¹³ Bullard reached a similar conclusion:

[That] 60% (15 million) of African-Americans live in communities with one or more abandoned toxic waste sites. Of the nation’s licensed commercial landfills, 60% are located in predominantly African-American or Latino-American communities. This accounts for 40% of the nation’s total estimated landfill capacity.¹⁴

Whether it is a race or class phenomenon, or both, the conclusion is that groups disadvantaged by developers, decision-makers, or simply by the more powerful and influential segments of society suffer more from environmental hazards than majority populations. The need for substantial research on the correlation between class, race and pollution, however, persists. Despite the ongoing debate on the role of race and class in environmental justice, definitions of environmental justice emerged as the movement grew.

Defining Environmental Justice

As the movement matured, the effort to define environmental justice became increasingly important. The United States Environmental Protection Agency defines environmental justice as the “fair treatment for people of all races, cultures, and incomes, regarding the development of environmental laws, regulations, and policies.”¹⁵ In 1991, the United Church of Christ

¹¹ Historical patterns of land use and population density can also be considered relevant factors in the distribution of environmental harms (and benefits).

¹² Hockman, E.M., and Morris, C. M. 1998. Progress towards environmental justice: a five-year perspective of toxicity, race and poverty in Michigan 1990-1995. *Journal of Environmental Planning and Management* 41(2): 157-176.

¹³ Bowen, W. M., and Wells, M. V. 2002. The politics and reality of environmental justice: a history and considerations for public administrators and policy makers. *Public Administration Review* 6 (62): 688-698.

¹⁴ Bullard, R.D. 1993. Anatomy of environmental racism. In *Toxic struggles: the theory and practice of environmental justice*, ed. R. Hofrichter. Philadelphia: New Society

¹⁵ United States Environmental Protection Agency (EPA). 2002 Environmental justice in waste programs. URL: <http://www.epa.gov/swerosps/ej/index.html> [Consulted 11 February 2003]. .

Commission for Racial Justice¹⁶ co-organized the *First National People of Color Environmental Leadership Summit*. The proceedings put forth the following definition of environmental justice:

Environmental Justice – is the fair treatment of people of all races, cultures and income with respect to the development, implementation and enforcement of environmental laws, regulations, programs, and policies. Fair treatment means that no racial, ethnic or socioeconomic group should bear a disproportionate share of the negative environmental consequences resulting from the operation of industrial, municipal, and commercial enterprises and from the execution of federal, state and local, and tribal programs and policies.¹⁷

More recently, in addition to the demand for equity in the distribution of environmental harms and benefits, the movement has been characterized as a call for recognition of diversity.¹⁸ This means that environmental justice is not only about inequalities in how environmental goods and bads are distributed based on race or class, but also about access and participation in decision-making that affects people's lives.

Thus, environmental justice is not only about who will get what, but also about the processes and procedures that govern how we decide the principles of social distribution. As Harvey put it: “The coupling of the search for empowerment and personal self-respect on the one hand with environmental goals on the other means that the movement for environmental justice twins ecological with social justice goals in quite unique ways.”¹⁹ This makes the environmental justice movement cross-sectoral and broad enough to engage groups and individuals with various backgrounds in environmental decisions.

Environmental Justice for All

A hallmark event in the environmental movement was the report of the World Commission on Environment and Development issued in 1987 (known also as the Brundtland Commission). The Brundtland Commission “pleaded with governments to consider the time dimension in all their decisions and to weigh benefits in the present against losses in the future.”²⁰ In addition to the already famous definition of sustainable development as development “that meets the needs of the present without compromising the ability of future generations to meet their own needs,” the Commission also stressed that “inequality is the planet's main environmental problem.”²¹

¹⁶ The United Church of Christ has been involved in the environmental justice movement since the Warren County case as a defender of human rights and supporter of racial equity.

¹⁷ United Church of Christ Commission for Racial Justice (UCCCRJ). 1991. *The Proceedings to the first national people of color environmental leadership summit*. October 24-27, 1991, in Washington DC. URL: <http://ecojustice.net/document/principles.htm> [consulted 10 May 2003].

¹⁸ Schlosberg, D. 1999. *Environmental justice and the new pluralism: the challenge of difference for environmentalism*. Oxford: University Press.

¹⁹ Harvey, D. 1999. The environment of justice. In *Living with nature: environmental politics and cultural discourse*, ed. F. Fischer and M. A. Hajer. Oxford: University Press.

²⁰ Sachs, W. 2002. Ecology, justice, and the end of development. In *Environmental justice: discourses in the international political economy*, ed. J. Byrne, 19-36. New Jersey: Transaction Publishers.

²¹ World Commission on Environment and Development (WCED). 1987. *Our common future*. Oxford: Oxford University Press.

Intergenerational rights for the environment thus can be seen as an intergenerational environmental justice issue.

This discourse traditionally emphasized human populations, but the rights of other inhabitants of the planet also entered the discussion. Some authors talk about “ecological justice.”²² Low defines environmental and ecological justice as follows:

The struggle for justice as it is shaped by the politics of the environment...has two relational aspects: the justice of the distribution of environment among peoples, and the justice of the relations between humans and the rest of the natural world. We term these aspects of justice: *environmental justice* and *ecological justice*. They are really two aspects of the same relationship.²³

This is an important aspect of the discourse on environmental justice since social needs, environmental benefits and economic opportunities must be understood within the limits imposed by life-supporting ecosystems. This approach builds on the sustainability concept defined by Agyeman as, “the need to ensure a better quality of life for all, now and into the future, in a just and equitable manner, whilst living within the limits of supporting ecosystems.”²⁴ To summarize, environment-related justice consists of three main spheres. It is justice towards the future generations (or intergenerational justice), ecological justice (or justice related to non-human beings) and the social dimension of distribution within the human space (intra-generational justice).

²² Low, N., and Gleeson, B. 1998. *Justice, society and nature – an exploration of political ecology*. London: Routledge. Baxter, B.H. 2000. Ecological justice and justice as impartiality. *Environmental Politics* 3 (autumn): 43-64.

²³ Low, N., and Gleeson, B. 1998. *Justice, society and nature – an exploration of political ecology*. London: Routledge. See also Baxter, B.H. 2000. Ecological justice and justice as impartiality. *Environmental Politics* 3 (autumn): 43-64.

²⁴ Agyeman, J. 2002. Constructing environmental injustice: transatlantic tales. *Environmental Politics* 3 (autumn): 31-53.

SECTION II. Environment, Health, and Human Rights: Environmental Justice in Europe

The conceptual and legal integration of the environment, health and human rights in the past two decades has given rise to new forms of social activism, new constitutional protections in many countries, at least one major regional treaty, and new human rights norms at the international level. The origins of the linkages between human rights and the environment derive from four streams of thought and research: 1) research showing discrimination in the distribution of environmental risks and benefits, which has fostered the emergence of “environmental justice” movements on behalf of marginalised social groups in many countries; 2) research showing that developed countries export environmental risks to developing countries, resulting in increased attention to this problem by UN agencies; 3) the movement to establish the right to a clean environment as a universal human right, resulting in the provision of such a right in the constitutions of 53 nations as of 2004; and 4) arguments claiming that environmental protection itself is enhanced when poverty is reduced, social inclusion is stressed, and citizens are armed with civil rights that ensure that they have access to information, participation, and justice. The importance of the linkage between environment, health and human rights is particularly evident in the case of the Roma.

Discrimination in the Distribution of Environmental Risks and Benefits

Discrimination in the distribution of environmental risks and benefits have been confirmed by research in various parts of the world, and now in Central and Eastern Europe. Case after case raises critical questions regarding the role of discrimination of pollution exposure levels and access to fundamental environmental goods and services such as clean water and sewerage.

A study in the UK comparing large factory sites with average household incomes revealed that 662 of Integrated Pollution Control (IPC) certified factories are located in areas where the average household income is less than 15,000 British pounds.²⁵ Only five of the UK's IPC factories are located in areas where the average household income is 30,000 or more British pounds. The communities with the lowest average incomes had the highest numbers of factories. The non-governmental organisation Friends of the Earth emphasised that whether or not this condition was the result of discrimination, the impact is clear.²⁶

In Germany, immigrants and less economically viable communities seem to bear the brunt of environmental injustices. Turkish immigrants, for example, work in unsafe conditions and subsequently live near highly polluting factories. In another German town, Wuppertal, a number of mobile telephone transmission towers are located on tops of schools attended largely by immigrant students. A small, more remote, economically challenged community in Gorleben near the former border between East and West Germany has been left to fight against a nuclear waste storage facility that could never have been located in a more well-to-do, centrally located area.

²⁵ Friends of the Earth. 2000. ‘Pollution Injustice’, <http://www.foe.co.uk/pollution-injustice/>.

²⁶ *Ibid.*

Exporting Environmental Risks to Developing Countries

In recent decades, richer countries have also used poor countries as a ‘sink’ for pollution and waste. Ironically, improvements in environmental quality resulting from the enactment of stricter environmental standards in the global North sometimes have contributed to the growth of polluting industries and the dumping of toxic wastes in the South, as corporations and entire industries actively seek sites with fewer environmental regulations.²⁷ While the 1992 Basel Convention on the Control of Transboundary Movements of Hazardous Waste regulates the export of waste, its ‘recycling’ clause has permitted toxic waste to be labeled as recyclable material and hence exportable.

A similar dynamic has emerged within Europe, where companies in the more prosperous regions of the European Union are outsourcing waste disposal to municipalities in poorer countries in Central and Eastern Europe.²⁸ This process began in the early 1990s, when the change of political systems facilitated trade between east and west, and when one German firm infamously exported hazardous waste to Albania in barrels labeled “humanitarian aid.”²⁹ The east-west trade in waste has accelerated with CEE countries’ accession into the European Union. In January 2007, a major Hungarian news outlet reported that dozens of small municipalities and firms in Hungary have made contracts for German firms to dump their waste, in most cases without consulting local residents.³⁰ Such cases offer a lens on the international and local dimensions of environmental inequalities.

Right to a Clean Environment

A clean and safe environment and access to natural resources are basic human rights. The UN General Assembly Resolution 45/94 declared that, “all individuals are entitled to live in an environment adequate for their health and well-being”. This was the outcome of persistent efforts by the environmental movement to establish the right to a clean environment as a universal human right. As of 2004, as many as 53 nations included the provision of such a right in their constitutions. Principle 3 of the 1994 Draft Declaration of Principles on Human Rights and the Environment³¹ establishes a foundation for environmental justice: All persons shall be free from any form of discrimination in regard to actions and decisions that affect the environment. Principle 4 states that all persons have the right to an environment adequate to meet equitably the needs of present generations and that does not impair the rights of future generations to meet equitably their needs.

²⁷ Clapp, Jennifer. 2001. *Toxic Exports: The Transfer of Hazardous Wastes from Rich to Poor Countries*. Ithaca, N.Y.: Cornell University Press.

²⁸ Harper, Krista. 2006. *Wild Capitalism: Environmental Activists and Postsocialist Political Ecology in Hungary*. Boulder, CO: East European Monographs.

²⁹ Cleary, Maura. 1997. “TED Case Study #359: Industrial Waste in Albania.” TED Case Studies, Volume 7, Number 1, January, 1997. Accessed online at <http://www.american.edu/TED/class/all.htm> on 16 February 2007.

³⁰ Zsak a boltját: Nemet szemet Magyarországon (“Waste for sale: German garbage in Hungary”). 2007. *Heti Világgazdaság* 4 (cover story).

³¹ On 16 May 1994, an international group of experts on international human rights and environmental law convened at the United Nations in Geneva and drafted the first-ever declaration of principles on human rights and the environment. Available at: <http://www.worldpolicy.org/globalrights/environment/envright.html> [Consulted 9 February 2007].

The second United Nations Conference on Human Settlements (Habitat II) from 1996 endorsed important changes in the approach to human settlement, acknowledging the need for a balanced and environmentally sustainable approach. The Habitat Agenda, a global call for action setting out approaches and strategy for the sustainable development of the world's cities, towns and villages in the 21st century, was adopted.³² The Habitat Agenda calls for promoting access for all people to safe drinking water, sanitation and other basic services, facilities and amenities, especially for people living in poverty, women, and those otherwise belonging to vulnerable and disadvantaged groups.³³ The United Nations Human Rights Committee passed General Observation (in 2002) No. 15.2, which recognizes the right to water as an indispensable factor for human dignity, and links this basic right to life and health.³⁴

The International Covenant on Economic, Social and Cultural Rights (ICESCR) asserts that, “Adequate housing must be habitable, in terms of providing the inhabitants with adequate space and protecting them from cold, damp, heat, rain, wind or other threats to health, structural hazards, and disease vectors. The physical safety of occupants must be guaranteed as well. The Committee encourages States parties to comprehensively apply the Health Principles of Housing prepared by WHO which view housing as the environmental factor most frequently associated with conditions for disease in epidemiological analyses; i.e. inadequate and deficient housing and living conditions are invariably associated with higher mortality and morbidity rates.”³⁵ The EU's Racial Equality Directive further prohibits discrimination in access to and supply of housing.

There is a gradually developing, strong international and national framework for human rights encompassing environmental issues and linking the protection of human rights with sustainable development. Cases of environmental injustice have to be seen in these two contexts: (i) people (regardless their ethnic origin or class) have the right to a clean and safe environment and fair access to natural resources; and (ii) sustainable development means that the needs of some people must not be met by treating others unfairly, including future generations. Research on environmental justice can contribute to understanding the human rights–sustainable development nexus. It contributes to understanding the origins, mechanisms and impacts of differentiated treatment and creates a basis for analyzing how to prevent inequality in the distribution of environmental benefits and harms (often linked with conflicts) at the international, country, regional or local levels.

Environmental Protection, Poverty Reduction, Social Inclusion, and Civil Rights

The European Union has a foundation from which to encourage and support environmental justice. In addition to several EU policy efforts outlined in this section, specific measures, for example, have been found in directives related to anti-discrimination initiatives and the Aarhus Convention. The European Union has in recent years adopted a number of Directives setting

³² *The Habitat Agenda, Istanbul Declaration on Human Settlements*, (3-14 June 1996, Istanbul, Turkey) United Nations Human Settlements Programme (UN-HABITAT). <http://www.unchc.org/unchc/english/hagenda/index.htm> [Consulted 3 October 2005].

³³ The Habitat Agenda Chapter III – Commitments: Adequate shelter for all – Paragraph 40c.

³⁴ The Committee for Economic, Social and Cultural Rights. General Observation No. 15 (2002), “The right to water” (Articles 11 and 12 of the International Charter on Economic, Social and Cultural Rights). Geneva, 11-29 November 2002.

³⁵ International Covenant on Economic, Social and Cultural Rights adopted by the UN General Assembly on 16 December 1966.” General Comment no.4 to the International Covenant on Economic, Social and Cultural Rights, paragraph 8, letter d.

guidelines for domestic law in the field of anti-discrimination, most notably Directive 43/2000, which sets standards under EU law in the field of banning discrimination on racial or ethnic grounds. Deadlines for transposition into domestic law came in 2003, and a number of EU Member States now have amended legislation to significantly strengthen domestic legal protections against discrimination on a number of grounds. Other Member States have anti-discrimination laws for the first time.

The Charter of Fundamental Rights of the European Union³⁶ sets out in a single text, for the first time in the European Union's history, a whole range of civil, political, economic and social rights of European citizens and all persons residing in the EU. Article 37 (Environmental Protection) proclaims that: A high level of environmental protection and the improvement of the quality of the environment must be integrated into the policies of the Union and ensured in accordance with the principle of sustainable development.³⁷ There can hardly be sustainable development without protected and implemented human rights. We cannot reach sustainable development for some at the expense of others.

The EU Sustainable Development Strategy (EU SDS)³⁸ reflects this. Priority is given to a reduction of the number of people at risk of poverty and social exclusion by 2010. Its guiding policy principles (solidarity within and between generations) are focused on the need to address the needs of current generations without compromising the ability of future generations to meet their needs in the European Union and elsewhere.

Agenda 21 is a program of the United Nations (UN) related to sustainable development.³⁹ According to Agenda 21, one of the principles of sustainable development is combating poverty, while the long-term objective of enabling all people to achieve sustainable livelihoods should be based on an integrating factor that allows policies to address issues of development, sustainable resource management and poverty eradication simultaneously. The goal is to improve the social, economic and environmental quality of human settlements and the living and working environments of all people, in particular the urban and rural poor, through providing adequate shelter for all, and integrated provision of environmental infrastructure: water, sanitation, drainage and solid-waste management.

The Sixth Environmental Action Programme of the European Union asserts "environment and health" as one of the priorities for environmental policy developments in the EU in the coming years. The Strategy for Sustainable Development further offers an opportunity to promote environmental justice in Europe as it mutually addresses economic, environmental, and social issues by combating poor environmental conditions, social exclusion, and poverty. The European Convention on Human Rights also addresses issues of environment and health. The European Social Charter has been an effective mechanism for affirming certain housing rights.⁴⁰

³⁶ Proclaimed at the EU summit in Nice in December 2000.

³⁷ http://ec.europa.eu/comm/external_relations/human_rights/doc/charter_364_01en.pdf

³⁸ Review of the EU Sustainable Development Strategy (EU SDS) – Renewed Strategy
<http://register.consilium.europa.eu/pdf/en/06/st10/st10117.en06.pdf>

³⁹ Full text of Agenda 21 available at: <http://www.un.org/esa/sustdev/documents/agenda21/english/agenda21toc.htm> [Consulted 7 February 2007].

⁴⁰ See European Roma Rights Centre (ERRC) v. Greece. 2005.

The Millennium Development Goals (MDGs), to be achieved by 2015, are eight goals that respond to the world's main development challenges.⁴¹ From an environmental justice perspective, Goal 1 (Eradicate extreme poverty and hunger) and Goal 7 (Ensure environmental sustainability) are of particular importance. While Goal 1 calls for a 50% decrease in the proportion of people living on less than a dollar a day and those who suffer from hunger, Goal 7 promotes the integration of the principles of sustainable development into country policies and programmes; a reversal in the loss of environmental resources; a reduction (by half) in the proportion of people without sustainable access to safe drinking water; and significant improvement in the lives of at least 100 million slum dwellers by 2020.

The Aarhus Convention on Access to Information, Participation, and Justice on Environmental Matters provides a significant basis for promoting environmental justice. The European Union has adopted two Directives on access to information and public participation as part of the Aarhus Convention. The EU adopted Directive 2003/4/EC on public access to environmental information and Directive 2003/35/EC providing for public participation in respect to drawing up of certain plans and programmes relating to the environment. More recently, EC Regulation (No. 1367/2006) on the application of procedural rights will be applied as of June 28, 2007.

Of these multiple streams linking human rights and the environment, the movement for environmental justice has finally come to the European Union. While this framework provides a basis for strengthening environmental justice, challenges remain. One of the most prominent of challenges is found in the plight of the Roma. In this next subsection, special attention is paid to the particular struggle to promote environmental justice regarding the Roma communities of Europe.

Environmental Justice and the Roma

The plight of the Roma and refugees in Europe especially demonstrates the urgency of an environmental justice agenda. Even a cursory overview of the situation in many Romani settlements around Europe confirms the link between poor environmental conditions, poverty and race. While it is widely known that the Roma experience racial prejudice and discrimination, more attention is needed on how this is reflected in their living conditions and manifested as health problems through the distribution of environmental benefits and harms. Much of the literature on the health of Roma is fragmented, and itself tends to reflect further discrimination as it focuses on the Roma as a threat to the public health of majority populations, particularly in its emphasis on communicable diseases.⁴² While Roma take on a disproportionate share of the burden of environmental harms, they are frequently denied the benefits such as access to water and other natural resources.

Discrimination and persistent poverty is said to account for the poor health status of Roma.⁴³ Roma, compared to non-Roma, have lower life expectancy and are more likely than not to live in substandard housing, be exposed to environmental pollution, and experience hazardous exposure in the workplace.

⁴¹ The MDGs are drawn from the actions and targets contained in the Millennium Declaration that was adopted by 189 nations and signed by 147 heads of state and governments during the UN Millennium Summit in September 2000.

⁴² Hajioff, Steve and Martin McKee. 2000. The Health of the Roma People: A Review of the Published Literature. *Journal of Epidemiology and Community Health* 54: 864-869.

⁴³ Loewenberg, Samuel. The Health of Europe's Most Marginalised Populations. *The Lancet*, December 16, 2006, Volume 368.

Economic transformation in CEE has enhanced segregation. Since Roma are among the first to lose their jobs⁴⁴, the already high number of state-dependent Roma is increasing further. Some of them left the cities and moved into slum-type villages in the countryside. Complex laws on residence permits combined with discrimination mean that Roma are often unable to move, since municipal authorities refuse to provide them with residence permits for their new choice of settlements. Local councils have issued ordinances banning Roma from settlements. In Slovakia, Roma are frequently evicted, and many observers have noted a trend to remove Roma from town centers and relocate them to inferior ghettoised housing on the periphery.⁴⁵ Due to these restrictions, Roma cannot move to other places. In such circumstances, Roma may settle only in the places that are not attractive for the majority population, or are virtually locked in the current settlements, which may be problematic from a social, health, and environmental point of view.

Discrimination against the Roma has led to geographical marginalisation to the most polluted or high-risk areas of a region. Significant segments of the Romani community live in proximity to waste treatment facilities, active or abandoned industrial sites, and major thoroughfares. Systematic discrimination in the provision of housing and infrastructure and the application of laws including legalization of buildings and structures is widespread, for example, in Macedonia. A high percentage of Gypsy and Traveller communities in the United Kingdom (UK) are located in areas that are fully unsuitable for living and raising families. In addition to the environmental health risks posed by living in highly polluted areas, such communities also tend to be on the outskirts of towns making access to public services, transportation, and employment difficult, if not impossible.

Roma communities tend to have insufficient access to environmental goods such as water and sewerage. Consider, for example, the following tabulations regarding Roma dwellings and access to environmental benefits such as water and sewerage in several CEE countries:

Percent of Roma population living in households without access to facilities in the dwelling

	BULGARIA	CZECH REPUBLIC	HUNGARY	ROMANIA	SLOVAKIA
RUNNING WATER	45	4	34	65	32
TOILET IN THE DWELLING	75	15	46	65	44
SEWAGE TREATMENT	51	6	63	62	46
BATHROOM IN THE DWELLING	70	12	41	66	37

Source: UNDP/ILO regional survey. 2002.

Environmental and public health conditions contribute to poor health for the approximately 100,000 residents of Roma settlements throughout Hungary. A survey of nine Roma communities in Northern Hungary demonstrated that poorly insulated housing and the widespread use of dilapidated woodstoves (“sparhelt”) waste residents’ energy resources and also contribute to respiratory ailments in the winter months.⁴⁶ Proximity to garbage dumps and lack of access to clean

⁴⁴ They mostly do unskilled jobs and are subject to racial discrimination from the side of employers when downsizing.

⁴⁵ European Roma Rights Center (ERRC) 1999. Fact sheets: Roma in the Slovak Republic. Last update: 1999. Available at: <http://errc.org/publications/factsheets/slovakrepublic.shtml> [Visited on February 24, 2003].

⁴⁶ Autonómia/UNDP Foundation. Energiatakarékossági kísérleti programok az Encsi kistérségben (“Energy conservation pilot program for the Encse microregion”). 2004. Budapest: Autonómia.

drinking water and adequate sewerage pose especially critical environmental health problems for Roma settlements. In a Roma shantytown in Heves where men recycled discarded car batteries from an illegal dump as a source of income, a child died of lead poisoning and a number of residents became seriously disabled.⁴⁷ In August and September of 2006, a hepatitis A epidemic in a village in Somogy County led to the hospitalization of over fifty people, the majority of whom were Roma children.⁴⁸ Although ongoing, systematic research is needed, environmental health issues contribute significantly to health disparities in Hungary, where Roma have 10-15 years less life expectancy than non-Roma.

Some Romani settlements are environmental time bombs. The two prevailing patterns of environmental discrimination are toxic exposure from environmental liabilities and disease and homelessness related to flood vulnerability. For example, Roma communities in Ostrava, Czech Republic reside in flats located above an abandoned mine including methane gas. Subsidence and exposure are persistent threats. Pátoracka, a Roma settlement in Eastern Slovakia, is located very near a former mercury and iron mine, where local conditions are highly toxic. The settlement is surrounded by a giant hill of debris of loose rock from the mine. White Slovaks were formerly evacuated from the site as the ground began to give way and homes began to sink into the ground. Other Roma in the region live on a derelict factory site (Zabijanec) where mining waste surrounds the community and the ground is contaminated by industrial waste. Children playing in “their backyard” are fully exposed to these toxins which have long-term effects on health such as neurological damage.

These environmental burdens endured disproportionately by the Roma show up in the health record. The results of a study supported by The United Kingdom Department of Health that focused on the health status of Roma suggested that Gypsy and Traveller communities have significantly greater health needs than other ethnic minority communities and that there is an inverse relationship between health needs and related services.⁴⁹

Not only are the environmental burdens placed on the most marginalized of European society, but environmental benefits are withheld. In Tetovo, Macedonia, the European Roma Rights Centre visited a Roma settlement on a hill above the Ottoman fortress of Arabat overlooking the Tetje neighborhood. Here, the water is not clean and sewer provisions are non-existent. Roma reported high rates of disease due to both the overwhelming presence of mildew and poor sanitation provisions.⁵⁰

⁴⁷ Varró, M.J., Gombkötő, G., Szeremi, M., Rudnai, P., and Agócs, M. 2001. Risk factors of a mass lead exposure, Heves, Hungary. *Egészségtudomány* 45:167–180.

⁴⁸ Lakatos, Elza. 2006b. Újabb megbetegedések és oltások Istvándiban (“New round of illnesses and immunizations in Istvándi”). Roma Press Center. 8 September 2006. Accessed on 11 February 2007 at <http://www.romapage.hu/hirek/hircentrum-forummal/article/107706/1464/page/9/>

⁴⁹ Aspinall, P. 2004. *Health status, behavior, wider determinants of health, and use of services*. University of Kent: Centre for Health Services Studies. Executive summary available at: http://www.mdx.ac.uk/www/rctsh/asert/executive_summary_gypsy_travellers.htm

⁵⁰ European Roma Rights Centre (ERRC). 1998. A Pleasant Fiction. The Human Rights Situation of Roma in Macedonia. Country Reports Series, No.7. July.

SECTION III. Exposure to Pollution

HUNGARY

In 2004, a team of researchers from the Debrecen University School of Public Health and the Gypsy Leaders' Professional Association published a survey of housing and environmental conditions in 557 predominantly Romani settlements, tracking the following ten indicators:

1. the majority of houses lacks foundations and cellars
2. the presence of waste dumps
3. the presence of a slaughterhouse
4. settlement is built on soggy soil or a floodplain
5. lack of gas lines
6. lack of water mains
7. lack of sewerage
8. lack of electricity
9. population above 50 people
10. a walking distance of 30 or more minutes from a paved road

Approximately one quarter of the settlements surveyed had 4 or more of these indicators, with ten settlements scoring between 6 and 8. In Borsod County's 90 Roma settlements, the most common indicators were lack of sewerage and gas mains and the presence of waste dumps. The research team prepared maps of the survey data showing a large number of cases where sewerage and gas mains exist in the town, but not in the Roma settlement.⁵⁵ The National Public Health and Medical Officers' Service reported that of the 767 Romany colonies identified in Hungary, 15% are within 1000m of illegal waste deposits, and 11% are within 1000m of animal carcass disposal sites.⁵⁶

Environmental pollution in general is a significant problem throughout CEE. Waste generated from heavy metal industrial activity in Bulgaria and Slovakia, for example, is dumped in landfills without precautionary measures.⁵¹ Coal and uranium mines and untreated industrial waste containing heavy metals cause persistent environmental problems in the Czech Republic.⁵² Open cast mines, lignite-based power plants, and industrial activity involving chemicals and aluminum plague the environment in Hungary.⁵³ Such environmental problems pose unique risks to those who are poor or otherwise living on the margins of society, "beyond the pale,"⁵⁴ because of the role of discrimination as a determinant in where these people end up living, working, and playing. In this section of the report, several case studies reflecting this dynamic are presented.

Housing conditions of the poor and marginalised ethnic minorities are particularly disconcerting and reflect some of the most egregious cases of environmental injustice. At the institutional level, there are multiple barriers to securing a safe and clean place to live. Securing adequate and safe housing has become increasingly difficult due to privatization, housing restitution processes, and the shifting legal status of land. Communities suffering environmental injustices where they live tend to be "out of the loop," experiencing difficulties with registration permission, property and tenancy rights, and evictions due to discrimination.

⁵¹ Fitzgerald, Edward et al. 1998. Environmental Pollution and Child Health in Central and Eastern Europe. *Environmental Health Perspectives*, 106(6):307-310.

⁵² Ibid.

⁵³ Ibid.

⁵⁴ Filcak, Richard. 2007. Environmental Justice in the Slovak Republic: The Case of the Roma. Ph.D. Dissertation. Budapest, Central European University.

⁵⁵ Kósa, Karolina, et al. 2004. "Telepek és Telepszerű Lakóhelyek Felmérése." ("Survey of Settlements and Settlement-type Residences"). Debrecen, Hungary: Debrecen University School of Public Health.

⁵⁶ György U., Andrea O., Maria B., Sandor B. and Eva S. 2005. Roma Colonies in Hungary –Medical Care of Children and Hygienic Conditions. *Orv Hetil.* April 10; 146(15):691-9.

The housing of socially excluded groups is more likely to be in proximity high-risk flood areas and/or in to former or existing polluting facilities, and lack accessible clean water and sanitation. At the same time, these communities tend to be located farther away from public services, employment opportunities, and public transportation. Air quality in such places can be compromised by both internal and external factors ranging from mildew build-up on the walls inside homes to incinerator exhaust and soil contaminated with heavy metals. Soil quality, an especially critical factor where children play, can be threatened by lead or other “toxic debris” leftover from defunct industrial and mining operations.

Such living conditions pose serious health risks. According to a study in Europe, non-chromosomal anomalies increase with proximity to hazardous waste sites by 33%.⁵⁷ Exposure to pollutants exacerbates cardiopulmonary and respiratory diseases. For example, exposure to particulates, nitrogen dioxide, and sulfur dioxide have been associated with increased mortality rates.⁵⁸

Case Study: Internal Displacement Camps in Mitrovica/e, Kosovo

HISTORY AND EVOLUTION THE CASE: In the summer of 1999 as Yugoslav forces withdrew from Kosovo and NATO military action ceased, the United Nations (UN) set up an administrative structure in Kosovo. Conflict in which ethnic Albanians burned down and pillaged the houses of Kosovo Serbs and a group including Roma, Ashkali and Egyptians generally regarded as “Gypsies” spurred a massive displacement of these people from their homes. Those from Roma based communities that did not leave Kosovo (approximately 500-600) were placed in camps for internally displaced persons built by the UN High Commission for Refugees in a northern municipal region called Mitrovica/e. Administered by the UN Interim Administration Mission in Kosovo (UNMIK) and the Provisional Institutions of Self-Government (PISG), the camps known as Chesmin Lug, Kablare, and Zitkovac are situated in a highly toxic area due to tailings of the nearby Trepca Mine and Smelter Complex. There is a high concentration of lead in the air and the soil, and the residents, especially children, suffered increasingly from severe lead poisoning. While the camps were supposed to be a temporary arrangement to last only 45 days, it wasn’t until six years later, that the displaced residents were provided alternative provisions despite the overwhelming evidence that living in these camps was deadly.

This situation was complicated by a number of legal, social and political factors. Internally displaced persons (IDPs) face a number of challenges that prevent them from returning to their original residences. Ethnic tensions persist in Southern Mitrovica/a that may threaten the safety of people returning home the region. New homes have to be built, and many refugees lack documentation demonstrating previous ownership or residency. Finally, some leaders of the communities in the camps are encouraged by the Serbs and displaced Roma from the area who now live in western Europe to resist agreements to return to their place of origin. These leaders were at odds with some of the residents who were desperate to protect their children from further health threats associated with living in the camps. In particular, women residents were openly concerned about getting out of the camps to protect their children, but found it difficult to confront the male leadership.

⁵⁷ Dolk, H., Vriheid, M., Armstrong B. et al. Risk of Congenital anomalies near hazardous waste landfill sites in Europe: The EUROHAZCON study. *Lancet*, 352:423-27.

⁵⁸ Craft, Elena S. et al. 2006. Prioritizing Environmental Issues around the World: Opinions from an International Central and Eastern European Environmental Health Conference. *Environmental Health Perspectives*, 114(12):1813-1817.

Finally, in September 2006, after moving most of the affected community members to Osterode and closing two of the three camps, the World Health Organization commenced medical treatment.⁵⁹ UNMIK in cooperation with the UN High Commissioner for Refugees, the UN Children's Fund, and WHO and several NGOs made the move possible.

HEALTH IMPACTS: There is no question that people in the camps were exposed to such high levels of lead that the health of the camp communities, especially children, severely deteriorated and some died as a result. Once lead enters the body of a human being, it binds in the blood depriving the system of oxygen. The impacts of lead poisoning are irreversible with subsequent deterioration of the brain and other critical organs including the kidney, the liver, and the stomach. The IQ is lowered by 20 points or more in children with high BLL. Lead exposure in children is most troubling as it affects brain development destroying nerve cells and preventing important neural connections that can cause permanent and irreversible damage.⁶⁰ Several sources confirmed the extreme severity of the lead levels in the resident's blood.⁶¹ The International Herald Tribune reported in 2005 that children are especially vulnerable to such living conditions and that, "some 60 Gypsy children under the age of 6 have been exposed such high levels of lead that they are highly likely either to die soon or to suffer irreversible brain damage."⁶² Studies in 2000 and 2004-5 by the World Health Organization affirmed extremely high levels of lead amongst a high percentage of the inhabitants. Whereas lead levels of higher than ten micrograms per deciliter of blood are considered a serious health threat to the nervous system, the World Health Organization found that out of the 77 camp residents who were tested for lead, 65 had lead levels above 40 requiring medical intervention. In 2005, WHO found that 88% of children under six years old had blood lead levels (BLL) requiring immediate medical intervention. Visitors to the camp, including representatives from the European Roma Rights Center and the Society for Threatened Peoples, observed that children visibly showed signs of serious health problems generally associated with lead poisoning such as mental dysfunctioning including memory loss and poor coordination, as well as more acute symptoms such as vomiting and convulsions. It is now known for certain that one two-year old child named, Dzenita Mehmeti, died as a direct result of exposure to lead in the camp where she lived.

In addition to the environmental hazards, the residents struggle in other ways. According to Agence France-Presse, food assistance is inconsistent at best and on welfare of 35 euros per month, many scavenge through garbage containers to survive.

NEED FOR ENVIRONMENTAL JUSTICE: This is one of the most explicit cases of environmental in justice in the region due to the blatant discrimination against camp residents. The UN Ombudsman in Kosovo, Marek Nowicki, asserts that, "...these people were being treated this way for no other reason than that they were Roma."⁶³ Given the overwhelming evidence regarding lead levels and subsequent health impacts in the camps, people, especially pregnant women and

⁵⁹ Kosovo's Displaced People Treated for Lead Poisoning. *Environment News Service*. September 1, 2006.

⁶⁰ Rice, D. and Barone, S. 2000. Critical periods of vulnerability for the developing nervous system: Evidence from humans and animal models. *Environmental Health Perspectives*, 108:3:511-33.

⁶¹ The World Health Organization, The United Nations itself, the International Committee of the Red Cross, and the Society for Threatened Peoples.

⁶² Polansky, Paul. 2005. Poisoned Camps for the Gypsies, *International Herald Tribune*, Tuesday, April 26, 2005, page 7.

⁶³ Hajdari, Ismet. Kosovo Roma refugees face unspeakable poverty, exposure to toxic metals. *Agence France-Presse (AFP)*, April 10, 2005

children, should not be living in these camps “even one more day.”⁶⁴ While these marginalized communities were left to live on the contaminated site, UNMIK police officers who were regularly exposed to the area were tested for lead and due to the high levels found in their blood were immediately evacuated. The World Health Organization asserted repeatedly that the people must be moved from these toxic camps. Removal from the camps is the only treatment that could work to reduce the health impacts of the lead exposure on the communities, but neither the local or Regional UN authorities would take responsibility for getting the people back home to South Mitrovica/e, or at a minimum getting them out of this highly toxic zone.

Case Study: Romania

Certain patterns of institutionalized racism regarding housing are most concerning in Romania. In general, however, Romania suffers as many CEE countries from the rapid industrialization of the socialist era and inadequate environmental precautions. About half of the population in Romania lives near waste repositories that do not meet established standards.⁶⁵ The legal and administrative situation indicate a stronger need for local public authorities to combat prejudice and racism in housing characterized most strongly by eviction from and demolition of housing occupied by the poor, and geographical segregation of the Roma. Especially vulnerable groups including children, the elderly, and woman tend to suffer most from these declining living conditions. Of large concern, according to Romani CRISS a Roma rights non-governmental organisation in Romania, is the, “major discrepancy between the political will at the governmental level and what happens at the local level.”⁶⁶

In addition to averting legal eviction procedures, evicted Roma are subsequently placed near waste disposal sites and various industrial areas on the periphery of cities where public facilities, transportation and employment opportunities are minimal at best. For example, in Dorohoi-Centrul Vechi, the local authorities are demolishing a housing unit occupied by 14-15 Roma families that will subsequently be moved to social housing that is located directly in the vicinity of an industrial zone and a purification facility. In Constanta, 20 new houses are to be built for Roma on land in an area solely occupied by factories. Transportation is minimal and certain basic community facilities such as schools are absent. There is strong indication that such segregation violates the financing policy of the European Commission. In another case in Bucharest, 35 Roma families were moved to outer circles of the city where there are no basic shelter provisions and no public utilities including drinking water, sewerage and electricity. The presence of rodents, mosquitoes, and flies guarantees a chronic public health problem.

In 2004 in the municipal region of Harghita-Miercurea Ciuc, about 40-50 poor Roma were evicted from the center of town by the local authorities to a site on the periphery of town just on the other side of a fence surrounding a water filtering station that emits toxic gases. Warnings regarding the toxic emissions from the filtering station are posted on the fence surrounding the station (see photo: Miercurea Ciuc). Residents have asserted that two infants have died as a result of exposure to the toxic air generated by the plant, but this has not been confirmed by medical experts.

⁶⁴ Quote from Bernard Kouchner, a physician and first Special Representative for the UN Secretary-General in Kosovo regarding the desperate need to remove children and pregnant from the camps.

⁶⁵ Cucu M. et al. 1994. The dangerous wastes and health risks in Romania: national report. *Cen Eur J Public Health* 2:30-33.

⁶⁶ Romani CRISS, Roma Center for Social Intervention and Studies, 2005. Equal Access of Roma to Housing: Institutional Racism at Level of Local Public Authorities. Human Dimension Implementation Meeting; 19-30 September 2005) Warsaw, Poland.



Miercurea Ciuc, Romania. Photo by Romani Criss.

In Piatra Neamt, again Roma were transferred to the periphery of the city into a precarious environmental living situation near a garbage dump and shooting grounds. In Salaj Silmeul Silvaniei, the Roma live in environmental risky conditions where there is no access to water, heat, or sewerage. In Episcopia Bihor, a Roma settlement was built on the municipal rubbish dump of Oradea. Most of the Roma in the settlement live off of the recycled garbage. They are exposed to toxic materials and smog and air pollutants from incinerated waste.

It is not only the Roma that suffer desperate environmental living conditions due to industrial activity. Those in the lower socio-economic stratum of Romanian society have fewer choices to avoid environmentally dangerous living conditions, especially when economic livelihood is at stake.

In Copsa Mica, considered in 1990 to be the most polluted place in Europe and called by Time Magazine⁶⁷, “The blackest town in the world”, two factories produced carbo-sin and nonferrous materials including zinc, lead, copper and cadmium. During communist times, black rain fell upon the city and its 6000 inhabitants. To this day, the city is covered in black soot for a ten mile radius. Infant mortality and life expectancy are grim. Copsa Mica has the highest infant mortality in Europe (25/1000), which is two and half times greater than the rate in the nearby town, Medias. Children of the town suffer from reduced lung function, and life expectancy is 10-20 percent lower than the national average. Workers suffer from lead poisoning and respiratory ailments and the drinking water is contaminated.⁶⁸ While more skilled workers have moved away, many of those who remain (approximately 20,000 people) suffer from neurological health problems.

Access to quality and affordable housing is harder and harder to come by as privatization, changing legal status of land, and declining incomes challenge Romanian residents.⁶⁹ Although the Roma tend to have the least access to water and sanitation, other economically challenged segments of Romanian society also tend to lack access to water, gas, electricity, sewerage, and sanitation.

Case Study: Pătoracké, Eastern Slovakia

HISTORY AND EVOLUTION OF THE CASE: Pătoracké used to be a privileged part of the village. In the 1950s and 1960s the mining company built houses and whole infrastructure for their employees. Two blocks of flats served for the company’s mid- and high level managers. The settlement could be as a fully functioning part of the village with water and electricity infrastructure, school, offices and shops. In the beginning of the 1970s problems began to arise.

⁶⁷ Time, Inc., “Romania: The Blackest Town in the World,” Monday, March 19, 1990.

⁶⁸ Romania struggles against pollution, but environmentalists say it is going to be a long battle. 1992. *The Malay Mail*, June 4, 1992. Accessed online at www.recyclingpoint.com.sg/Articles/1992june4-Romaniastrugglesagainstpollution.htm

⁶⁹ World Bank, 2005. Roma in Expanding Europe: Breaking the Poverty Cycle.

The mining activities from the past started to endanger the settlement due to subsidence. There are several kilometers of mine corridors right under the settlement. The deepest underground structures are estimated to go as much as 900 meters below the surface. The first accident with houses falling down happened in the beginning of 1970s. Authorities declared the place to be an endangered zone. As an immediate response, the company decided to move all residents to newly built houses and flats in Spišská Nová Ves and Smižany towns.

The estimations (based on interviews in the village) are that around 2700 people moved out. The whole infrastructure and houses were destroyed and decommissioned with the exception of the two three-floor administrative buildings. This happened despite the fact that the mining and processing company received money from the state budget for removal of all buildings and infrastructure as part of the program to demolish the endangered zone. It is not clear why they left these two buildings behind, but the abandoned blocks soon attracted Roma from the village and from other surrounding villages and towns. Non-Roma were evacuated, while Roma were silently allowed to be there.

HEALTH IMPACTS: In addition to soil contamination where children play, the threat of subsidence creates a constant health threat with immediate and drastic consequences. In 2001 part of the zone sank, and there is still a hole in the ground in the middle of the settlement. Typical of many Roma communities in Europe, the lack of sufficient sewerage and waste treatment creates the context for ongoing negative health impacts associated with contagions related to poor living conditions.

Thirty years after the Roma moved in, Pätoracké is home for about 500 people who have two water taps serving the whole community. There is no sewage system or sewage treatment in this settlement, and the hygienic conditions are harsh, especially in the summer months. There are no toilets with running water, no place to wash, and children collect water in plastic jars and bottles. In the absence of waste collection, the place is surrounded by rotting garbage.

NEED FOR ENVIRONMENTAL JUSTICE: Pätoracké is located only a few hundred meters from mining and factory sites, which made this place even more attractive for Roma because the place was close to their work. Entrance to the mine was on the left side on the top of the hill of the mining waste. One of the two administrative buildings is still there, the other one collapsed in 1989, and some residents used the scrap material to construct their houses in the surrounding area.



Pätoracké settlement in the Rudňany village. Photo by Richard Filcak.

The shantytown is located approximately 0.8 km from the edge of the village and the only connection is through an unpaved road. Snow and climatic conditions often prevent children from attending the school in the winter time. Access by medical rescue teams in the case of emergency is problematic. The shantytown with houses made of waste material, tin and stones is built on the land of the company. The Roma are neither owners, nor tenants. Small houses and huts are built

illegally on the land restricted for any public or commercial use. The former administrative building legally does not exist, since the building was supposed to be destroyed and decommissioned in the beginning of the 1970s. Roma are not more than squatters in the building and huts which are not suppose to be there.

The local authorities and factory management did not take steps to address the situation until 1989, when the company filed bankruptcy. At that time, increased press scrutiny and new social and political system generated criticism of living conditions in the Pătoracké settlement. After the 2001 sink incident, it was declared an emergency situation and the government immediately responded with new plans on how to address the situation. In the first plan, there was an intention to build 86 flats for all families who were living there in that time. The municipality pledged 2.5 million Slovak Crowns (or 62 500 EUR) in 2001 to build 31 flats for 270 of the Roma living in Pătoracké. However, negotiations between the municipality and the national Ministry for Construction and Regional development slowed down, and the remaining 55 flats (out of the planned 86) exist only on paper.

The 31 newly built flats are located just several hundred meters from the shantytown in a reconstructed building of the former mining company. Residents from those houses most endangered by the threat of landslides were resettled, but the remaining families await resolution. Despite that this location is free from landslides and sinkholes, it is still surrounded by the mining waste dumps and is separated from the main part of the village where non-Roma live.

In the meantime, the momentum generated to address this emergency situation has diminished and the situation is increasingly considered “normal.” The Rudňany municipality has to compete for governmental funds with hundreds of other municipalities that also seek to address Roma housing problems. As one of the local council members puts it in a personal interview in the summer of 2004:

We have asked for any help from the governmental office for minorities and you know, one official told us, that they will label the situation here as the emergency and priority action only when somebody will die in the settlement [due to the risk of sinkholes].

The municipality bought land for the remaining public houses, and the Office of the Plenipotentiary of the Government for Roma Communities provided a grant for architectural design, but the government did not support the project. It is difficult to estimate whether the proposal was unsuccessful because of weak lobbying by the municipality or simply because of strong competition from other communities. In 2005, state funding allocated to Roma housing projects totalled only 200 million of Slovak crowns (approximately 5 million EUR), an inadequate investment considering the scope of the housing problem faced by the Slovak Republic’s Roma residents. The Rudňany project was put on hold in the 2004, and again in 2005.

Case Study: Veles, Macedonia

HISTORY AND EVOLUTION OF THE CASE: Veles has been described as a “horror film” and a “public health catastrophe.”⁷⁰ For thirty years, people, largely Roma, daily breathe the emissions from a smelting plant for lead and zinc located 300 meters from the homes of town residents. According to the Macedonian Institute for Health Protection, the smelter emits 62,000 tons of zinc, 47,300 tons of lead, and 120,000 tons of sulphur dioxide each year. In 2001, the World Health Organization (WHO) listed Veles as a critically dangerous place. Due to heavy metals in the soil, the mayor of the town, Mr. Kocevski, requested that all agricultural and cattle farming be ceased due to high levels of heavy metals in the soil.

HEALTH IMPACTS: Air contaminants associated with smelting factories such as sulphur compounds can cause acute respiratory problems.⁷¹ With long-term exposure, chronic respiratory and cardiovascular problems can develop. Within a five month period, two children of the 700 families in the town died of cancer. Newborns are frequently diagnosed with heart or lung disease, respiratory or blood problems, and cancer. The immune systems of children especially are extremely compromised. One doctor in the town reported that his child patients can hardly fight off even a common cold. The Association for the Protection of Future Generations of Veles reported that hair concentrations of lead from two resident families are seven and five times above the norm, respectively.

NEED FOR ENVIRONMENTAL JUSTICE: Given the desperate environmental conditions created by the industrial activities in the town and subsequent health impacts on the community, dominated ethnically by the Roma and otherwise by those with lower incomes, this situation is a loud call for environmental justice. Efforts to gain compensation for the health consequences associated with living in the vicinity of the smelter have been complicated by the fact that there are numerous owners of the plant. Furthermore, despite the fact that the plant is an economic sink, operation persists.

Case Study: Durres, Albania

HISTORY AND EVOLUTION OF THE CASE: The Porto Romano Chemical Plant is an abandoned industrial site on the outskirts of the city of Durres, Albania, that has become home to several thousand refugees from Kosovo. During the state socialist era, the plant produced sodium dichromate for leather tanning, and lindane (gamma-HCH0 and thiram), both pesticides. It closed in 1990, but the hazardous waste produced there was never cleaned up. In 2000 the Post Conflict Assessment Unit (PCAU) of the United Nations Environmental Programme (UNEP) published a report identifying five sites they considered to be ‘Environmental Security Hot Spots’ (ESHS), or sites having *‘serious problems that pose immediate risks to human health and the environment and require urgent remedial action.’* The Porto Romano plant and surrounding area was one such environmental hot spot.

HEALTH IMPACTS: The health impacts are largely associated with exposure to significant soil and groundwater contamination. Soil contamination within the abandoned site itself has produced some of the worst environmental conditions in Albania, and Europe. Lindane and chromium salt are among the most severe pollutants. The research is compelling:

⁷⁰ Jovanov, Mitko. 2003. Poisoned Town Pleads for Help. IWPR’s Balkan Crisis Report, No. 426, April 29. <http://www.iwpr.net>.

⁷¹ European Environment Agency and WHO Regional Office for Europe. 2002. Children’s health and environment: A review of evidence. EEA Copenhagen.

- » Ground water sample from site showed 4.4mg/liter of chlorobenzene (4,000times EU recommended limits).
- » Domestic cow milk sample contained 100 times acceptable beta-HCH isomer concentrations (compared to EU regulations).
- » Soil samples contained very high HCH isomer concentrations (1,290mg/kg to 3,140mg/kg). The level of HCH requiring intervention in the Netherlands is 2mg/kg.⁷²

Additionally, containers at a nearby storage facility are leaking, and there is open access to the site. The chemical plant used an adjacent wetland as a dumpsite, and chemicals from the site are polluting the Aegean Sea due to leaching from groundwater and contaminated run-off.

NEED FOR ENVIRONMENTAL JUSTICE: Since 1998, large numbers of refugees displaced by the war in Kosovo have migrated to this region, and now thousands of people live on the abandoned chemical plant site. The municipal government of Durres has started to make housing on the site permanent by building septic tanks and other permanent structures. As of 2003, no attempt had been made by the government to remove the residents from the site or to provide alternative housing.

An atmosphere of distrust between local communities and refugees has prevented effective mobilization to clean up the site.⁷³ To resolve the problem, the PCAU report recommended preventing access to the site, relocating both Albanian and Kosovan residents, and cleaning up the contaminated area. However, because of ethnic disputes and grievances in the region, these solutions were not as straight forward as they first may have appeared. In late summer 2006, however, 300 tons of hazardous waste was removed from the site through a project supported by a Dutch aid agency.⁷⁴

⁷² UNEP (2000). *UNEP Balkans Post-Conflict Environmental Assessment. Albania. Analytical Results of UNEP Field Samples from Industrial Hot Spots.* Switzerland: UNEP.

⁷³ Schnabel, A, 2001. *Southeast European Security. Threats, responses, challenges.* New York: Nova Science.

⁷⁴ "Clean-Up at Plant Along Adriatic Coast Removes 300 Tons of Pesticide," Associated Press, August 31, 2006. Accessed online at <http://www.enn.com/today.html?id=11167&ref=rss>

SECTION IV. Flooding

It is not only the disproportionate exposure to environmental hazards, but also flooding that exposes certain communities to serious environmental threats. Poor and ethnic minority based communities located in areas that consistently flood due to natural processes also draw attention to the need for environmental justice. It begs the question of, “are poor and minority populations more likely to live in areas that consistently flood?” Communities living on a flood plain are exposed to the constant threat of being overrun by water. Even when flooding is not occurring, the effects of constant humidity on living conditions creates a seedbed of microbial growth that particularly impacts respiratory health while generating other health problems including skin conditions associated with exposure to respiratory allergens including fungal spores, moulds, and dust mites. Dampness has also been associated with nausea and vomiting.⁷⁵

HUNGARY

Although there are no organizations or institutions focused on environmental justice in Hungary, environmental justice issues have had a role in civil rights struggles since the start of the Roma civil rights movement in the late 1980s. One of the first independent Roma civil organizations, the Anti-Ghetto Committee of Miskolc, was founded by activist Aladár Horváth when the city proposed to relocate Roma residents of the urban center to a new settlement on a floodplain of the Sajó River on the outskirts of Miskolc.⁷⁶ Flooding is a persistent issue for many Roma communities; in the summer of 2006, hundreds of Roma families were evacuated and placed in temporary shelters when their houses in northern Hungary were flooded.⁷⁷

MACEDONIA

One of the largest European Roma settlements in Europe is Srederek, an exposed settlement with approximately 3500 inhabitants on the edge of the town of Kumanovo, a multi-ethnic⁷⁸ municipality in northern Macedonia. It is a poor settlement characterized by high unemployment rates (between 90 and 100%),⁷⁹ low access to education, poor health, and no water or sewage system prior to 1998. One prominent Romani activist in the area, Mr. Asmet Elezovski⁸⁰ stated that “the new generation of Roma cannot be a part of some employment programs or receive state-owned apartments, so they were forced to buy land and make houses near the old settlement.” The old settlement, however, is located on an island between a split river (the Kumanovo). Part of the “down river syndrome”, it is heavily polluted and floods during most years. In January 2003, flooding took the homes of 406 families or comprising around 3000 Roma and forced them to live in collective centers.⁸¹ In August of 2005, Kumanovo experienced severe river flooding that particularly impacted the two Roma settlements, Srederek and Bavci, consisting of 180 families including 94 children of age three and younger.

⁷⁵ European Environment Agency and WHO Regional Office for Europe. 2002. Children’s health and environment: A review of evidence. EEA Copenhagen.

⁷⁶ Ladányi, János. A miskolci gettóügy (“The Miskolc Ghetto Case”). *Valóság* 1991. 4. (45-54. oldal)

⁷⁷ Lakatos, Elza. 2006. Gátrendszert terveznek Boldván (“Levee System Planned for Boldva”). Roma Press Center, 8 June 2006. Accessed online on 11 February 2007 at <http://www.romapage.hu/hirek/hircentrum-forummal/article/106688/1464/page/15/>

⁷⁸ Roma, Macedonians and Albanians.

⁷⁹ The official unemployment rate in Macedonia in April 1998 was 37.1% (CEDIME-SE 2000).

⁸⁰ Mr. Elezovski is a prominent Macedonian Roma activist, member of the Roma Community Center DROM in Kumanovo.

⁸¹ Elezovski, A. 2003. 100 Years of the Macedonian State. *Roots* 8.

Case Study: Ostrava, Czech Republic

HISTORY AND EVOLUTION OF THE CASE: Ostrava is considered to have one of the largest populations of Roma in the Czech Republic. In 1993 when the Czech Republic was established, Roma were denied citizenship status through a new Citizenship Act.⁸² The Roma took residence in the neighborhood Slezska Ostrava of Hrusov when the middle class residents moved out into better apartments in 1950-70. In 1980 a highway overpass was built and in the summer of 1997, the place was severely flooded. Some of the inhabitants were relocated to emergency housing, while some residents stayed. The Main Office of the Architect of the City of Ostrava declared the place uninhabitable and a local government decision declared the area unsuitable for housing due to the constant threat of flooding. Despite the conditions, 70 families still reside in the area with the approval of the Slezska Ostrava municipal authorities.



Ostrava, Czech Republic. Photo by ERRC.

HEALTH IMPACTS: According to the Regional Hygiene Office, the housing in Lower Hrusov is a health hazard.⁸³ The housing conditions in Hrusov have been associated with respiratory problems, asthma and skin allergies. One case, in particular, has been documented by an expert medical advisor to the courts.⁸⁴ In Eastern Lower Hrusov where the Roma predominantly live, the walls inside the apartments are covered in black mould and solid house waste which is not systematically collected is stockpiled in empty neighboring apartments. Basic necessities such as water for drinking and washing are scarce. Sewage

floods the cellars and ground floors of the housing. And, with the flooding comes insects. One resident claimed that painting does not keep the mould from recurring.⁸⁵ Stagnant, pooled water and sewerage cause persistent mould. Moulds such as *cladosporium* and *aspergillus* thrive in moist environments.

NEED FOR ENVIRONMENTAL JUSTICE: While non-Roma inhabitants of the threatened area were moved to other parts of the city, Roma were simply housed in the flooded apartments located within Hrusov.⁸⁶ Five years after the major flooding in 1997, the deputy mayor of Slezka Ostrava declines to move Roma from the area to a new housing complex in Ostrava Hermanice because he

⁸² Vishwanathan, Sri Kumar. 2001. Some strategies involving the relationship between Roma and the Czechs. Stockholm International Forum, Conference Series.

⁸³ Bukovska, Barbora. 2002. Difference and Indifference: Bringing Czech Roma Ghettoes to Europe's Court. Eumap.org: Monitoring human rights and the rule of law in Europe. See www.eumap.org/journal/features/2002/may02/czechromaghettos. Last visited: October, 2006.

⁸⁴ Ibid. Referring to: Expert Opinion in the Matter of the Examination of the Health of Minor D.Z., April 22, 2001, conducted by MU Dr. Irena Krcmova, CSc, court registered expert in allergenic and clinical immunology.

⁸⁵ Sobotka, Eva. 2003. Life under the bridge: ghettoizing Roma in Lower Hrusov, Ostrava, Czech Republic. European Roma Rights Center Notebook.

⁸⁶ Open Society Institute. 2001. Minority Protection in the Czech Republic.

said that they steal and because he lives there.⁸⁷ Discrimination of the Roma by local authorities is well documented by the non-governmental organization, “Life Together”.⁸⁸

While there is ethnic discrimination against the Roma in this case, it is also a case of classism and discriminatory access to education. For, the Roma who live here are extremely poor and are frequently kept out of mainstream educational opportunities. Roma are more likely to be placed in “remedial special schools” than other children.⁸⁹ This deprives them of one of the things they need most: human capital.

Yet, the story of Hrusov is also one of success in the struggle for environmental justice. A unique housing project called, “Coexistence Village” spearheaded by Kumar Vishwanathan who received the Alice Masaryk Award for human rights, created the context for an integrated grassroots initiative to build their own housing. The housing complex is made up of ten Roma, ten mixed, and ten non-Roma families. Mr. Vishwanathan notes, “The basic significance is that Czechs and Roma can build together something not just of great beauty, but also great value. They can live together having lost everything in the floods. They built the houses themselves, they took part in the construction. Today they take part in the maintenance and in managing things to some extent, and I think it’s just proof that Czechs and Roma can live together.” He adds, however, that the economic conditions of those living in the housing units are still extremely tenuous and employment opportunities must be generated to solve the fundamental community economic problems.⁹⁰

Further, despite this success story, the broader picture in the Czech Republic is not so optimistic. Ghettoized Roma communities are on the rise in Czech Republic.⁹¹ Inhabitants of these ghettos constitute a third of the Roma population in Czech Republic and suffer from poor health and high unemployment (95-100%).

Case Study: Hermanovce, Jarovnice, and Svinia, Slovakia

HISTORY AND EVOLUTION OF THE CASE: HERMANOVCE All of the Roma in Hermanovce live in a separated shantytown between two forks of the Svinka River. The settlement is built on land which cannot be classified as a wetland; it is solid ground. But, if you dig a hole deeper than a meter, it would be immediately flooded by groundwater, and thus is not suitable for construction of normal (bricked or wooden) houses requiring a solid basement. Approximately 400 Roma live on this small island and the slope just above it located in the lower part of the village. Approximately 25 huts, mud houses and shelters occupy a 200 m³ space on the island. A landfill for municipal waste is located on the slope area. Hence, in addition to the threat of flooding, the space is overcrowded and the soil and water are likely contaminated from landfill runoff.

HEALTH IMPACTS: In addition to the immediate dangers of flooding, flooded areas are characterized by an ongoing atmosphere of dampness. This is associated with biological contamination,

⁸⁷ Ibid.

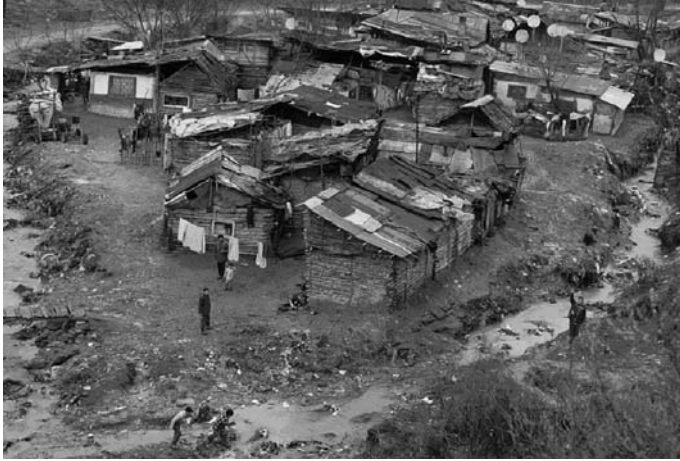
⁸⁸ See Vishwanathan, Kumar. 2002. Towards improving the situation of marginalized Roma in one Czech city. European Roma Rights Center, Roma Rights. Nr. 1.

⁸⁹ Kramer, Julian. 2003. Living on the edge: a Roma Clan in Ostrava, Czech Republic. Open Democracy Ltd. See www.opendemocracy.net/democracy/article_1404.jsp. Last visited: October, 2006.

⁹⁰ Vaughan, David. 2005. Kumar Vishwanathan: building bridges between communities in Ostrava. Current Affairs. See www.radio.cz/en/article/73683. Last visited: October, 2006.

⁹¹ Study by the Labour and Social Affairs Ministry. 2006. See www.radio.cz/en/article/83181. Last visited October, 2006.

especially in the form of moulds. Persistent moulds create high risk conditions for respiratory and skin problems. Crowding, a housing condition more likely present among lower income populations, poses further risks associated with increased risk of spreading infectious diseases.⁹² The landfill is not protected against leakage, and although studies have not been done, leachate is most likely present throughout the surrounding soil and water creating an exposure problem, especially for children.



Hermanovce, Slovakia. Photo by Anna Stoecher.

NEED FOR ENVIRONMENTAL JUSTICE: Settlement in this area was avoided by others in the surrounding community. The settlement consists of poor houses constructed from wooden waste, tin and mud. In the 1940s and 1950s, Roma moved into two abandoned houses which were close to the current settlement. The land where the settlement is located belongs to the village.

HISTORY AND EVOLUTION OF THE CASE: **JAROVNICE** The most dramatic impact of the flooding in this area was in the late 1990s in Jarovnice. Heavy rains on June 20, 1998

brought about the worst floods in Slovak history. The slow and quiet Svinka River turned into a wild force. As the river approaches Jarovnice, it turns in a flat arch towards the left, and enters the shantytown of Jarovnice's Roma in the valley. The river was partly regulated upstream, and the water was flushed through Renčišov and Uzovské Pekňany (villages upstream) leaving Jarovnice the first area to catch the flood wave.

HEALTH IMPACTS: The estimated total number of people affected by the flood was 10,850 in 75 villages. During the flood, approximately 25 homes of non-Roma and approximately 140 Roma dwellings were affected. About 35 Romani homes were destroyed in Jarovnice. Forty-seven people died. Of these 47, 45 of the victims were Roma of which 42 were from the shantytown in Jarovnice. The toll of this disaster easily could have been much higher as one forest manager for the area noted:

There was only one lucky moment in this disaster – the flood came in the early afternoon, when most of the Roma were on the streets and awake, if it would come in the middle of night when most of them slept, than casualties would be hundreds if not a thousand of lives. (Personal interview with a former forest manager in charge of the area in 1998. January 2005)

NEED FOR ENVIRONMENTAL JUSTICE: The Romani shantytown settlement in Jarovnice is situated in the valley of the Svinka River. Non-Roma live in the village above the valley, protecting them from being as tragically affected by the floods, while the Roma dwell in the low-lying area. The Roma didn't want to return to the river valley, where the water had swept away their dwellings. However, as the mayor of the village pointed out after the floods in 1998, the white Slovaks in

⁹² World Health Organization. 2004. Technical Meeting on "Housing-Health" Indicators. Summary Report.

Jarovnice didn't want the Roma in close proximity, and so there was nowhere to begin building new dwellings for the Roma left without shelter. "We found a location that would be feasible for the construction of new dwellings, but the land belongs to private persons. It's their decision, whether construction starts or not," said the mayor of Jarovnice in an interview with the Slovak daily *Pravda*.⁹³

In 2005, it was increasingly clear that the momentum created by the disaster had been lost. Roma continue to live in the same place as before the flood. As a precautionary measure, however, the river bed was deepened and paved to reduce risk. Perceptions held by the majority population living in the area about why the Roma live in this danger zone range from a lack of understanding about Roma capacity and opportunity to move to blatant open neglect and racism:

This place [Roma shantytown] is of no good land. I think it always belonged to the municipality; it was wetland, mosquitoes... my grandfather use to go there to wash horses... I don't know why they [Roma] live there. (Personal interview, May 2004, Jarovnice resident)

I would build a fence all around this place; they [Roma] are lost people you know. It is waste of time and money to do anything for them. But this place is good enough for them. (Personal interview, August 2004, Jarovnice resident)

From the perspective of the Roma, the reason for building homes made of wooden boards and stones in the valley were largely economic. As one young Romani pointed out, "They [the non-Roma majority] don't want us here. Where should I go? I have no money. I build my house there [shantytown] because where else? Our people live there...I cannot go and build it else, gadjos would throw me out."⁹⁴ The central Government, concerned about public opinion over the devastating impacts of the flood, invested in infrastructure development, but Roma families still live in the dangerous flood zone. The public, shocked over the fatalities associated with the flood, forced the government to take action. However, while housing for 20 families was eventually constructed in 2006, the vast majority of the residents still wait for safer housing.

While some of the families have been accommodated with safer housing and the river bed has been better regulated and deepened to alleviate the risk of flooding, there is still only a minimal effort on the part of the municipality or central government to provide decent living conditions for the community. As one NGO activist in the area reflected:

There is only one street worker in the whole community, which is extremely low given the size of the community. There was a church mission center built in Jarovnice, but the local priest was by the decision of the church moved to the city of Michalovce and the activities are dying out. It is an example how this type of work relies on several enthusiastic individuals

⁹³ *Pravda* daily, „Názory“ [Opinions] June 30, 1998.

⁹⁴ *Gadjo* (plural *Gadjove*) is the Roma term for the "white". In local slang among the "whites" it means farmer or redneck.

and is not systematically developed with the support of the government. The role of the state is here substituted by NGOs. (Personal interview, local NGO activist)

Many of the Roma houses were built illegally, although taxes on them were paid to the municipality and most of the Roma possess residence permits. The place where the Romani settlement stands has been known as a flood zone for decades. There were channels for sewage water built after the 1998, but as one of the settlement inhabitants pointed out, “What are these channels good for if we don’t have running water?”⁹⁵

HISTORY AND EVOLUTION OF THE CASE: SVINIA Regular floods are also a reality in Svinia, although they have not been as bad as in Jarovnice. The first reaction of humanitarian organizations and the Slovak government after the 1998 flood was to provide shelter for people who lost their houses. Portable cabins known as *unimobunkas* were bought (40 in the case of Svinia) as a temporary solution before new houses could be constructed.⁹⁶ In 2006, the *unimobukas* still serve as permanent residences for entire families. Many people live in huts on the river bank that are made of wood and mud. When it rains, the mud floors turn into swampland. A Romani female, who moved in 2002 from a hut into a flat, recollects:

Q: How did you live in huts?

A: Every time it rained I found myself in water up to my knees. Then my husband’s family moved out and we were lucky to move here [to one of the flats in the shantytown]. It is much better here...

In the beginning of the year 2000, the extent of the flooding was decreased by regulation of the river and the introduction of protective measures (e.g., river bed deepening, concrete walls). The intensity of the flooding decreased, but part of the settlement is still regularly under water. The settlement is surrounded by forest which limits the possibilities for construction of houses near the river.

HEALTH IMPACTS: The flooding caused one fatality in 1998 and has created constant stress in the community. The Roma regularly flee their homes and huts during storms and seek shelter in a nearby village or the forest. In addition to the stress of living under the threat of disastrous flooding, respiratory and skin problems due to persistent dampness threaten the community.

NEED FOR ENVIRONMENTAL JUSTICE: Flood management is addressed in an “end-of-the-pipe” style. This means that instead of addressing the problem at its roots, municipalities and the government started to pave the streams with concrete and deepen the river beds in order to prevent floods in the villages. As a result, they created a “toboggan” system in which the water flows faster upstream flooding the villages downstream. As an NGO activist pointed out rhetorically, “It will ultimately require paving the river all the way to the sea to prevent floods by this approach.”

⁹⁵ Pravda Daily, “Povodez v Jarovniciach: Päz rokov po tragedii” [The flood in Jarovnice: Five years after the tragedy]. July 21, 2003.

⁹⁶ Unimobunka is a wooden box or portable cabin – often used by construction workers as temporary accommodation, later transported on a new construction site. Usually around 5 meters long, 4 meters wide and 2.5 meters high.

SECTION V. Denied Benefits: Access to Water, Waste Management, Sewerage, and Natural Resources

While pollution and flooding pose particular risks to community health, so does the lack of certain environmental benefits such as natural resources, especially water and waste management. Environmental justice is needed to secure such resources and waste management in communities least likely to have access to such fundamental environmental benefits due to discrimination. Poor people and ethnically marginalized communities are less likely than majority populations to have access to water and waste management such as sewerage. This deprivation leads to significant health problems. Under these circumstances, such health problems can be said to be caused by discrimination.

The poor or non-existent access to water is high amongst those who are often either too poor to pay for such basic necessities or are more likely to live in places where access is difficult or doesn't exist at all. The lack of safe drinking water and appropriate sewerage can cause parasitoses and other infectious digestive diseases.⁹⁷ Such diseases, causing diarrhea in children, pose serious health risks. Poor communities of Bulgaria, Romania and Slovakia suffer the most from a lack of access to basic environmental needs such as water and sewerage. Of Romania's total population, Roma are the least likely to enjoy the public water system and are more likely to either have to access their water outside of their living structure or from a river.⁹⁸ The same is true in Bulgaria.

Toilet facilities are also more likely to be located outside of living structures, and are often inadequate at best. Such deprived living conditions have significant health implications, not just for poor or Roma communities who may suffer them most, but for public health in general. The Bulgarian Ministry of Health receives an increasing number of reports of acute jaundice syndrome (559 cases, and it's increasing) from predominantly Roma inhabitants of a town called Plovdiv. Most of the cases have been confirmed as Hepatitis A infections. This outbreak is related to exposure to fecal material resulting from makeshift sewers or degraded sewerage systems and inadequate water supply.

Such conditions are more present in marginalized communities that suffer discrimination while other groups and the majority population have much better access to sewerage and water. Interestingly enough, for example, ethnic German inhabitants of Romania are the most likely to have access to public water and indoor toilet facilities.⁹⁹

MACEDONIA

In Tetovo, the European Roma Rights Centre visited a Roma settlement on a hill above the Ottoman fortress of Arabat, overlooking the Tetje neighborhood. Here, the roads are unpaved, the water is not clean, the electricity is substandard or unavailable, and sewer provisions are non-existent. Roma reported high rates of disease due to the overwhelming presence of poor sanitation provisions.

There is no sewage system in the Roma ghetto in Prilep, Macedonia. Faeces run down the unpaved street in front of the houses. A petition to city authorities was submitted in 1995, with the signatures of hundreds of Roma, to call their attention to this threat to public health. There is still no sewage system in the Romani ghetto in Prilep.

⁹⁷ Zoon, Ina. 2001. *On the Margins*. Open Society Institute.

⁹⁸ World Bank, 2000. *Roma and the Transition in CEE: Trends and Challenges*. Source: RIHS, 1998.

⁹⁹ World Bank, 2000. *Roma and the Transition in CEE: Trends and Challenges*. Source: RIHS, 1998.

Case Study: Fakulteta Settlement in Sofia, Bulgaria

HISTORY AND EVOLUTION OF THE CASE: Roma people in Bulgaria represent one of the biggest minority groups constituting 8.9% of the total population.¹⁰⁰ The major socio-economic changes that the country went through during the transition period have deepened long standing problems of the Roma population such as increased unemployment, illiteracy and criminalisation but also have created new ones such as significant deterioration of their living environment and health status.

The Fakulteta Roma Settlement in Sofia, the capital of Bulgaria, is home to over 35,000 Roma people. It is not far away from the city centre. The first Roma families bought land and settled there in the 1930s,¹⁰¹ and ever since, Fakulteta has a growing number of inhabitants turning into an



Fakulteta Neighborhood in Sofia, Bulgaria.
Photo by Keti Medarova.

isolated ghetto within the capital city. Fakulteta has a high unemployment rate of approximately 90%. Severe poverty plagues the area.¹⁰² It is only a street that divides the Roma from the non-Roma residential areas but the difference in the living conditions and quality of the environment are striking. According to the World Bank in 2000 over 84% of the Roma people lived below the poverty level in comparison with the national poverty line of 36% in Bulgaria and 40% of the ethnic Turks.¹⁰³ Five years later, a UNDP report revealed that still five times more Roma people live under the poverty line compared to non-Roma.¹⁰⁴

HEALTH IMPACTS: The environmental damage and the consequent health implications in Bulgaria, however, are rarely articulated. Further there are a limited number of studies

produced on this topic, but the available statistics are striking: 74% of Roma do not have toilets and 89% do not have water. Environment-related illnesses occur more often among Roma people than the general population and the infant mortality rate is 240 per 1000 for Roma compared to 40 per 1000 for the general population. Life expectancy is 10 years less than the average for the rest of the population of the country.¹⁰⁵ Moreover, widespread poverty and poor living conditions also negatively impact the quality of nutrition available and increase the risk of disease for many

¹⁰⁰ World Bank (WB). 2000. *Roma and the Transition in Central and Eastern Europe: Trends and Challenges*. World Bank: Washington.

¹⁰¹ European Roma Rights Centre (ERRC). n.d. *Fighting for Fakulteta: Advocating Roma Housing Rights in Bulgaria*. [online] URL: <http://www.errc.org/cikk.php?cikk=891&archiv=1>, consulted on October 4th, 2006.

¹⁰² European Monitoring Centre on Racism and Xenophobia (EUMC). 2005. *Promoting ROMA Integration at the local level. Equal Voices*. 16.

¹⁰³ World Bank (WB). 2000. *Roma and the Transition in Central and Eastern Europe: Trends and Challenges*. World Bank: Washington.

¹⁰⁴ United Nations Development Programme (UNDP). 2005. *At Risk: Roma and the Displaced in Southeast Europe*.

¹⁰⁵ Doctors Without Borders. 2004. *Access to Primary Health Care Services – Fakulteta District*. [online] URL: <http://www.msf.org>, consulted 19 October 2006. Médecins Sans Frontières (MSF) or *Doctors Without Borders* is an international humanitarian aid organization that provides emergency medical assistance to populations in danger in more than 70 countries. More information about them can be found on their web site: <http://www.msf.org>

Roma. Therefore, this study is particularly focused on exploring and linking environmental conditions and health through the lens of environmental injustice. Environmental injustice in the context of this study implies discrimination towards the Roma population, who suffer disproportionately from environmental damage, lack of access to drinking water and sanitation, which consequently have negative health implications. Roma suffer additional problems related to health care such as being refused medical care or free medicines,¹⁰⁶ lack of information about health reforms and the consequent exclusion from the health insurance system, inability to pay monthly health insurance,¹⁰⁷ disproportionately fewer vaccinations for Roma children,¹⁰⁸ etc.

A study by the Open Society Institute from 2001 shows that certain types of environment-related illnesses occur several times more often amongst Roma than the general population. “The last reported case of poliomyelitis in Bulgaria... occurred in Romani communities.”¹⁰⁹ They are most susceptible to community diseases and specifically water-borne diseases. Typical diseases include dysentery, tuberculosis, donkey cough, malaria as well as different allergies due to excessive dirt – diseases that very rarely occur in the majority Bulgarian population.

In traditional reports regarding minority issues, the vicious circle of poverty, illiteracy, unemployment and poverty has been reiterated many times over the years. This study concludes that the vicious circle should be revisited and expanded to include poor living conditions (which can be a cause but also a consequence of degrading environmental quality) and health implications. Thus, a more holistic understanding of Roma problems can be acquired and an opportunity for more preventive measures can be considered. For instance, another link should be mentioned here – a healthy environment and sound living conditions have a direct impact on human capital and employment.¹¹⁰

The poor living conditions in Fakulteta render serious repercussions on the health status of Roma. Based on this case study, four main links between the environmental living conditions on the Fakulteta Settlement and the health of the residing community are made and displayed in the following table:

¹⁰⁶ Balkan British Social Surveys AD (BBSS). 2005. *Final Report: Qualitative Survey (Focus Groups). Attitudes Towards the Roma in Bulgaria.*

¹⁰⁷ Open Society Institute. 2002. *Minority Protection in Bulgaria. Monitoring of the EU Accession Process: Minority Protection.* [online] URL: http://ftp.osi.hu/euaccession/2002_m_bulgaria.pdf, consulted 5 October 2006.

¹⁰⁸ Open Society Institute (OSI). 2001. *On the Margins: Roma and Public Services in Romania, Bulgaria and Macedonia.* New York: OSI.

¹⁰⁹ *Ibid.*

¹¹⁰ Petrova, D. /2004. *Towards a Measuring Stick for Environmental Injustice. Local Governance Brief.* Budapest: Open Society Institute.

ENVIRONMENTAL / LIVING CONDITIONS	HEALTH IMPLICATIONS
1) lack of clean water and sanitation	A) low hygiene B) water-borne diseases
2) uncontrolled dumping of waste	A) excessive dirt and a hub for rats and insects B) allergies and epidemics
3) lack of proper transport infrastructure	A) no emergency ambulances can provide services B) no waste trucks can collect the waste
4) lack of environmentally-related information	A) higher health risk B) inability of the authorities to formulate the environment-health link and to address it in coherent policies

Links between poor environmental / living conditions and health implications in Fakulteta

Substandard housing and a lack of clean water and sanitation create the conditions for very poor hygiene. *“In Glavova mahala there are cases of babies’ deaths and children with open wounds on their bodies and heads. We are sure it is because of the dirt and poor conditions they are living in”*, says a Roma woman from the Fakulteta.

With regards to the uncontrolled illegal dumping of waste there is no research or assessment available on what kind of compounds there are in the waste thus it is fairly difficult to extrapolate health impacts. However, usually in the case of solid construction waste there might be toxic substances present. People can be exposed either directly or via contaminated water. Skin diseases are very common.¹¹¹ Children are particularly vulnerable since they find dump sites interesting and spend their playtime there.

Another link can be derived from the lack of proper transport infrastructure, which impedes urgent health care. The Romani Baht Foundation filed a case when a two years old girl from the settlement had a critical condition with high temperature. The parents called for emergency assistance but an ambulance never came because the roads in the ghetto are so poor.¹¹² The EU Accession Monitoring Program notes that “paramedics frequently refuse even to enter Roma neighborhoods.” OSI reports that the “the least offending pretexts are lack of gasoline, available vehicles, or doctors” but often ambulance drivers find Fakulteta “dangerous.”¹¹³ Disabled Roma are especially vulnerable. Another striking case entails the death of a one year old baby caused by fire from a candle while the parents were outside doing the laundry. Due to electricity cuts in Fakulteta, candles are a very common source of light, which, however, in this case appeared to be risky and lethal.¹¹⁴

A serious issue in the ghetto was that medical facilities in this neighborhood were non-existent. Therefore, the Médecins Sans Frontières launched a project for the construction of a medical center in Fakulteta, which started operating in June 2003. The project appears to have been

¹¹¹ Open Society Institute (OSI). 2001. *On the Margins: Roma and Public Services in Romania, Bulgaria and Macedonia*. New York: OSI.

¹¹² Romani Baht Foundation. n.d. *Roma Shadow Report*. [online] URL: http://www.greekhelsinki.gr/bhr/english/articles/roma_shadow_report_bulgaria.doc, consulted 5th October 2006.

¹¹³ Open Society Institute (OSI). 2001. *On the Margins: Roma and Public Services in Romania, Bulgaria and Macedonia*. New York: OSI.

¹¹⁴ ERRC. 2006. *Romani Infant Dies in Fire in Bulgaria after Electricity Cut in Settlement*. [online] URL: <http://www.errc.org/cikk/pp?cikk=2473>, consulted 10 October 2006.

successful since its launch – 6,335 patients were registered up to the end of June 2003, out of which 18% were children under the age of 5 years and 28% were women in reproductive age (16 to 45 years).¹¹⁵ Later, in 2004 gynaeco-obstetrical services and HIV consulting were also introduced, and a ‘catch up’ vaccination campaign was undertaken. However, this project constitutes only the first step in a chain of measures and initiatives, which should apply an inherently preventive approach when addressing Roma health. Such an approach should address some of the roots of the problem, which as argued in this study are deeply related to the quality of the living environment.

Some studies attempt to explain how Roma themselves construct the idea of health care and suggest that poor health status is an internal cultural problem since Roma will seek health care only in the case of emergency and in the form of medicine.¹¹⁶ Such an argument can be valid but in no case can refute the connection between deteriorated living conditions and higher health risk for Roma people in Fakulteta. Rather, it is a problem of lack of information regarding environment and health and the link between them. Also, there are no aggregated health statistics by ethnicity which could display the higher environmental and health risk situation of Roma in Fakulteta. The lack of such information and statistical figures also prevents the authorities from assessing the situation and formulating adequate policies and measures.

NEED FOR ENVIRONMENTAL JUSTICE: In 1947 and 1969 there were two plans by the government to develop the territory of Fakulteta respectively as a sport complex and a “Jubilee forest”¹¹⁷ regardless of the Roma inhabitants residing there.¹¹⁸ Those plans, however, never materialized. Since then, Fakulteta has been evolving into what it is today – an isolated Roma ghetto suffering from the lack of roads and telecommunications, insufficient electricity supply, a very old and poorly maintained water supply system, a primitive sewerage system and a lack of waste collection infrastructure. In 1975, a Master Plan for the development of the capital city of Sofia, which included the construction of water supply and sewerage systems for the entire city, was developed but never approved by the municipal government of Sofia. In Fakulteta, only the water supply system was completed and no sewerage system was constructed. Some of the roads were partially paved but none of the infrastructure has been maintained or upgraded since then.¹¹⁹ In the meantime, dynamic demographic processes took place and the number of Roma people has significantly increased together with the number of illegally constructed housing structures imposing escalating pressure on the capacity of infrastructure facilities.

The access to and quality of drinking water represents a serious problem due to the lack of a proper water supply system which the municipality refuses to maintain and upgrade. Another problem stems from the numerous illegal connections to the supply system creating low pressure in the pumping system and insufficient water resources. The system is so overloaded and old that

¹¹⁵ Médecins Sans Frontières (MSF). 2004. Access to Primary Health Care Services – Fakulteta District. [online] URL: <http://www.msf.org>, consulted 19 October 2006.

¹¹⁶ European Monitoring Centre on Racism and Xenophobia (EUMC). 2005. Promoting ROMA Integration at the local level. *Equal Voices*. 16.

¹¹⁷ A master plan for the development of the area was developed in 1969 envisaging the planting of trees and giving it the name, “Jubilee Forest.”

¹¹⁸ European Roma Rights Centre (ERRC). n.d. Fighting for Fakulteta: Advocating Roma Housing Rights in Bulgaria. [online] URL: <http://www.errc.org/cikk.php?cikk=891&archiv=1>, consulted on October 4th, 2006.

¹¹⁹ ERRC. [online] URL: http://lists.errc.org/rr_nr2_2000/noteb3.shtml, consulted October 15th, 2005. ERRC. 2006. Romani Infant Dies in Fire in Bulgaria after Electricity Cut in Settlement. [online] URL: <http://www.errc.org/cikk/pp?cikk=2473>, consulted 10 October 2006.

during heavy rains, mud comes out of the sinks. For instance, in the poorest mahala,¹²⁰ Glavova mahala, there is only one water tap for 200 families, so people queue and fill bottles and buckets to secure some water for their households.¹²¹ Again there, as part of the old water supply infrastructure, there are a number of deep drainage pits, which get filled in with muddy water and become unrecognizable so children tend to fall in them. “*Yesterday there was a kid who fell in and almost drowned in it*”, says a Roma man, resident of the Glavova mahala.

The “sewerage system” in the Fakulteta settlement is a very primitive one at best, as raw sewerage ends up in a swamp in the Glavova mahala. It consists of small hand-dug channels along the roads adjacent to Roma houses, intended to divert the waste water out of their homes. In Sofia, the sewerage system has been recently upgraded but the majority of houses in Fakulteta were simply not connected to it. Such practices not only affirm poor living conditions but also are very likely to impose serious impacts on the environment including surface and ground water contamination and soil degradation. Moreover, they can trigger water-borne diseases within the Roma settlement to which infants are particularly susceptible.

In Fakulteta there are no proper roads, which imply no proper public transportation within the settlement.¹²² There is no waste collection system – there are no garbage bins – thus, garbage is usually piled unorganized in the middle of the streets. Even if there were garbage bins, waste trucks cannot collect the waste due to the lack of proper roads. The municipality refuses to provide transport and waste collection services because they declare Fakulteta to be not included officially in any municipal plans.¹²³ Therefore, often Roma people burn waste in order to reduce the volume, emitting unknown substances in the air and posing a risk of fire in the settlement. There are cases when children burn old tires without any protection and therefore inhale toxic gases. Those gases might contain dioxins which are considered carcinogenic.¹²⁴

One of the other serious problems faced by the Roma is the illegal dumping of solid and hazardous waste, which usually requires special treatment. It is a regular practice that construction companies escape from the legal requirement to accommodate the generated waste in specifically designed and maintained sites and tend to transport and dump the waste in the Fakulteta settlement.¹²⁵ There is a large territory within the settlement which was once a green park and currently has been transformed into an illegal dumping site. The situation is aggravated additionally by the tendency of Roma people to bring or get paid to bring a lot of garbage from the city centre in the form of metals, paper, glass, etc. to the settlement. However, uncontrolled piling of waste can have a severe impact on the environment such as soil and groundwater contamination and methane emissions. Fakulteta usually emits a terrible odor and can easily become a breeding place for rats and insects, which transmit diseases.

A big question is how to induce political will for further actions? Given, the location of the settlement near the core of the capital city the worst case scenario would be when the escalating health

¹²⁰ Mahala – residential unit within the Fakulteta settlement.

¹²¹ Stoykova, Iskra (Romani Baht Foundation). 2006. Personal Communication.

¹²² Open Society Institute (OSI). 2001. *On the Margins: Roma and Public Services in Romania, Bulgaria and Macedonia*. New York: OSI.

¹²³ Open Society Institute. 2002. *Minority Protection in Bulgaria. Monitoring of the EU Accession Process: Minority Protection*. [online] URL: http://ftp.osi.hu/euaccession/2002_m_bulgaria.pdf, consulted 5 October 2006.

¹²⁴ World Health Organization (WHO). 1999. *Dioxins and Their Effects on Human Health. Fact Sheet # 225*. [online] URL: <http://who.int/mediacentre/factsheets/fs225/en/index.html>, consulted 1 November 2006.

¹²⁵ Stoykova, Iskra. Personal Communication.

problems consisting of low hygiene 'Middle ages' diseases pose a palpable epidemic hazard to the entire population of the capital city. The best case scenario would include: addressing the above formulated links between environmental quality and health by formulating coherent preventive policies; conducting assessments of the environmental quality of the Fakulteta settlement and providing basic infrastructure and services by including the settlement in regulation municipal plans; prevention of illegal waste dumping and clean up of current contaminations; and the generation and provision of environmental- and health-related information.

Case Study: Deponija, Serbia

HISTORY AND EVOLUTION OF THE CASE: The Roma settlement "Deponija" (Deponija means dumping site in Serbian) is located on the Danube riverbank in Belgrade, Serbia. The settlement was established during the 1970's on a former landfill. The landfill was gradually officially closed during the 1980's. Additionally, the settlement is situated between factories that directly discharge waste into the area. One of the factories allowed one of its workers to build a house in the area where the Roma settlement is situated today. Then slowly, more and more families started to build their houses in the area and people increasingly moved into the growing settlement. Approximately 900 people lived in the settlement in 2002, now the number is closer to 1000. Approximately 60 families (300-400 people) from Kosovo moved to "Deponija" to escape the NATO bombings in 1999. Social cohesion is low, and there are many internal social conflicts due to diversity issues, some based on religious orientation. Unemployment, low education and poverty are widespread.

There is no wastewater treatment in the settlement. There is one well in the center of the settlement that supplies most of the inhabitants with drinking water. Some households have a water supply in their houses, or in their courtyards. Houses are mainly illegally connected to the electricity grid.

Waste collection is not regulated. Collection of the secondary raw materials and recyclable materials is the main source of income for the majority of the population. Usually, a 'deal' is made with a truck driver who simply unloads the waste in front of the house. Waste that is of no value for selling remains there, so the whole 'slum' is dispersed with unwanted waste.

HEALTH IMPACTS: The health situation is bad, similar to other Roma settlements in Serbia. The residents are constantly exposed to pollutants from factory dumping and the deluge of unmanaged sewerage and waste leftover from informal collection and recycling efforts. From time to time, vaccination actions are organized, but the access to health care is sporadic and depends on the legal status. Children's health is especially at stake due to non-hygienic living conditions.¹²⁶

NEED FOR ENVIRONMENTAL JUSTICE: These especially troubling living conditions are not unique to Deponija. In general, the Roma of Serbia (and Montenegro) suffer disproportionate access to water and sewerage compared to the general population. Consider the following statistics:

¹²⁶ Strategic (for the World Bank). 2005. The Decade of Roma Inclusion. Roma Groups Focus Groups Discussion. Serbia. June.

Percentage of non-Roma and Roma households without access to facilities, Serbia and Montenegro

	NON-ROMA (% OF HOUSEHOLDS)	ROMA (% OF HOUSEHOLDS)
WATER SUPPLY	63.0	91.5
TOILET WITHIN THE DWELLING	29.8	82.0
SEWERAGE	33.2	63.4

Source: Bodewig and Sethi¹²⁷

While efforts have been launched to improve the situation in Deponija, the results are mixed. The NGO called DURN implemented a project in Deponija from October 2002 – May 2003 that was financed by the European Commission, NOVIB and UNICEF and had the aim of improving the living conditions in the settlement through education, employment opportunities, housing, waste water treatment, women’s programs and general strengthening of local communities. The results have been published in a book “Deponija: To the Better Future” authored by project leaders, Professor Vladimir Macura and Zlata Vuksanovic. The book was published in Serbian, Roma and English.

One of the activities within the project was waste collection. As soon as the project finished, however, the situation worsened and waste was not collected anymore. There was an idea to establish a company that would collect waste for recycling, since that was the major source of income, but inhabitants could not agree on the management of such a company.

Various trainings and short courses have been organized to help people get better education and find jobs. Those who got job opportunities or whose economic situation improved left the settlement. There is no political will to legalize the settlement, only ‘soft’ programs were given a green light from the city authorities. Because of the insecurity, houses are not been repaired and the land ownership issue is still not clear.



Zabijanec Settlement. Photo by Richard Filcak.

Case Study: Zabijanec, Eastern Slovakia

HISTORY AND EVOLUTION OF THE CASE: In the beginning of the 1970s Roma moved into an abandoned factory site in Zabijanec. This settlement is located directly on a former industrial zone. Two blocks of apartments there were built as administrative buildings of the mining company. The area served as a place for collecting metal ore and transport hub. In 1965 the company moved their activities closer to the actual mining sites and the place was abandoned. A few years later, (in the beginning of 1970s) Roma moved into the abandoned buildings and have lived there since

¹²⁷ Christian Bodewig, and Akshay Sethi. 2005. Poverty, Social Exclusion and Ethnicity in Serbia and Montenegro: The Case of the Roma. Part of Report of the World Bank’s Programmatic Poverty Assessment for Serbia and Montenegro

then. The concrete construction is former storage site for poly-metal ores. At the foot of the hill are piles of mining waste.

The settlement has one water tap with drinkable water for 469 inhabitants (as of the summer of 2004) behind one of the former administrative buildings. It is a pipe at the bottom of the hill. The source is a nearby reservoir generated from underground water. It also supplies the non-Roma part of the village. Inhabitants (mostly women and children) collect water in bottles and jars and bring it to their houses. There is no sewage system or sewage treatment in the settlement. There are no toilets in the houses.



Zabijanec. Photo by Richard Filcak.

These kind of conditions are not restricted to Zabijanec. It is characteristic of Roma living conditions throughout Slovakia. Consider the following tables comparing the Roma to non-Roma.

Source of Water: Non-Roma ("General") households compared to Roma households, Slovakia.

SOURCE OF WATER	GENERAL HOUSEHOLDS	ROMA HOUSEHOLDS	ROMA BY TYPE OF SETTLEMENT		
			SEGREGATED	SEPARATED	MIXED
PUBLIC WATER SUPPLY	73,2	45,8	35,4	51,3	50,8
PIPED WATER FROM OWN WELL	12,7	9,0	8,3	5,4	13,3
PUBLIC TAP IN COMMUNITY	2,3	12,8	17,9	11,7	8,8
COVERED WELL OR BOREHOLE	10,4	23,9	26,3	23,3	22,1
WATER FROM SPRING	0,3	2,1	3,3	2,5	0,4
WATER FROM STREAM/RIVER	0,3	1,8	1,7	2,5	1,3
WATER IN DWELLING OF FRIENDS/RELATIVES	0,6	4,4	6,4	3,3	3,3
NOT STATED	-	0,1	0,4	0,4	-
HOUSEHOLDS TOTAL	100,0	100,0	100,0	100,0	100,0

Source: Filadelfiová, J., Gerbery, D., and Škobla, D. 2006. *Správa o životných podmienkach rómskych domácností na Slovensku* (Report on living conditions in Roma households in Slovakia). Bratislava: United Nations Development Programme.

Distance of the main water source from the dwelling by community type (in %) in Slovakia.

DISTANCE	SEGREGATED	SEPARATED	MIXED	TOTAL
LESS THAN 10 METERS	31,1	41,3	51,1	39,2
11-50 METERS	48,9	38,5	38,4	42,8
MORE THAN 50 METERS	20,0	19,2	9,3	16,9
NOT STATED	-	1,0	1,2	1,1
HOUSEHOLDS TOTAL	100,0	100,0	100,0	100,0

Source: Source: Filadelfiová, J., Gerbery, D., and Škobla, D. 2006. *Správa o životných podmienkach rómskych domácností na Slovensku (Report on living conditions in Roma households in Slovakia)*. Bratislava: United Nations Development Programme.

HEALTH IMPACTS: Poor sanitation due to inadequate basic infrastructure is a major reason for the poor health status of Roma communities. In the Slovak Republic, for example, these factors contribute to high mortality rates for Roma infants: it is 34.8 per 1,000 children born, while the mortality rate among non-Roma infants is 14.6 per 1,000 children born according to the World Bank as reported in 2000. Infrastructure development may be the key for improvement in the health situation. A significant part of the water and sewage treatment infrastructure is financed from the state budget, either from domestic sources or through channeling pre-accession financial aid from the European Union. The Slovak Republic (as part of the accession process) adopted EU environmental legislation. There are several directives related to water treatment. For instance, Council Directive 91/271/EEC concerning urban wastewater treatment states that every settlement above 2000 inhabitants has to have a wastewater facility. While the majority of Slovak villages do not fulfill this directive on wastewater treatment, in the case of Roma settlements the situation is even worse due to the fact that there is often not even a drinking water supply system.

Sources of pollution in Zabíjanec are twofold. The first one is in surrounding area comprised of toxic mining waste dumps. Since these dumps are on the slope above the settlement, in the case of rain and snow melting, water with high levels of heavy metals flows down into the settlement and deposit in the soil. Inhabitants then bring this contaminated soil into their houses on their feet or breathe it in the dust during the summer time. The second source of contamination is the place itself. Since it served as an industrial zone, there are residues of heavy metals, oils and other industrial materials in the soil. The municipality bought 15 000 m² of land for resettlement of the people, but there is no budget for building of the estimated 60 houses needed.

NEED FOR ENVIRONMENTAL JUSTICE: Re-settlement is hardly imaginable (in the former totalitarian regime) without approval (or at least indifference) of the authorities and the mine administration, although all of them must have been aware of the social and most of all environmental conditions. The allocation and distribution of financial resources (i.e., funds) in a society is a power-struggle among a number of political parties, interests groups, lobbyists and businesses. The lack of political influence and effective know-how for participation in decisions making concerning the allocation of resources for building infrastructure effectively excludes this minority from governmental and EU funds. This is particularly the case for environmental infrastructure for water/sewage management.

SECTION VI. Environmental Justice: The Unique Circumstances of Women and Children

Women and children in Central and Eastern Europe are in an especially challenging position with regards to environmental justice. In post-communist societies, the privatisation of public services and the introduction of the free market economy have tended to worsen the situation regarding more vulnerable groups in society such as women and children. Prejudice and discrimination may further prevent these groups from accessing adequate health care where it may most be needed.

The health of women with regards to environmental justice is unique. In traditional, poverty-stricken societies, women predominantly tend to the home and family life. Further, women are likely to have first hand experience with environmentally related health problems during pregnancy and through childcare. Further, in predominantly traditional roles in the family, they can be more exposed to hazards and pollutants. Poor women, for example, tend to be more involved in scavenging activities that expose them to multiple hazards in their efforts to decipher through waste to extract useable goods.¹²⁸ Women who predominantly have responsibility for domestic maintenance are both subsequently exposed to certain hazards as well as be in a position to identify and articulate the problems and thereby become prominent actors to promote remedies.

Children are especially vulnerable to poor environmental conditions. As they biologically develop, a healthy environment is critical. Rapid cell growth of babies and youths can be easily disrupted by mutating factors in the environment. Children frequently put their hands and other objects in their mouths and play on the ground which disproportionately exposes them to pollutants. Children are also especially vulnerable to respiratory conditions. And, poor or ethnically marginalised children tend to live, play and go to school in more environmentally hazardous areas than others. Research indicates that Roma children experience a higher risk for lead poisoning¹²⁹ and have notably high levels of antibodies to Hepatitis A.¹³⁰ Minority groups tend more to be the victims of forced eviction which impacts health in a variety of ways including psychological stress which ultimately especially impact women and children. Further, access to health care is compounded by not only institutional barriers, but also cultural and attitudinal differences and lack of trust of health care professionals amongst ethnic minority groups.

Women of poor economic status and those in marginalized communities are in the position of becoming very effective advocates for environmental justice due to a traditional and more direct role in promoting family health. In Roma communities in Romania, for example, it is largely the women who are responsible for the health of the family.¹³¹ Women in Roma communities state that health is a key priority.¹³²

¹²⁸ European Monitoring Centre on Racism and Xenophobia (EUMC). 2003. *Breaking the Barriers Romani Women and Access to Public Health Care*. Luxembourg: Office for the Official Publications of the European Community.

¹²⁹ Redondo M.J. and F. J. Guisasola. 1995. An unknown risk group of lead poisoning: the Gypsy children. *Eur J. Pediatr*, 154: 197-200.

¹³⁰ Cilla G.; Perez-Trallero E.; Marimon J.M.; Erdozain S.; and C Gutierrez 1995. Prevalence of Hepatitis A antibody among disadvantaged Gypsy people in northern Spain. *Epidemiol Infect*, 115:157-61.

¹³¹ Open Society Institute, 2005. *Mediating Romani Health: Policy and Program Opportunities*.

¹³² Plafker, Karen. *The social roots of Roma health conditions*. Network Public Health Program, Open Society Institute.

In an effort to improve health services to the Roma population, Romani CRISS established a health mediation program to improve the delivery of health services to Roma communities that, on the one hand tend to have poor access to health services or be denied services due to discrimination or lack of appropriate legal documents, and on the other, tend to be sceptical of health care provided through public services. Mediators in this program must be women since they tend to be responsible for family health in the home and also could make it possible for female clients to discuss especially personal issues related to women's health.

While poor and minority populations suffer disproportionate exposure to environmental harms and access to environmental benefits, women and children within those groups tend to suffer the most. Environmental justice, while focusing on discrimination against certain groups in general, requires an especially keen and focused consideration of women and children.

SECTION VII. Occupational Hazards

The working conditions experienced by people trying to make a living the best way they can often present circumstances calling for environmental justice. People desperate for jobs to sustain themselves and/or their families find themselves working under conditions that pose threats to their health. Further, when it comes to employment or unemployment, employment may be preferred despite hazardous conditions. These working conditions are less likely to be experienced by the more wealthy or dominant segments of society. Working in hazardous conditions tends to reflect the struggle of those most in need, the poor and otherwise marginalized groups in society.

Several countries in CEE such as Poland, Czech Republic, Slovakia, Hungary, Romania, and Bulgaria experience environmental and occupational health problems associated with the former socialist system.¹³³ Dilapidated or otherwise insufficient infrastructure or factory equipment, struggling or constrained economies, lack of environmental regulation, and poor industrial and agricultural practices in CEE create the conditions for increased health risks associated with environmental pollution.¹³⁴

The health impacts of various working conditions are proven. Research on the incidence of cancer among men¹³⁵ resulting from occupational exposure in Europe concluded the following:

CANCER TYPE	RATE
LUNG	13-18%
BLADDER	2-10%
LARYNGEAL	2-8%

Source: Boffetta, Paolo and Manolis Kogevinas. 1999. Introduction: Epidemiologic Research and Prevention of Occupational Cancer in Europe. *Environment and Health Perspectives*, 107(2):229-231.

Different work sectors involve different health stresses. Agricultural work, for example, tends to involve exposure to pesticides and fertilizers. Work in the industrial sector can involve exposure to other toxics such as lead, benzene, methanol, and asbestos. Further, the social and economic unpredictability of the CEE region in general has increased the pressure on workers to secure or maintain employment. Resulting from the stress to secure or maintain employment, there is often a high rate of alcoholism, domestic abuse, mental illness, and other health threats associated with stress.¹³⁶

In CEE where transition has created unstable or unpredictable economic conditions for many people, those especially vulnerable in the new system like the poor and ethnically marginalised are faced with desperate work choices, if they have choices at all. More research is needed on occupational cancer and other health problems, especially with respect to environmental justice. While this may be at the community level, it is also important to consider that workers in CEE may suffer higher exposure to carcinogens and other types of toxins compared to Western European countries.

¹³³ Fabianova, Eleonora. 1999. Occupational Cancer in Central European Countries. *Environmental Health Perspectives*, 107(2):279-282.

¹³⁴ Craft, Elena S. et al. 2006. Prioritizing Environmental Issues around the World: Opinions from an International Central and Eastern European Environmental Health Conference. *Environmental Health Perspectives*, 114(12):1813-1817.

¹³⁵ Figures among women are much lower ranging from 1-5%, 0-5%, and 0-1% respectively.

¹³⁶ See, for example, Kideckel, David A. 2002. "Final Research on Labor and the Body in Post-Socialist Romania" Research Report for IREX.

SECTION VIII. Promoting Environmental Justice in Europe

In this section, we provide a policy action framework for improving environmental justice in Europe. Promoting environmental justice in Europe takes the form of several approaches in which distribution and entitlement are considered at many levels and involve different actors, strategies, and institutions. Fundamental to this is the simultaneous development and strengthening of policies at all jurisdictional levels (i.e., international, national, regional, and local), corporate social responsibility, and civic, especially grassroots, initiatives. Critical in this process is the advancement of educational opportunities for all. An international study comparing different countries revealed that the degree of discrimination in the distribution of pollution and access to clean water and sanitation facilities is influenced by a country's income distribution, political rights and civil liberties, and literacy rate.¹³⁷ Naturally, where people have a stronger capacity to articulate effectively their demands, polluters are more likely to respond.

Policy Action Framework for Environmental Justice in Europe

Europe has established a basis for promoting environmental justice. Concrete steps can now be taken to assert a firm commitment to strengthening environmental justice in Europe. These steps include establishing a working group and coordination bodies; conducting research; establishing mechanisms and financial instruments; and creating a specific legal basis for environmental justice. This report, while research focused, is a call for action that not only includes improving information and knowledge, but work to decrease the disparities in the distribution of environmental harms and benefits and their subsequent health impacts on especially vulnerable groups in society.

Establishing a Working Group and Coordination Bodies on Environmental Justice

Until now, the European Union has not recognized the issue of environmental justice as a distributional justice problem affecting the health and well-being of minorities and the poor, as defined in this report. In order to put this problem on the political agenda, and develop a common understanding of the problem for policy makers, civil society, and citizens, the European Commission should establish a working group on environmental justice, and task it to produce a white paper on environmental justice matters in Europe. The working group should be specifically instructed to take account of all vulnerable groups across the EU, including but not limited to Roma, other ethnic minorities, immigrants, women and children, and the poor.

PROMOTING ENVIRONMENTAL JUSTICE IN GREECE

On June 8, 2005, the European Committee on Social Rights held that in the matter of *European Roma Rights Centre (ERRC) v. Greece*, Greek policies on housing and accommodation of Roma violate Article 16 of the European Social Charter due to inadequate housing provision. The Charter is directed at promoting social inclusion and respect for difference. As asserted, "The Committee finds that Greece has failed to take sufficient measures to improve the living conditions of the Roma and that the measures taken have not yet achieved what is required by the Charter, notably by reason of the insufficient means for constraining local authorities or sanctioning them. It finds on the evidence submitted that a significant number of Roma are living in conditions that fail to meet the minimum standards and therefore that the situation is in breach of the obligation to promote the right of families to adequate housing laid down in Article 16."

¹³⁷ Torras, Mariano and James Boyce. 1998. "Income, inequality, and pollution: A reassessment of the environmental Kuznets curve." *Ecological Economics* 25:147-160.

The European Union should encourage Member States and candidate countries to establish coordination bodies at the national level to work on development and implementation of law and policy in environmental justice matters, as well as to facilitate forums for non-governmental groups working on the issue to liaise with relevant policy-makers. Through the Open Method of Coordination, the European Union should work with Member States to develop best practices, targets and benchmarks in the area of environmental justice.

Conducting Research on Environmental Justice

Expanding norms on both combating all forms of discrimination on the one hand and access to justice in matters relating to the environment on the other provide the Union with a welcome opportunity to take stock of the intersections between these two areas by undertaking further study of the Union role in combating environmental racism. Additionally, through Eurostat and other data groups at the EU level, the European Union should assist Member States in developing data and indicators to measure possible disparate environmental and health impacts on minorities and other vulnerable groups. Research should be specifically geared toward remedying environmental injustices.

Developing Mechanisms and Financial Instruments for Action

Following the publication of a white paper on environmental justice matters in the European Union, the European Commission should develop mechanisms and financial instruments to promote environmental justice in Europe. Additionally, states should be encouraged to engage similar efforts. Addressing environmental injustices should be a horizontal priority for EU Structural Funds. Programmes and initiatives to tackle environmental injustices and their impacts on health are needed to establish the necessary institutional framework for building environmental justice in Europe. Such institutions should not only stress health impact assessment risk and risk communication, but actually improve environmental conditions as an outcome. Programmes and initiatives could further engage health, environment, and human rights advocates in collaborative endeavors.

Strengthening EU Laws to Promote Environmental Justice

Strengthening EU laws to promote environmental justice could include making linkages between EU anti-discrimination and EU environmental law and mainstreaming environmental justice themes and considerations into all EU policies (social, development, health sectors, etc.) and especially environmental laws.

The draft Directive of the European Parliament and of the Council on Access to Justice in Environmental Matters provides a unique opportunity for the Union to begin to address environmental racism issues by linking its anti-discrimination work on the one hand with its efforts in the field of the environment on the other, two fields of EU policy and law currently undertaken in relative isolation from each other. This proposal should be pursued, and ultimately reconsidered, approved and implemented. The European Union should encourage Member States to link environmental legislation to laws adopted to comply with EU anti-discrimination legal requirements.

An important step that the European Union could take in addressing the problem of disproportionate impacts of environmental harms on minority ethnic groups would be the inclusion of the

following text in the preambulatory and/or substantive provisions of the Directive of the European Parliament and of the Council on Access to Justice in Environmental Matters:

“In matters related to the environment as they pertain to racial and ethnic discrimination, this Directive should be read in conjunction with Directive 2000/43/EC ‘implementing the principle of equal treatment between persons irrespective of racial or ethnic origin’.”

Further, the European Union should incorporate environmental justice principles and objectives in the European Union Strategy for Sustainable Development. Environmental justice considerations should be furthermore prominent in the remaining period of the Environment and Health Action Plan (2004-2010) and its second phase from 2010 onwards.

The European Union should amend the directives implementing the Aarhus Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters to reflect environmental justice considerations; specifically, the directives should instruct competent authorities to make special provisions to reach out to minority groups and the poor in order to make environmental and health related information accessible to these groups and to encourage them to participate in decision-making processes on matters affecting their well-being, and in particular their health.

SECTION IX. Conclusion

It is indeed time for Europe to embrace more fully environmental justice. A brighter and bolder future awaits Europe as environmental, health, and human rights problems are increasingly understood as interlinked requiring an integrated approach. The conclusion is clear:

- » Improving environmental and human rights in Europe will improve the health status of especially vulnerable or marginalized segments of society; and
- » Improving the health and well-being of Europe's poor and marginalised communities will promote human rights and the environment.

Europe's commitment to this future can ultimately be evidenced by its role in the promotion of environmental justice. Environmental justice asserts the link and establishes a framework for action.

This report conveys both Europe's accomplishments and where more work is needed. The case studies in this report on exposure to pollution, flooding, and access to environmental benefits such as water provide the evidence of the need for stronger environmental justice in Europe. While Europe has done a lot to address environmental, health, and human rights problems, more work lay ahead in the form of institution-building, research, mechanisms and financial support, and lawmaking to specifically promote environmental justice.

A safe and healthy place to live, work, and play is important for all Europeans. It is most egregious and disconcerting when such fundamental needs are denied due to discrimination, prejudice, and racism. The most troubling and most promising aspects are that these are social ailments that have remedies. They are not specific cases of diseases with no cure. They inherently demand an educational system where all people can learn about the world, and can learn to live together with yes, conflict, but also with empathy and a respect for human dignity. The European Union can continue to build a sound policy framework for citizens to engage their rights to a healthy environment and to be treated fairly. And, the people of Europe can continue to generate, envision, and take advantage of their opportunity, capacity and agency to participate in the promotion of environmental justice.

APPENDIX Environmental Justice Framework

Distributive

HOUSING	<ul style="list-style-type: none"> » Legal challenges: <ul style="list-style-type: none"> 1) static-“out of the loop” registration permission, property rights, evictions; 2) dynamic –erosion of tenancy rights » Construction quality in relationship to health and safety » Residential location regarding proximity to city/village, public services, employment opportunities, etc. and suitability regarding land-use planning and cadastral maps » Air quality (indoor and outdoor) » Water quality » Soil quality » Proximity and vulnerability to environmental hazards » Maintenance of residence
WATER	<ul style="list-style-type: none"> » Access: <ul style="list-style-type: none"> 1) Actual or effective distance to water source; 2) Availability (e.g., water source per percentage of users); and 3) Consistency of provision » Chemical and biological water composition
SANITATION FACILITIES	<ul style="list-style-type: none"> » Existence and quality of waste water treatment or sewerage » Maintenance of sanitation facilities
WASTE MANAGEMENT	<ul style="list-style-type: none"> » Access to and provision of adequate waste collection services » Fees (e.g., taxes) associated with waste management services should reflect waste production » Illegal dumping practices (local or third party)
HEALTH SERVICES	<ul style="list-style-type: none"> » Access, provision, and extent of health services
INFRASTRUCTURE DEVELOPMENT	<ul style="list-style-type: none"> » Distribution of governmental/EU funds and investments » Continuity of investment policy » Funds accessibility

Procedural

ACCESS TO REPRESENTATION	<ul style="list-style-type: none"> » Representation of minorities in the political system: <ul style="list-style-type: none"> Electoral system and the expression of minority concerns Provisions for minority representation Structural hindrances for effective participation of minorities (e.g., gerrymandering) » Effective representation of minorities: <ul style="list-style-type: none"> Quantitative representation (numerical representation in core bodies) Qualitative representation (group perception of public representation) » Legal provisions for direct democracy (e.g. local referenda) » Voting rights in all relevant elections
ACCESS TO JUSTICE	<ul style="list-style-type: none"> » Adequacy of domestic laws (i.e., sufficient and in harmony with international standards) to ensure access to environmental justice » Availability of legal aid to vulnerable groups » Degree of impartiality of the legal system » Number and capacity of legal professionals in the field of environmental justice » Standing (e.g., consider lack of security of tenure as an obstacle to justice) » Availability and accountability of administrative venues (e.g., existence of formal complaint process, expediency of response to formal complaints)
ACCESS TO INFORMATION	<ul style="list-style-type: none"> » Availability of information (in law and in practice) in a useful and accessible form in matters relating to the environment and health » Proper notification and proactive provision of information (substantive and procedural) on environmental issues in a language understandable to the community

Capacity and Agency

SECURITY	<ul style="list-style-type: none"> » Personal security: <ul style="list-style-type: none"> Street lights Police presence (force composition (i.e., % minority), reaction time, actions taken, fair treatment issues (re: raids, for example), etc.) Number of policemen (number of the police members from the minority) Fear of retaliation » Law enforcement: <ul style="list-style-type: none"> Environmental authority involvement (number of air, water and soil samples) Number of legal complaints Police response (reaction time, actions undertaken) Raid activity (number in the minority/majority areas)
EDUCATION	<ul style="list-style-type: none"> » Availability, quality and focus of education <ul style="list-style-type: none"> Literacy rate » Grade level completion
SOCIAL CAPITAL	<ul style="list-style-type: none"> » Capacity to formulate and defend own interests » Strength of formal and informal networks for participation in the decision-making process » Capacity to organize (e.g., number of local NGOs, level of organization on the local level) » Activism within the communities

Entitlement

ACCESS TO RESOURCES	<ul style="list-style-type: none"> » Access to and participation in the management of natural resources (including water) » Land tenure » Number and quality of employment opportunities » Access to common goods (e.g., municipal pastures, forests owned by the municipality or community) » Access to health services
HEALTHY ENVIRONMENT	<ul style="list-style-type: none"> » Protection from disproportionate exposure to environmental risks » Sufficient water, air, and soil quality and quantity (guarantee of public environmental goods)

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The **Health & Environment Alliance (HEAL)** is an international non-governmental organisation that aims to improve health through public policy that promotes a cleaner and safer environment. Our work draws on the findings of the environmental health science revolution, which is revealing the impact of environmental degradation on health in an ever-widening range of diseases and conditions. We represent a diverse network of more than 50 citizens', patients', women's, health professionals' and environmental organisations across Europe with a strong track record in bringing environmental health science and policy to an increasing number of fora. Our vision is that of a healthy planet for healthy people.

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**Center for Environmental
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The Central European University, **Center for Environmental Policy and Law (CEPL)** was created in 2002 in order to promote environmental policy and legal research at the university and throughout the region, and to serve as a bridge between research and environmental action. CEPL builds upon over ten years of experience in the Department of Environmental Sciences and Policy and works closely with researchers and environmental stakeholders in the region. CEPL serves as a focal point for integrating environmental policy research and facilitating connections between researchers and institutions engaged in environmental action. The Center's main programmes are Environmental Justice, Transboundary Governance, and Environment and Society.

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