

## Supporting Information to Resolution 2009-5

Submitted by The Rev. Joseph Parrish

RESOLUTION 2009-5:

*Subject: Environmental Justice*

*Be It Resolved*, That the 225th Annual Convention of the Diocese of New Jersey support an environmentally just treatment of all in God's Creation, especially children, indigenous peoples, and the economically marginalized; and be it

*Further Resolved*, That the Diocese direct the Environmental Commission to provide information to educate our parishes about decisions that would affect the lives and health of all of us and disproportionately the most vulnerable persons in our society; and be it

*Further Resolved*, That each congregation be encouraged to refer this resolution to their outreach committee or other such venue in order to educate and disseminate information to their members and encourage environmentally just actions.

*SUBMITTED BY: The Rev'd Joseph R. Parrish, Jr., on behalf of the Environmental Commission of the Diocese of New Jersey*

*Statement in Support of Resolution 2009-5 by Proposers:*

It has been well documented that environmental injustice is common experience for groups that have a racial or age mix different from the majority of the population.

Children are helplessly subjected to breathing the cigarette smoke of their close family members, resulting in very high rates of childhood asthma in New Jersey. By virtue of their rapid development, they are also the most vulnerable of the population to airborne particulates including lead, mercury, and other heavy metals from paints, industrial processes, coal-burning power plants, and the like, with some of the highest blood lead levels of all U.S. children being found in the urban environments of New Jersey.

Indigenous peoples have borne the brunt of deposits of radioactive materials from nuclear power plants and weapons development. Every indigenous tribe in America either has a nuclear waste site on its tribal lands or has such a site within a short distance from their lands, polluting their water supplies with resultant dramatic illnesses and morbidity.

Waste incinerators are generally sited in non-white communities, as evidenced by the largest waste incinerators in New Jersey, which are in a black neighborhood of Rahway, a black neighborhood in Camden, and a black neighborhood in Newark.

We recall the advice of the prophet Micah, to act justly, love mercy, and walk humbly with our God. Educating adults about how their smoking affects our children, making all aware of how environmental wastes are hidden from sight unjustly, and calling our society to review and correct the unjust siting of waste depositories and incinerators would put the Diocese on a track to become a leader for environmental justice.

### *CHILDREN*

Here is back up for the childhood asthma portion of our resolution on environmental justice. It is from the US Surgeon General in a report by the US Centers for Disease Control and Prevention in 2006.

There is also "causal relationship between parental smoking and middle ear disease in children" and "a causal relationship between secondhand smoke exposure from parental smoking and lower respiratory illnesses in infants and children." "Respiratory infections remain a leading cause of childhood morbidity in the United States and other developed countries and are a leading cause of childhood deaths worldwide."

From the title page: [http://www.cdc.gov/tobacco/data\\_statistics/fact\\_sheets/secondhand\\_smoke/secondhandsmoke.htm](http://www.cdc.gov/tobacco/data_statistics/fact_sheets/secondhand_smoke/secondhandsmoke.htm)

Secondhand smoke exposure causes respiratory symptoms in children and slows their lung growth.<sup>2</sup>

Secondhand smoke causes sudden infant death syndrome (SIDS), acute respiratory infections, ear problems, and more frequent and severe asthma attacks in children.<sup>2</sup>

There is no risk-free level of secondhand smoke exposure. Even brief exposure can be dangerous.<sup>2</sup>

{Reference 2 above: U.S. Department of Health and Human Services. The Health Consequences of Involuntary Exposure to Tobacco Smoke: A Report of the Surgeon General. Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Coordinating Center for Health Promotion, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2006 [cited 2006 Sep 27]. Available from: [http://www.surgeongeneral.gov/library/secondhandsmoke/report/.](http://www.surgeongeneral.gov/library/secondhandsmoke/report/)}

Each year in the United States, secondhand smoke exposure is responsible for 150,000–300,000 new cases of bronchitis and pneumonia in children aged less than 18 months. This results in 7,500–15,000 hospitalizations, annually. {Reference: United States Environmental Protection Agency. Respiratory Health Effects of Passive Smoking: Lung Cancer and Other Disorders.\* Office of Research and Development, EPA/600/6-90/006F, Washington, D.C., December 1992 [cited 2006 Sep 27]. Available from: [http://oaspub.epa.gov/eims/eimscomm.getfile?p\\_download\\_id=36793](http://oaspub.epa.gov/eims/eimscomm.getfile?p_download_id=36793).}

As the report is hundreds of pages long, I only cite additionally for effects of second hand smoke on children a few pages below as summarized in Chapter 6 from studies surveyed by the US Centers for Disease Control:

<http://www.surgeongeneral.gov/library/secondhandsmoke/report/chapter6.pdf>

## Evidence Synthesis

The finding of an association between parental smoking and LRI [lower respiratory infection] is consistent across diverse study populations and study designs, methods of case ascertainment, and diagnostic groupings (Table 6.2). The association cannot be attributed to confounding or publication bias. Only two studies found an inverse association. One small study that reported an inverse association for maternal smoking had wide confidence limits and a positive association with cotinine levels in meconium (Nuesslein et al. 1999). A study from Brazil found an inverse association with pneumonia (Victora et al. 1994). Studies in developing countries generally have tended not to find an increased risk associated with exposure of infants and children to parental smoking. This pattern may reflect the different nature of LRIs in developing countries where bacteria are key pathogens and there is a powerful effect from biomass fuel combustion (Smith et al. 2000; Black and Michaelsen 2002), and where levels of secondhand smoke exposure are possibly lower because of housing characteristics and smoking patterns.

Some variation among studies in the magnitude of OR estimates would be anticipated as patterns of smoking differed among countries and over time, and the methods of the studies were not consistent in all respects. This variation is reflected in statistically significant heterogeneity in some of the pooled analyses (Table 6.3). For this reason, the summary Odds Ratios [ORs] derived under the fixed effects assumption should be interpreted with caution. The random effects method may be more appropriate in these circumstances because its wider confidence limits reflect the heterogeneity between studies. This method is, however, more susceptible to the effects of any publication bias because the random effects method gives greater weight to smaller studies. Thus, considering the largest studies only, the fixed effects estimate for maternal smoking was 1.56 and the random effects estimate was 1.72. Regardless, the pooled estimates were statistically significant and it is highly unlikely that the association emerged by chance.

The papers that have been cited were selected using keywords relevant to passive/involuntary smoking and children in the title or abstract. When cross-checked against previous reviews of involuntary smoking in children, major omissions were not identified (USDHHS 1986; USEPA 1992; DiFranza and Lew 1996; Li et al. 1999), whereas the systematic search identified relevant references not cited elsewhere. There is a possibility that the selection was biased toward studies reporting a positive association; it is more likely that statistically significant findings would be mentioned in the abstract in comparison with nonsignificant or null findings. Three of the higher ORs were derived from small case-control studies in

which involuntary smoking was not the focus of the original research (Hall et al. 1984; McConnochie and Roghmann 1986b; Hayes et al. 1989), and for these three studies publication bias may have been operative. The slightly higher pooled ORs obtained by the random effects compared with the fixed effects method (Table 6.3) reflect the greater weight assigned by the random effects approach to these small studies with a relatively large OR. However, inclusion of the large Chinese studies (Chen et al. 1988a; Jin and Rossignol 1993; Chen 1994) in the meta-analysis of the effects of smoking by either parent would have had a conservative effect (i.e., a smaller pooled estimate), because few mothers smoked in these communities.

The biologic basis for the association of paternal smoking with LRI is possibly complex, and may reflect mechanisms of injury that are in play before and after birth. These mechanisms operate to make respiratory infections more severe or to possibly increase the likelihood of infection. Although viral infection is a well-characterized etiologic factor (Graham 1990), there is evidence that the severity of the illness may be determined in part by lung function abnormalities detectable from birth that result from maternal smoking during pregnancy (Dezateux and Stocks 1997). Many early childhood episodes of wheeze, including bronchiolitis, probably form part of this spectrum of viral illnesses, although other episodes may be the first evidence of more persistent childhood asthma with associated atopic manifestations (Silverman 1993; Martinez et al. 1995). The evidence does not indicate that parental smoking increases the rate of infection with respiratory pathogens. Respiratory viruses are isolated with equal frequency among infants in smoking and nonsmoking households (Gardner et al. 1984). *Surgeon General's Report 292 Chapter 6*

The effect of parental smoking on the incidence of wheeze and nonwheeze illnesses appears similar, suggesting a general increase in susceptibility to clinical illness upon exposure to respiratory infections rather than to influences on mechanisms more specifically related to asthma.

The pooled results from families with nonsmoking mothers suggest that the effects of parental smoking are at least partly attributable to postnatal (i.e., environmental) exposure to tobacco smoke in the home. The somewhat stronger effects of smoking by the mother compared with other household members may be related to the role of the mother as the principal caregiver, which would explain a higher degree of postnatal exposure of the child from the mother's smoking. However, there is also evidence pointing to altered intrauterine lung development as a specific adverse effect of maternal smoking during pregnancy (Tager et al. 1993).

The effect of parental smoking is largely independent of potential confounding variables in studies that have measured and incorporated such variables into the analyses, suggesting that residual confounding by other factors is unlikely. It thus appears that smoking by the parents, rather than characteristics of the family related to smoking, adversely affect children and cause LRIs. The evidence supports the conclusion found in other recent reviews that there is a causal relationship between parental smoking and acute LRIs (USDHHS 1986; USEPA 1992; DiFranza and Lew 1996; WHO 1997; Li et al. 1999; California EPA 2005). The findings are consistent, properly temporal in the exposure-outcome relationship, and biologically plausible. The evidence is strongest for the first two years of life. The studies that were reviewed also suggest a clear reduction in the estimated effect after two to three years of age, particularly for pneumonia and bronchitis. The failure to find statistically significant associations in some studies of older children should not be interpreted, however, as indicative of no effect of secondhand smoke exposure at older ages.

## Conclusions

1. The evidence is sufficient to infer a causal relationship between secondhand smoke exposure from parental smoking and lower respiratory illnesses in infants and children.
2. The increased risk for lower respiratory illnesses is greatest from smoking by the mother.

## Implications

Respiratory infections remain a leading cause of childhood morbidity in the United States and other developed countries and are a leading cause of childhood deaths worldwide. The effect of parental smoking, particularly maternal smoking, is of a substantial magnitude. Reducing smoking by parents, beginning with maternal smoking during pregnancy, should reduce the occurrence of LRI. Health care practitioners providing care for pregnant women, infants, and children should urge smoking cessation; parents who are unable to quit should be encouraged not to smoke in the home.

(Pages 291 and 292)

...exposure to secondhand smoke is causally associated with an increase in the incidence of childhood asthma (USEPA 1992; Halcken et al. 1995). This association has been attributed to chronic (but possibly reversible) effects of parental smoking on bronchial hyperreactivity rather than to the acute effects of cigarette smoke on airway caliber (USEPA 1992). The most relevant evidence for secondhand smoke exposure and onset of asthma comes from studies of older children at an age when there is reasonable diagnostic certainty. This evidence comes from only a small number of studies and their statistical power is limited, particularly within specific age strata. In addition, all studies are inherently limited by the difficulty of classifying the outcome, and there may be variations in the phenotypes that were considered across the studies. Within these constraints, the evidence indicating an association of secondhand smoke exposure from parental smoking with asthma incidence is inconsistent. The evidence for asthma prevalence, by contrast, was sufficient to support an inference of causality. (Page 375)

1. The evidence is sufficient to infer a causal relationship between parental smoking and middle ear disease in children, including acute and recurrent otitis media and chronic middle ear effusion. (Page 309)

Very special thanks for the information for protecting our children are due to the following caring people:

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#### *INDIGENOUS PEOPLES*

<http://www.nirs.org/radwaste/scullvalley/historynativecommunitiesnuclearwaste06142005.pdf>

<sup>4</sup> The nuclear fuel chain involves the mining and milling of uranium, and the processing, conversion and enrichment of it into fuel for nuclear reactors and atomic weaponry. Most of the uranium in the U.S. is located on Native American lands. Uranium mines were, and continue to be, on Navajo lands throughout the Grants Mineral Belt (Arizona and New Mexico), on Laguna Pueblo land in New Mexico and tribal lands in the Northwest, as well as on and near Sioux Indian lands in western South Dakota. These mines have taken a particularly hard toll on the communities near them. Native Americans miners, most of whom were never informed of the dangers of uranium, were exposed to its particulate and radioactive gases in the mines for decades. They have suffered large numbers of lung cancer fatalities, a disease almost entirely unknown among the Navajos and Pueblos before uranium mining. Mining debris and mill tailings, as milling often takes place near the mines to minimize transport of waste rock, were put into unlined storage ponds or out in the open air, where often they leached into nearby soil and water. Groundwater that entered into the mines, and thus became contaminated, was regularly pumped out into rivers and lakes. Worsening this already poor situation, when mining ceased in the late 1970's (because of the drop in uranium prices), companies abandoned the mines. They did this without sealing the tunnels, filling the pits, or removing the large piles of radioactive and toxic tailings. As a result, Native American families have lived for many decades in very close proximity to the mines, grazed their livestock there, and had children playing in them. Uranium mine tailings have been used in roads, homes, buildings and school

playgrounds. Serious health effects have been documented (See, for example, Peter H. Eichstaedt, *If You Poison Us: Uranium and Native Americans*, Red Crane Books, Santa Fe, New Mexico, 1994; *Poison Fire, Sacred Earth: Testimonies, Lectures, Conclusions*, The World Uranium Hearing, Salzburg, Austria, September, 1992; *This Is My Homeland: Stories of the effects of nuclear industries by people of the Serpent River First Nation and the north shore of Lake Huron*, edited by Lorraine Rekmans, Keith Lewis and Anabel Dwyer, Serpent River First Nation, 2003; Winona LaDuke, "Nuclear Waste: Dumping on the Indians," *All Our Relations*, South End Press, 2001.) Some of the extraction and processing facilities for converting milled uranium into nuclear fuel (such as Kerr-McGee's Sequoyah Fuels Plant at Gore, Oklahoma) have also disproportionately impacted Native communities. Nuclear reactors, such as those at Prairie Island, Minnesota and Big Rock Point, Michigan, have been built next to Native American communities or on their sacred sites against the tribes' will. Such exploitation extends back to the dawn of the Atomic Age, such as during the Manhattan Project in the 1940's when

the Los Alamos National Laboratory in New Mexico was built near Pueblo Indian communities directly on top of their sacred burial grounds, and when the "Trinity" test – the first atomic weapons explosion in history – was conducted immediately upwind of the Mescalero Apache Indian Reservation in New Mexico, a tribal community targeted 40 to 50 years later for a national high-level radioactive waste dump.

<http://www.sonic.net/~kerry/uranium.html>

Navajo Uranium Radiation Victims

[ftp://ftp.halcyon.com/pub/FWDP/Americas/four\\_dir.txt](ftp://ftp.halcyon.com/pub/FWDP/Americas/four_dir.txt)

2. According to a 1981 report by the United States Department of Energy, about one tenth of known United States uranium reserves are found on Indian reservation lands. Uranium has been mined on the Navajo and Laguna Reservations in the south-west, and the Spokane Reservation in the State of Washington. In addition, two sites in the Black Hills of South Dakota, Edgemont and Bell Fourche, have operated on a small scale in the past and are still considered important reserves, and new exploration has begun near the Havasupai and Hopi Reservations.
3. The largest known United States deposit, the so-called Grants Mineral Belt centered at the town of Grants, New Mexico, lies partly under the Navajo, Acoma and Laguna Indian Reservations. Discovered in 1950 by a Navajo shepherd, the Grants field has accounted for one half of all United States uranium production since then. The Jackpile Mine is located on the Laguna Reservation, 1.5 km east of the town of Pagate, and, from 1955-1968, a number of mines and mills were operating near the towns of Shiprock and Tuba City on the Navajo Reservation. A government-sponsored study, published in the New England Journal of Medicine in 1984, confirmed exceptionally high rates of lung cancer among Navajo uranium miners.
4. The most common health risk associated with uranium mining is breathing radon-222 gas, which continues to seep from the crushed ore and mill tailings for hundreds of thousands of years. It is therefore essential to contain this material, and prevent it from either blowing away or spilling into water supplies. Responding to the widely publicized discovery that more than 600 homes in Grand Junction, Colorado, had been built on top of uranium mill tailings (House Report No. 95-649 [1978]), Congress targeted 22 abandoned uranium mines and mills for remedial action. Four are located on the Navajo Reservation (House Report No. 95-1480 [1978]). They were operated by Kerr-McGee, Vanadium Corp. of America, El Paso Natural Gas Co., and Texas Zinc Minerals to supply uranium to the Federal Government. The El Paso Natural Gas site, 10 km east of Tuba City, alone contains more than 700,000 cubic metres of materials, which has already blown over an area of 100 ha and lies, according to a 1986 Department of Energy report, within 3 km of several Navajo shepherding camps. The Kerr-McGee mill at Grants, 30 km from the Laguna Reservation, is also scheduled for action and contains some 33 million tonnes of tailings.

[http://www.nirs.org/radwaste/scullvalley/sv\\_victory91406.htm](http://www.nirs.org/radwaste/scullvalley/sv_victory91406.htm)

...the broader fight against radioactive racism is far from over. Sacred Western Shoshone Indian land at Yucca Mountain, Nevada is still being targeted for the national permanent dumpsite for high-level radioactive waste, despite the Treaty of Ruby Valley of 1863, and despite the site's seismic, volcanic, and hydrological hazards. The U.S. Department of Energy is now targeting the Walker River Paiute in western Nevada for a rail route to ship 77,000 tons of high-level radioactive waste from all over the country to Yucca Mountain. Uranium mining companies, with NRC complicity, are attempting to circumvent a Navajo ban on uranium mining, milling, and processing on tribal territory. Nuclear utilities are pressing to extend by 20 years the operations at the already 40 year old, dangerously deteriorated Palisades nuclear plant in the predominantly African American town of Covert, Michigan; the reactor site almost certainly contains Native American archaeological and perhaps even burial sites that remain unprotected. And nuclear giant Entergy wants to build a new reactor in the impoverished, predominantly African American County of Claiborne, Mississippi. The list goes on and on – the vigilance of atomic watchdogs must go on and on too, to counter this outrageous radioactive racism.

<http://www.mindfully.org/Nucs/Goshute-Tribe-Nuc-Waste.htm>

Goshute Native American Tribe Turns to Nuclear Waste

HANNAH WOLFSON / AP 2dec00

SKULL VALLEY INDIAN RESERVATION, Utah -- Leon Bear knows the boundaries of his tribe's land by heart.

From the reservoir that provides water to his tiny village, Bear sweeps his arm across the parched valley, pointing out fences and smokestacks that ring the last remnant of his tribe's traditional lands.

To the north, a magnesium plant sits on the shore of the Great Salt Lake; to the south, the Army tests equipment for exposure to nerve gas on a stretch of desert as large as Rhode Island. A bombing range and hazardous waste incinerator lie over the Cedar Mountains to the west; a stockpile of chemical weapons and the incinerator that destroys them sit to the east.

Now the tiny Skull Valley Band of Goshutes has agreed to turn its reservation into one of the country's largest nuclear waste dumps.

Opponents, including other tribe members, say the plan could endanger people, the wildlife of the West Desert and the region's economy.

It's not that the tribe hasn't tried. At the village entrance, the last examples of one failed project -- portable toilets and showers built for the military -- sit unused.

Only two real options remained: nuclear waste and gambling...

### ENVIRONMENTAL RACISM

From Wikipedia, the free encyclopedia

[http://en.wikipedia.org/wiki/Environmental\\_racism](http://en.wikipedia.org/wiki/Environmental_racism)

Environmental racism refers to intentional or unintentional racial discrimination in the enforcement of environmental rules and regulations, the intentional or unintentional targeting of minority communities<sup>[1]</sup> for the siting of polluting industries, or the exclusion of minority groups from public and private boards, commissions, and regulatory bodies. The term was coined and defined by the former Reverend Dr. Benjamin F. Chavis, Jr.<sup>[2]</sup> Environmental justice is the movement to reverse environmental racism.<sup>[3][4]</sup>

In the United States

Since the term "environmental racism" was coined, researchers have investigated why minorities are more likely than whites to reside in areas where there is more pollution.<sup>[5]</sup> Some social scientists suggest that the historical processes of suburbanization and decentralization are examples of white privilege that have contributed to contemporary patterns of environmental racism.<sup>[6]</sup> In the United States, the wealth of a community is not nearly as good a predictor of hazardous waste locations as the ethnic background of the residents, suggesting that the selection of sites for hazardous waste disposal involves racism.<sup>[7]</sup> These minority communities may be easier targets for environmental racism because they are less likely to organize and protest than their middle or upper class white counterparts. This lack of protest could be due to fear of losing their jobs, thereby jeopardizing their economic survival.<sup>[8]</sup>

Studies and Reports

Researcher James T. Hamilton studied American zip codes targeted for capacity expansion in plans by commercial hazardous waste facilities from 1987 to 1992, and locations targeted for hazardous waste facilities had an average nonwhite population of 25 percent, versus 18 percent for those areas without net expansion. Hamilton suggests that differences in the probability that residents will raise a firm's expected location costs by engaging in successful collective action to oppose expansion offer the best explanation for which neighborhoods are targeted by polluting industries.<sup>[9]</sup> Another study centered around Los Angeles in 1997 found that working-class minority communities are more frequently targeted for the construction of hazardous waste treatment, storage, and disposal facilities.<sup>[10]</sup>

A 2007 study by the University of Colorado at Boulder showed that although the average black or Hispanic resident of a major U.S. city lives in a more polluted part of town than the average white person, the levels of inequality vary widely between cities. The study found that black/white environmental inequality levels were highest in Orlando, Florida, Norfolk, Virginia, Louisville, Kentucky, and Portland, Oregon, and weakest in Baltimore, Maryland, Las Vegas, Nevada, Boston, Massachusetts, and Nassau and Suffolk Counties, New York.<sup>[5]</sup> Urban minority communities may also face environmental racism in the form of parks that are smaller, less accessible and of poorer quality than those in more affluent or white

areas in some cities.<sup>[11][12]</sup> This may have an indirect impact on health since young people have fewer places to play and adults have fewer opportunities for exercise.<sup>[12]</sup>

According to a 1993 study done by Seema Arora and Timothy Cason, it appears that race is an especially influential factor determining toxic releases in the Southern United States. "This result seems confined to nonurban areas, which contain high concentrations of minority residents mainly in the South." As a result of this finding, Arora and Cason suggest a solution to this problem of environmental racism. The researchers believe that "raising awareness and providing information to the affected rural, southern communities" could be a significant step in the fight for environmental justice.<sup>[13]</sup>

After publishing its first report entitled "Toxic Wastes and Race in the United States"<sup>[14]</sup> in 1987, the United Church of Christ Commission for Racial Justice (CRJ) conducted a follow-up study that was published in 2007. The 1987 report focused on the environmental hazards that minority communities face as a result of the placement of landfills, toxic waste sites, etc. near their communities. This report found that when analyzing the factors of race, household income, home value, and "the estimated amount of hazardous waste generated by industry," the most significant factor in determining the location of commercial hazardous waste facilities in the US was race. The report released in 2007, entitled "Toxic Wastes and Race at Twenty," concludes that many of these same poor minority communities are still facing the same problems that they did 20 years ago. In 2007, these communities even faced new problems "because of government cutbacks in enforcement, weakening health protection, and dismantling the environmental justice regulatory apparatus."

Some of the 2007 Report Findings:

- National Disparities - Host neighborhoods of commercial hazardous waste facilities are made up of 56% people of color (including African Americans, Hispanics/Latinos, and Asians/Pacific Islanders). However, non-host neighborhoods are only made up of 30% people of color.
- Neighborhoods with Clustered Facilities - Neighborhoods with hazardous waste facilities clustered close together have populations with 69% people of color, while neighborhoods without clustered facilities have populations with 51% people of color.
- State Disparities - This problem of environmental racism is not only found in a few states. Rather, out of the 44 states that have hazardous waste facilities, 40 of these states have disproportionately high percentages of people of color living within 3 kilometers of the facilities. The top-ten ranking states with disparities between the percentages of people of color living in host neighborhoods and those living in non-host neighborhoods are Michigan, Nevada, Kentucky, Illinois, Alabama, Tennessee, Washington, Kansas, Arkansas, and California.

## Governmental Policies

Policies related to redlining and urban decay can also play a role in environmental racism, and in turn have an impact on public health. For example, sociologist Robert Wallace writes that the pattern of the AIDS outbreak during the 80s was affected by the outcomes of a program of 'planned shrinkage' directed in African-American and Hispanic communities and implemented through systematic denial of municipal services, particularly fire extinguishment resources, which are essential for maintaining urban levels of population density and ensuring community stability.<sup>[15]</sup>

## International

Environmental racism also exists at an international scale. First world corporations often produce dangerous chemicals banned in the United States and export them to developing countries, or send waste materials to countries with relaxed environmental laws.

In one instance, the French aircraft carrier Clemenceau was prohibited from entering Alang, an Indian ship-breaking yard due to a lack of clear documentation about its toxic contents. French President Jacques Chirac ultimately ordered the carrier, which contained tons of hazardous materials including asbestos and PCBs, to return to France.<sup>[16]</sup>

E-waste disposal sites, such as one in Giuyu China, are also subject of controversy. In Giuyu, laborers with no protective clothing regularly burn plastics and circuit boards from old computers. They pour acid on electronic parts to extract silver and gold, and crush cathode ray tubes from computer monitors to remove other valuable metals, such as lead. Nearly 80 percent of children in the E-waste hub of Giuyu, China, suffer from lead poisoning, according to recent reports.<sup>[17]</sup>

## Environmental justice

Main article: Environmental justice

According to the Environmental Protection Agency (EPA), "Environmental Justice is the fair treatment and meaningful involvement of all people...with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. EPA has this goal for all communities and persons across this Nation. It will be achieved when everyone enjoys the same degree of protection from environmental and health hazards and equal access to the decision-making process to have a healthy environment in which to live, learn, and work."<sup>[18]</sup>

On 11 February 1994 President Bill Clinton signed Executive Order 12898<sup>[19]</sup>, which directed federal agencies to develop strategies to help them identify and address disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority and low-income populations. Clinton also intended the Order to provide minority and low-income communities with access to public information and opportunities for public participation in matters relating to human health or the environment.<sup>[20]</sup>

United States organizations working for environmental justice include: Greenaction, Center for Health, Environment and Justice, and the Coalition Against Environmental Racism. In response to public concerns raised by these groups, the United States Environmental Protection Agency created the Office of Environmental Justice in 1992.

## Hazards

According to the United States EPA, the six most prominent examples of environmental hazards include:<sup>[20]</sup>

- Lead - There is a particularly high concentration of lead problems in low-income and culturally diverse populations, who live in the inner city where the public housing units were built before 1970.
- Waste Sites - Low income, and quite often culturally diverse populations, are more likely than other groups to live near landfills, incinerators, and hazardous waste treatment facilities.
- Air Pollution - 57 percent of all European Americans, 65 percent of African Americans, and 80 percent of Hispanic Americans live in communities that have failed to meet at least one of EPA's ambient air quality standards.
- Pesticides - Approximately 90 percent of the 2 million hired farm workers in the United States are people of color, including Chicano, Puerto Ricans, Caribbean blacks and African Americans. Through direct exposure to pesticides, farm workers and their families may face serious health risks. It has been estimated that as many as 313,000 farm workers in the U.S. may suffer from pesticide-related illnesses each year.
- Wastewater (City Sewers) - Many inner cities still have sewer systems that are not designed to handle storm overflow. As a result, raw sewage may be carried into local rivers and streams during storms, creating a health hazard.
- Wastewater - (Agricultural Runoff) - It is suspected that the increased use of commercial fertilizers and concentrations of animal wastes contribute to the degradation of receiving streams and rivers in rural areas, with communities that are often low income and culturally diverse.

## Gentrification

Although it is not always connected to race and can sometimes be generalized by class, gentrification or urban renewal can be connected to environmental racism and residential segregation. Gentrification has historically been defined as higher income newcomers displacing lower income residents from up-and-coming urban neighborhoods. The concept has been understood as reflecting the residential turnover of an area that was predominantly composed of residents of color, to one populated by higher income whites. Yet definitions of gentrification fail to mention this racial component. Critical race theory is used to examine race as an implicit assumption that merits investigation as demographic changes in the U.S. challenge these class-based definitions.<sup>[21]</sup>

## References

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5. <sup>a b</sup> Environmental Racism Study Finds Levels Of Inequality Defy Simple Explanation
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