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ODOT Herbicide Applications Along State Highways: Human Rights Concerns

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| Matter of Concern: | ODOT road shoulder herbicide applications and human health effects |
| Date: | April 23, 2008 |
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Purpose of This Report

The purpose of this Report is to provide the Oregon Transportation Commission, Concerned Citizens for Clean Air and the Oregon Toxics Alliance a list of international human rights norms of concern in respect to the Oregon Department of Transportation's road shoulder herbicide spray program, to outline ODOT's potential liabilities with respect to the program and to describe pathways ODOT could take to minimize those liabilities.

Facts

The Vegetation Management Program of ODOT's Office of Maintenance is responsible for control of vegetation on the shoulders of state-maintained roads and highways in Oregon. The Program uses a variety of methods for vegetation control, including mowing, shoulder grading, manual control and chemical herbicide control, currently the Program's primary vegetation management tool.

Concerned Citizens for Clean Air (CCCA) is a non-profit citizens' group located on the Central Oregon coast chartered with the state of Oregon since 2005. Oregon Toxics Alliance (OTA) is a non-profit citizens' group headquartered in Eugene, Oregon and chartered with the state of Oregon since 2001.

In February 2007 CCCA issued a report titled *Herbicide Use on Oregon Highway Shoulders – Time to Stop?* which detailed the kinds and quantities of herbicide products used on Oregon highway shoulders, examined their effectiveness, and posed questions about herbicide effects on human health and the environment. It also asked whether roadside vegetation could be controlled without, or with significantly less use of, chemical herbicides, explored ethical and human rights concerns about broadcast herbicide use, and offered recommendations for alternative methods of vegetation control.

In May 2007, at CCCA's request, supported by citizen petitions and letters from local elected officials, ODOT Director Matthew Garrett designated a 25 mile stretch of coastal state highway 101 as a pilot project to evaluate methods, costs and consequences of reducing the use of herbicides on highway shoulders. In February 2008 Director Garrett announced that the pilot project would continue at least through July of 2009 while more data were collected.

Issues

CCCA and OTA are concerned about reports of adverse acute health effects resulting from the public's exposure to road shoulder herbicide sprays and spray residues, and potential long-term health effects that may result from the public's acute and/or prolonged exposures.

Human Rights Norms of Concern

Environmental issues often directly impact human rights, and part of the purpose of this Report is to help the Oregon Transportation Commission, Concerned Citizens for Clean Air and the Oregon Toxics Alliance appreciate the human rights dimensions of ODOT's roadside spray program. As Daniel Taillant, Director of the Argentina-based Center for Human Rights and the Environment says, "Everything and anything that influences the environment directly influences our human condition, and a violation of the environment is a violation of our human rights."¹

Listed below are 23 specific human rights norms that may have direct relevance to ODOT's shoulder spray program. (This list does not include additional rights that may be protected by the US or Oregon constitutions or by state statutes.) These norms can be found articulated in several different human rights declarations, conventions, charters and other international instruments, including:

- *Universal Declaration of Human Rights (UDHR)*²
- *International Covenant on Civil and Political Rights (CCPR)*³
- *International Covenant on Economic, Social and Cultural Rights (CESCR)*⁴
- *Convention on the Rights of the Child (1990) (CRC)*⁵
- *Convention on the Elimination of All Forms of Discrimination against Women (CEDAW)*⁶
- *Rio Declaration on Environment and Development*
- The World Health Organization *Declaration of Alma Ata*⁷
- *The Nuremberg Code*⁸

The first three documents above, *UDHR*, *CCPR* and *CESCR*, are usually considered primary and are often referred to as the international bill of human rights, so in the list below they are given a certain pride of place when identifying documents in which specific rights are articulated.⁹

1. Right to life, liberty and security of person.

Articulated in

UDHR Article 3

"Everyone has the right to life, liberty and security of person."

CCPR Article 9

"Everyone has the right to liberty and security of person."

UDHR Article 13

"(1) Everyone has the right to freedom of movement and residence within the borders of each State."

What this right entails

This is the right to be safe and secure in one's person.

The right to liberty entails the freedom to move about within the boundaries of one's state.

Reasons for concern

- Reports of adverse physical health effects related to road shoulder herbicide exposures.
- Adverse health effects attributable to exposures to herbicides, drift and residues include respiratory, cardiovascular, dermal and neurologic effects, as well as miscarriages and birth anomalies, particularly for pregnancies conceived or carried during periods of exposure.
- If any citizens consider their freedom of movement to be restricted due to their need to avoid roadside herbicide applications, particularly if those restrictions result in documentable economic loss, that would be a concern.
- If any citizens consider that threat of injury from spray exposures will require them to move from their current place of residence or place of work, particularly if that would result in documentable economic loss, that would be a concern.

2. Right to privacy and home

Articulated in

UDHR Article 12

"No one shall be subjected to arbitrary interference with his privacy, family, home or correspondence...."

CCPR Article 17

"No one shall be subjected to arbitrary or unlawful interference with his privacy, family, home or correspondence."

What this right entails

This entails the right to be secure in your home , to be able to enjoy the use of your property and to not have one's property devalued as a result of state actions.

"The European Human Rights Court noted that severe environmental pollution may affect individuals' well-being and prevent them from enjoying their homes in such a way as to affect their private and family life adversely, without, however, seriously endangering their health."¹⁰

This means that adverse health effects are not the only kind of adverse effects that violate the right to one's property and home.

Reasons for concern

- Discomfort experienced at home, or compromised ability to enjoy one's home and property due to exposure to roadside herbicides or herbicide drift or residues, even without adverse health effects.
- Potential adverse physical health effects related to roadside herbicides and suffered in the home.

3. The family's right to protection

Articulated in

CCPR Article 23

“The family is the natural and fundamental group unit of society and is entitled to protection by society and the State.”

CESCR Article 10

“The widest possible protection and assistance should be accorded to the family, which is the natural and fundamental group unit of society, particularly for its establishment and while it is responsible for the care and education of dependent children.”

What this right entails

This means that the health, strength, well-being and social integrity of families must be protected and supported; if these become compromised as a result of roadside herbicide applications, drift or residues then this right has been violated.

Reasons for concern

- Adverse physical or economic effects on families attributable to roadside herbicide applications, drift or residues.
- If the health or well being of families, including economic well being, have been adversely affected as a result of roadside sprays, that would be a concern.

4. Right to property

Articulated in

UDHR Article 17

“No one shall be arbitrarily deprived of his property.”

What this right entails

See number 2 above regarding the right to privacy and home.

Reasons for concern

- Any adverse physical or economic impacts on property or property values attributable to roadside herbicide applications, drift or residues.
- If individuals, families or businesses have been forced to leave or sell their property due to roadside sprays, that would be a concern.
- If individuals’ or families’ ability to enjoy the use of their property has been compromised due to roadside herbicide applications, drift or residues, that would be a concern.

5. Right to work

Articulated in

CESCR Article 6

“The States Parties to the present Covenant recognize the right to work, which includes the right of everyone to the opportunity to gain his living by work which he freely chooses or accepts, and will take appropriate steps to safeguard this right.”

What this right entails

This right refers to the right to work and, by extension, the right to be able to transport oneself to work without being made sick along the way.

Reasons for concern

- Citizens who may become unable to work due to exposure to roadside herbicide applications, drift or residues.
- Citizens who may be unable to transport themselves to work due to their need to avoid exposure to roadside herbicide applications, drift or residues.
- Workplaces that may become contaminated by roadside herbicide applications, drift or residues enough that some workers are unable to work or keep their jobs would be a concern.

6. Right to safe and healthy working conditions

Articulated in

CESCR Article 7

“States Parties to the present Covenant recognize the right of everyone to the enjoyment of just and favourable conditions of work which ensure...[s]afe and healthy working conditions”

What this right entails

This entails the right to a safe and healthy work environment.

Reasons for concern

- Adverse physical effects experienced in the workplace that are attributable to roadside herbicide applications, drift or residues.
- Any reports of workplace safety having been compromised as a result of roadside herbicide applications, drift or residues.

7. Motherhood and childhood’s right to special care

Articulated in

UDHR Article 25

“Motherhood and childhood are entitled to special care and assistance. All children...shall enjoy the same social protection.”

CESCR Article 12 (section 2a)

establishes the obligation of states party to this Covenant to take steps to make “provision for the reduction of the stillbirth-rate and...infant mortality and for the healthy development of the child.”

CRC Article 27

“1. States Parties recognize the right of every child to a standard of living adequate for the child's physical, mental, spiritual, moral and social development.”

What this right entails

This is the right of children and their mothers to be provided special care, protection and assistance. This means that states have a particular duty to protect children and mothers

from anything, including environmental toxics, that may compromise the child's physical, mental, spiritual or social development.

Reasons for concern

- Research indicates that children are at much greater risk than adults because of their increased biological susceptibility to adverse health effects from exposure to herbicides.
- Research indicates that fetuses and pregnant mothers are at risk for adverse effects from exposure to herbicides.
- If mothers, and mothers' ability to be good caregivers for their children, are adversely affected by roadside sprays, that would be a concern.

8. Duty to protect the child (i.e., persons under age 18):

Articulated in

CRC Article 19

"States Parties shall take all appropriate legislative, administrative, social and educational measures to protect the child from all forms of physical or mental violence, injury or abuse, neglect or negligent treatment, [or] maltreatment...."

CESCR Article ten (section three)

"Special measures of protection and assistance should be taken on behalf of all children and young persons without any discrimination for reasons of parentage or other conditions."¹¹

What this right entails

This is the child's right to special protections, and the state's duty to provide special protections, from infliction of harm, including harm that could result from unavoidable exposures to environmental toxics.

Reasons for concern

- See above.

9. Right of the child to the highest standard of health

Articulated in

CRC Article 24

"States Parties recognize the right of the child to the enjoyment of the highest attainable standard of health."

What this right entails

This is the right of children to live in safe and healthy conditions, including safe and healthy environmental conditions, and not to have to undergo exposure to conditions that adversely affect health.

Reasons for concern

- If a government undertakes any activity that puts children at increased risk of adverse health effects, that is a concern.

- Adverse health effects attributable to exposures to herbicides, drift and residues can include respiratory, cardiovascular, dermal and neurologic effects, as well as miscarriages and birth anomalies, particularly for pregnancies conceived or carried during periods of exposure.

10. Right of everyone to the highest standard of health

Articulated in

CESCR Article 12

“States Parties to the present Covenant recognize the right of everyone to the enjoyment of the highest attainable standard of physical and mental health.”

What this right entails

This is the right to live in conditions conducive to the highest standard of health.

Reasons for concern

- If a government undertakes any activity that puts citizens at increased risk of adverse health effects, that is a concern.
- Adverse health effects attributable to exposures to herbicides, drift and residues can include respiratory, cardiovascular, dermal and neurologic effects, as well as miscarriages and birth anomalies, particularly for pregnancies conceived or carried during periods of exposure.
- Adverse psychological health effects attributable to roadside spray exposures are also of concern.

11. State’s duty to provide for the health of citizens

Articulated in

The Declaration of Alma-Ata, Article V

“Governments have a responsibility for the health of their people which can be fulfilled only by the provision of health and social measures.”

What this right entails

This more clearly reframes the right to health as a duty of a government to its citizens to provide for the health of its citizens.

Reasons for concern

- See above

12. State’s duty to provide for the health of citizens demands coordinated efforts of all sectors

Articulated in

Declaration of Alma-Ata Article VII

[Provision of health measures includes,] “in addition to the health sector, all related sectors and aspects of national and community development, in particular agriculture, animal husbandry, food, industry, education, housing, public works, communications and

other sectors; and demands the coordinated efforts of all those sectors.”

What this entails

This article elucidates the meaning of “provision of health and social measures,” saying that the state’s duty to provide the highest standard of health for its citizens extends beyond just the health sectors of governments; it involves all other sectors as well, including the responsibility to see that transportation, vegetation control and agricultural sectors are regulated in ways that are protective of citizens’ health.

Reasons for concern

- This article says that in addition to departments of health, all government departments, including departments of transportation, vegetation management, agriculture and other agencies that deal with chemicals and other potential health risks, also have a positive duty to protect the health of citizens.

13. Right to a healthy environment

Articulated in

Aarhus Convention Preamble

“every person has the right to live in an environment adequate to his or her health and well-being, and the duty, both individually and in association with others, to protect and improve the environment for the benefit of present and future generations.”

What this right entails

This is the right to live in an environment that is conducive to health.

Reasons for concern

- If roadside sprays compromise the environment or cause conditions not conducive to health, even if those exposures affect the health of some people more than others, that would a concern.

14. Duty to encourage school attendance

Articulated in

CRC Article 28, 1(e)

“[States Parties shall] Take measures to encourage regular attendance at schools.”

What this right entails

If states are enjoined to take measures “to encourage regular attendance at schools,” it follows that they are also required, *a fortiori*, to refrain from taking measures that make it difficult or impossible for students to attend school.

Reasons for concern

- Have roadside sprays prevented any students from attending school or being transported to school due to their need to avoid herbicide exposures?
- Have students been exposed to herbicide residues or drift while waiting for school buses?

- Have schools located near roadways been affected enough that some students have been unable to attend or stay in school?

15. Right to education

Articulated in

CESCR Article 13 (section 1)

“States Parties to the present Covenant recognize the right of everyone to education.”

Reasons for concern

- See above.

16. Right to effective remedy

Articulated in

CCPR Article 2(3)a

“Each State Party to the present Covenant undertakes: To ensure that any person whose rights or freedoms as herein recognized are violated shall have an effective remedy, notwithstanding that the violation has been committed by persons acting in an official capacity....”

What this right entails

“The legal obligation to offer restitution for injury is as old as the Code of Hammurabi, the first formal set of laws in history.”¹² It is recognized both internationally and domestically that “one of the major, primordial functions of the law is to return the victims of an unjust act to their previous condition.”¹³

“Effective remedy” means that by judicial action, monetary compensation or some other means any person whose rights have been unjustly violated will be restored as much as possible to their previous condition.

The right to effective remedy would be violated if, despite attempts to convince or compel ODOT to significantly reduce its roadside herbicide program using normal governmental methods and channels, the roadside spray program continues.¹⁴

Reasons for concern

- The potential for being required to pay monetary compensation should citizens be adversely impacted by roadside sprays, drift or residues would be a concern.

17. Right to compensation

Articulated in

In 1985 the U.N. General Assembly spelled out the nature of indemnification in the Declaration of Basic Principles of Justice for Victims of Crime and Abuses of Power. This declaration insists that “victims are entitled to prompt redress for the harm that they have suffered” and that offenders should “pay fair restitution to victims, their families and dependents.”¹⁵

What this right entails

“The basic moral law of every society asserts that a government which wrongly injures its own citizens must make them whole insofar as this is possible.”¹⁶

Reasons for concern

- Personal or business economic losses resulting from exposure to roadside sprays, drift or residues would be a concern.
- Any other losses that can be measured in economic terms would be a concern.

18. Right to know

Articulated in

The *Rio Declaration on Environment and Development* establishes citizens’ right to information about environmental toxics to which they may be exposed.

Rio Declaration Principle 10

“Environmental issues are best handled with participation of all concerned citizens, at the relevant level. At the national level, each individual shall have appropriate access to information concerning the environment that is held by public authorities, including information on hazardous materials and activities in their communities, and the opportunity to participate in decision-making processes. States shall facilitate and encourage public awareness and participation by making information widely available.”

Aarhus Convention Article 1

“each Party shall guarantee the rights of access to information, public participation in decision-making, and access to justice in environmental matters...”

What this right entails

This is the right of citizens to be provided full information about environmental issues so they can participate knowledgeably in decision-making about that issue. It entails the right to full disclosure of information about ingredients (both active and undisclosed “inert” ingredients), about details of spray plans, planned effectiveness studies, Health Risk Assessments, Environmental Impact Statements, planned (or lack of) health effects monitoring, etc.

Reasons for concern

- Despite manufacturers’ claims that information about undisclosed ingredients is proprietary, precedents are emerging around the world and in the US in support of citizens’ right to know the ingredients of chemical products to which they are exposed.
- The fact of spray drift is not insignificant. The problems of immediate drift, residues and subsequent vaporization of residues all exacerbate human rights concerns primarily because of the larger number of persons who are impacted by the chemicals and who, because they may not be immediately adjacent to road shoulders, may be uninformed, unwarned and perhaps unconsenting.

19. Right to participation in decision-making in environmental issues

Articulated in

Rio Declaration Principle 10
Aarhus Convention Article 1
(see above)

Reasons for concern

- Have citizens had sufficient opportunity to participate effectively in decision-making about roadside herbicide use and policy?

20. Right to equal protection of the law

Articulated in

CCPR Article 26

“All persons are equal before the law and are entitled without any discrimination to the equal protection of the law. In this respect, the law shall prohibit any discrimination and guarantee to all persons equal and effective protection against discrimination on any ground...”

What this right entails

This means that discrimination against persons and classes is proscribed.

The basic principles of environmental justice require that those communities that are disadvantaged in any way – socially, economically, as a result of discriminatory racial policies, etc., or who simply have less ready access to resources – be accorded the same degree of respect, fair treatment and opportunity for meaningful involvement in decision-making as communities that are more socially or economically advantaged and have greater access to resources. As explained on the Environmental Protection Agency website “Fair treatment means that no group of people, including racial, ethnic, or socioeconomic groups, should bear a disproportionate share of...negative environmental consequences.”¹⁷

Reasons for concern

- Are all communities treated equally in the spray program, regardless of perceived social privilege or socioeconomic status?
- Does the socio-economic makeup of communities appear to be a factor in any decisions made by the spray program?
- Are disadvantaged communities affected any differently than more privileged communities?
- Are communities with different racial compositions affected differently?

21. Right to freedom from discrimination due to disability

Articulated in

The Americans With Disabilities Act (US)

What this right entails

The US Department of Justice maintains a website with detailed information about ADA requirements¹⁸, but in general this law requires that everyone who has, or is perceived to have, a disability not be discriminated against in any way.

A booklet providing an overview of ADA “requirements for ensuring equal opportunity for persons with disabilities in employment, State and local government services, public accommodations, commercial facilities, and transportation,” etc. is available on the ADA website.¹⁹

Reasons for concern

- Discrimination occurs when any sub-group is disproportionately impacted by a policy or practice and no sufficient accommodations are made for them. Individuals with asthma or other respiratory conditions, chemically sensitive persons, pesticide sensitive persons, people with various allergies, immunocompromised people, the elderly, the very young, pregnant women,²⁰ any place-bound persons (in hospitals or elder care facilities near roadways, for example) to name a few vulnerable subsets of residents, may be reasonably expected to experience more serious adverse effects from herbicide exposures than the general population.
- Have reasonable accommodations been developed for persons in those groups to help them avoid being unfairly impacted by the sprays?

22. Right of experimental subjects to free and informed consent

Articulated in

Nuremberg Code Item 1

“The voluntary consent of the human subject is absolutely essential.”

Nuremberg Code Item 9

“the human subject should be at liberty to bring the experiment to an end if he has reached the physical or mental state where continuation of the experiment seems to him to be impossible.”

What this right entails

This is the right to be fully informed about an experiment before agreeing to participate, the freedom to choose whether to participate or not, and the freedom to withdraw from the experiment at any time.

The rights of experimental subjects to informed consent and to protection from possible harms, at least as they are expressed in *The Nuremberg Code*, are premised on the acknowledgment that the practice of long term application of these roadside herbicide formulations contains important unknowns as regards health effects and is at least partially experimental.

Reasons for concern

- Have citizens been provided opportunity to consent or not consent to exposure to roadside herbicides, drift and residues?
- Have citizens been provided ways to withdraw themselves or their families from the spray exposures if they wish to not be exposed?
- Have citizens, particularly those with certain disabilities, been notified about details of roadside sprays and provided alternative routes where they will not be exposed?

23. Right of experimental subjects to be protected from injury, disability or death

Articulated in

Nuremberg Code Item 7

“Proper preparations should be made and adequate facilities provided to protect the experimental subject against even remote possibilities of injury, disability, or death.”

What this right entails

This is the right to be protected from anticipated, remote or unanticipated harms that may possibly result from participation in the experiment.

Reasons for concern

- Have such protections been provided, particularly for those at increased risk of harm from herbicide exposure?

Potential Liabilities

Listed below are some liabilities ODOT may incur with respect to its use of chemical herbicides on state-maintained roadways.

1. The potential consequences of governments ignoring human rights norms are not insignificant. Loss of public confidence in government agencies and their processes is not a small thing, even from the perspective of the agency, and even when viewed through the lens of basic practicality. When human rights standards are compromised the consequences can be monumental, costly and long lasting.
2. If the Vegetation Management Program made no improvements there would be risk of public recognition that, despite awareness of links between herbicide exposure and health impacts and despite awareness of human rights concerns, ODOT did not move to significantly modify herbicide practices.
3. Greater involvement of human rights organizations such as Human Rights Watch in pesticide activism.
4. One goal of human rights activism is what they refer to as “the mobilization of shame.” Tools human rights organizations use include, among others, videotaping of actions considered to be human rights violations, and of the persons believed responsible for those actions; distributing those videos widely on You-Tube, google video and other sites; public, community-led, trial-like Citizens’ Tribunals with independent judges who weigh, using human rights norms rather than civil law, the justness of a given situation; and public, community-led, Citizens Inquiries which involve oral and written testimony from affected community members before a panel of commissioners.
5. Potentially costly legal actions re the Americans with Disabilities Act brought by persons with disabilities (such as pre-existing asthma, pesticide intolerances, cardiac arrhythmias, etc.) for failure to accommodate; possible legal actions brought for broadcast use of herbicides on road shoulders as a violation of human rights; and possible multiple small claims court actions for economic redress.

6. Potential litigation through the Inter-American Court of Human Rights, a court of the Organization of American States.

Pathways to Reducing Liabilities

1. The most important step to reduce liabilities would be for ODOT to initiate good faith discussions with Concerned Citizens for Clean Air, Oregon Toxics Alliance, Northwest Coalition for Alternatives to Pesticides or other environmental groups concerned about roadside spray policy and practice, and to postpone further spraying until satisfactory agreements can be reached in those discussions.
2. Provide examples of large scale, large sample, well designed population studies undertaken by third parties (i.e., not pesticide manufacturers or agriculture/forestry interests) published in the peer reviewed literature that demonstrate no adverse health effects from regularly exposing populations to the herbicide products that will be used. Absent such studies, provide examples of any studies published in the peer reviewed literature that demonstrate no adverse effects from exposing populations to the herbicide products that will be used. Absent that, provide examples of any studies that show no adverse effects from exposing populations to the herbicide products that will be used.
3. Rely as much as possible on non-chemical means of vegetation control.
4. If some use of chemical herbicides does still occur:
 - a. Provide notification by multiple means – signage, email lists, websites, phone calls, etc. – especially to those individuals susceptible to or concerned about adverse health impacts.
 - b. Publicly disclose all ingredients, both active and “inert,” of all herbicide formulations that would be applied. (Despite objections by manufacturers, there is growing precedent for this both around the world and in the US.)
 - c. Provide alternative routes of travel to those who choose to not expose themselves or their family members to herbicides, drift and residues.
 - d. Develop strategies for providing temporary alternative lodging, transportation and services to those who live or work adjacent to spray areas and who, for reasons of health or health concerns, require that they and their family members not be exposed to the herbicide sprays, drift or residues.
 - e. Develop strategies for insuring that placebound persons, such as those in daycare facilities, elder care facilities, hospitals, schools, etc, not be required to endure spray exposures if they wish not to.
 - f. Provide alternative routes of travel for school buses and other modes of transporting children to school, as well as for transportation to daycare facilities, elder care facilities, hospitals, etc.

- g. Insure that school bus stops remain free of herbicides, drift and residues.
- h. Arrange for health effects monitoring studies to be undertaken by the Department of Health or independent third parties. Active (rather than passive) surveillance methodologies should monitor for a range of adverse health effects, both acute and chronic, associated with exposure to herbicide spray, drift and residues. Representatives from citizen groups should be involved in design of the studies.
- i. Arrange oversight by an external observer, agreed to by both ODOT and citizen environmental organizations, to monitor implementation of the roadspray program.

Conclusion:

This Report provides the Oregon Transportation Commission, Concerned Citizens for Clean Air and the Oregon Toxics Alliance a list of international human rights norms of concern regarding ODOT's dispersal of chemical herbicides on state maintained road shoulders, outlines ODOT's potential liabilities and describes pathways the state could take to reduce those liabilities.

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The Center for Human Rights and the Environment is headquartered in Córdoba, Argentina. <http://www.cedha.org.ar>

Information about the Inter-American Commission on Human Rights, the Inter-American Court on Human Rights (seated in San José, Costa Rica) and human rights instruments pertinent to American states can be found at <http://www1.umn.edu/humanrts/inter-americansystem.htm>

¹ Picolotti, Romina and Jorge Daniel Taillant, *Linking Human Rights and the Environment*, University of Arizona Press, 2003, p 123 (emphasis in original).

² The *Universal Declaration of Human Rights* was unanimously adopted by the United Nations in 1948.

³ Signed by the US in 1977, ratified in 1992 and entered into force in 1992, though with reservations on articles 5-7, 10(2,3), 15(1), 19, 20, 27 and 47, and formal understandings on articles 2(1), 4(1), 7, 9(5), 14(3,6), 26. Ratification means that the provisions of this international instrument, aside from the reservations, do have the force of domestic law in the US.

⁴ Signed by the US in 1977; not ratified.

⁵ Signed by the US in 1995; not ratified. Though the US has not ratified this convention, “One hundred and ninety states have agreed to become parties to the Convention on the Rights of the Child, giving it the distinction of being the most widely ratified treaty in the history of the world.” Lauren, Paul Gordon, *The Evolution of International Human Rights*, University of Pennsylvania Press, Philadelphia, 2d ed, 2003, p 249.

⁶ Signed by the US in 1980; not ratified.

⁷ 1978

⁸ Rights enunciated in the 1947 *Nuremberg Code* are for the protection of individuals being studied in research protocols. If the case can be made that a population is being studied as research subjects – e.g., that persons living and working in the spray zone are being studied for health effects resulting from spray exposures – then provisions of the *Nuremberg Code* would apply to individuals in that population.

⁹ Many of the rights listed below have been articulated in several different human rights declarations, conventions or charters, but for simplicity’s sake this Report lists only one or two instruments for each right.

¹⁰ This passage continues: “It found that the determination of whether this violation had occurred in *Lopez-Ostra v. Spain* should be tested by striking a fair balance between the interest of the town’s economic well-being and the applicant’s effective enjoyment of her right to respect for her home and her private and family life. In doing this, the Court applied its “margin of appreciation” doctrine, allowing the State a “certain” discretion in determining the appropriate balance, but finding in this case that the margin of appreciation had been exceeded. It awarded Mrs Lopez-Ostra 4,000,000 pesetas [approximately US\$35,600], plus costs and attorneys’ fees.” Shelton, Dinah, “The Environmental Jurisprudence of International Human Rights Tribunals,” in Picolotti, R and Taillant, JD, 2003, p 15.

¹¹ See item 21 below on discrimination.

¹² Drinan, Robert F, *The Mobilization of Shame, A World View of Human Rights*. Yale University Press, 2001 p 186.

¹³ Drinan RF. 2001. p 170.

¹⁴ In reference to a specific case: “the human right to effective judicial remedy has been violated because despite the riverside communities’ plea to the judicial system, nothing has been done to stop the contamination.” in Picolotti, R and Taillant, JD, 2003, p 146.

¹⁵ Drinan RF. 2001. p 171.

¹⁶ Drinan RF. 2001. p 187.

¹⁷ US EPA’s definition of environmental justice. See <http://www.epa.gov/compliance/resources/faqs/ej/index.html> Quoted in Robert D Bullard, *The Quest for Environmental Justice: Human Rights and the Politics of Pollution*, Sierra Club Books, San Francisco, 2005, p. 4.

¹⁸ <http://www.usdoj.gov/crt/ada/>

¹⁹ <http://www.usdoj.gov/crt/ada/publicat.htm#Anchor-ADA-44867>

²⁰ In this regard, see provisions in the *Convention on the Elimination of All Forms of Discrimination against Women*.