

“Indigenous Women and Environmental Violence”

A Rights-based approach addressing impacts of Environmental Contamination on Indigenous Women, Girls and Future Generations

Submitted to the United Nations Permanent Forum on Indigenous Issues Expert Group Meeting
“Combating Violence Against Indigenous Women and Girls”, January 18 – 20, 2012, United Nations Headquarters, New York by Andrea Carmen, International Indian Treaty Council and Indigenous Women’s Environmental and Reproductive Health Initiative, and Viola Waghiyi, Native Village of Savoonga, St. Lawrence Island, Alaska and Alaska Community Action on Toxics
Theme 2: “Contextualizing Violence”

“From a traditional perspective, the health of our Peoples cannot be separated from the health of our environment, the practice of our spirituality and the expression of our inherent right to self-determination, upon which the mental, physical and social health of our communities is based.”

--- IITC Oral Intervention presented by Faith Gemmill, Gwich’in Nation Alaska
United Nations Working Group on Indigenous Populations, Geneva July 31, 1996

“We have listened to each other’s stories, and have seen the tragic effects within our own families, communities, and nations of the environmental, economic, social and cultural impacts of toxic contamination. These imposed, deplorable conditions violate the right to health and reproductive justice of Indigenous Peoples, and affect the lives, health and development of our unborn and young children. They seriously threaten our survival as Peoples, Cultures, and Nations.”

--- Declaration for Health, Life and Defense of Our Land, Rights and Future Generations”, 1st International Indigenous Women’s Environmental and Reproductive Health Symposium, June 30 – July 1, 2010, UN Permanent Forum’s 10th session [E/C.19/2011/CRP. 9]



Above: Annie Alowa, Yupik elder and community health aide stands among toxic waste at the formerly used defense site, Northeast Cape, St. Lawrence Island, Ak photo: ACAT
Right: Three generations of women and girls from a Yaqui family affected by pesticides: Potam Pueblo, Rio Yaqui, Sonora Mexico, June 2006. Photo: Jeff Conant



I. Introduction

The severe and ongoing harm caused by environmental toxics to Indigenous women, girls, unborn generations and Indigenous Peoples as a whole, requires immediate attention. These toxics include pesticides and other Persistent Organic Pollutants, as well as chemicals produced by extractive industries (coal, oil, tar sands etc.), military installations and weapons testing, waste dumping and incineration, industrial processes, all phases of uranium mining, milling and waste storage.

The production, use, dumping, and general proliferation of environmental toxics adverse effect the collective and individual rights of Indigenous Peoples, and Indigenous women and children specifically, to free prior and informed consent, health, well-being, culture, development, food and subsistence, life and security of person. The lack of accountability by corporations and States is resulting in devastating health impacts that continue to release environmental toxics into the environment. Of more than 80,000 chemicals in commerce, more than 85% of these chemicals have never been assessed for possible effects on human health in general, let alone their specific impacts on Indigenous women as a uniquely vulnerable group.

States and industry knowingly permit, produce, release, store, transport, export and dump hazardous chemicals that impair the endocrine and immune systems, adversely affect neurodevelopment and reproduction, and cause disease including all forms of cancer with few consequences. This is an egregious example of impunity. Unlike infectious diseases, environmental contaminants that cause disease and death are either deliberately released into the environment specifically *because* they are toxic to living things (i.e. pesticides), or they are a result of manufacturing from industrial or military processes that are judged by States and corporations to pose an “acceptable risk” as compared to their purported economic or military “benefits” to society as a whole. States and corporations deny “provable” impacts despite the clear evidence that these environmental toxics cause a range of serious, well documented health impacts, including harm to reproduction, health and fetal development which disproportionately affect Indigenous women.

Indigenous Peoples live in some of the most remote areas in the world: the deserts, mountains, forests and Arctic tundra. Indigenous families subsist off the land and waters through farming, herding, hunting, fishing and gathering for their main food supplies. Many of these regions are heavily exposed to toxic contaminants as a result of mining and extractive industries as well as industrial agriculture and “green revolution” programs which rely heavily on the use of toxic pesticides. Many chemicals are also transported atmospherically and through ocean currents, and heavily contaminate Indigenous lands and foods far from the points of production and use.

Indigenous women play a key role in farming, food gathering and preparation. They are also cultural practitioners, healers, teachers and knowledge holders who have a central role in the transmission of language and culture to younger generations. Indigenous women have a central role in food gathering and preparation and in a range of traditional cultural practices inextricably linked to the natural environment. These everyday practices increase their exposure and makes them particularly vulnerable to absorbing environmental contaminants, which are increasingly affecting their health, livelihoods and reproductive capacities.

The particular health effects of toxic contaminants on Indigenous women are well documented, and are further affirmed through a range of testimonies from the communities most affected, some of which have been included in this paper. Multiple studies confirm that alarmingly high levels of toxics are found in Indigenous women’s breast milk, placental cord blood, blood serum and body fat. Devastating impacts on maternal health include sterility, reproductive system cancers, decreased lactation and the inability to produce healthy children. Research also demonstrates the link between chemical exposures and intellectual and neurological

development of children, impacting their ability to retain and pass on culture, ceremonies, stories, language, songs -- a primary concern of Indigenous women.

Participants in the **1st International Indigenous Women's Environmental and Reproductive Health Symposium** from the North America, Latin America, Pacific, and Arctic and Caribbean regions summarized the impacts:

"Indigenous Peoples, and in particular women and children, are suffering the detrimental, devastating, multi-generational and deadly impacts of environmental toxins and contaminants that were unheard of in our communities prior to industrialization, including:

- *Contamination of mothers' breast milk at 4 to 12 times the levels found in the mother's body tissue in some Indigenous communities;*
- *Elevated levels of contaminants such as POPs and heavy metals in infant cord blood; Disproportionate levels of reproductive system cancers of the breasts, ovaries, uterus, prostate and testicles, including in young people;*
- *Increasing numbers of miscarriages and stillbirths, and;*
- *High levels of sterility and infertility in contaminated communities."*¹

The disproportionate impacts of environmental contamination on Indigenous Peoples and communities of color are the basis of the now well-accepted concept "environmental racism". The concept of "gender-based environmental violence" is not yet as common. Through this paper, we hope to lay some initial groundwork for the continuing development of this concept, and the development of solutions through implementation of human rights accountability. We will demonstrate why Indigenous women, and the unborn children that they carry, are disproportionately affected by environmental toxics for a number of cultural and biological reasons. We will also address some of the associated pervasive human rights violations that impact Indigenous women, girls, and the cultural health, viability and survival of Indigenous Peoples as a whole.

II. Environmental Violence Against Indigenous Women and Children: Human Rights Framework

*"The protection of our health, lands, resources including air and water, languages, cultures, traditional foods and subsistence, sovereignty and self-determination, and the transmission of our traditional knowledge and teachings to our future generations are inherent and inalienable human rights. These rights are affirmed in the **UN Declaration on the Rights of Indigenous Peoples** and other international standards, and must be upheld, respected and fully implemented."*²

*"Human rights are integral to the promotion of peace and security, economic prosperity and social equity... A major task for the United Nations, therefore, is to enhance its human rights programme and fully integrate it into the broad range of the Organization's activities".*³

The fundamental link between human rights and environmental contamination is a relatively new and evolving concept in the UN system. It has yet to be fully recognized and effectively integrated in international Convention

¹ Declaration for Health, Life and Defense of Our Land, Rights and Future Generations", *1st International Indigenous Women's Environmental and Reproductive Health Symposium, June 30 – July 1, 2010*, submitted to the UN Permanent Forum's 10th session as Conference Room Paper [E/C.19/2011/CRP. 9]

² Ibid

³ "Human Rights in the Report of the Secretary-General on Renewing the United Nations: a Programme for Reform, Extracts from the report of the Secretary-General to the General Assembly, A/51/950, para. 78 and 79, 14 July 1997

processes addressing toxic contaminants. Many States continue to resist addressing this fundamental inter-relationship in the context of UN Environmental Convention processes, despite the fact that a number of existing international human rights norms and standards provide a clear and compelling case for doing so.

A central factor of the proliferation of environmental toxics is the conscious and deliberate nature of their production, marketing, export and release despite their well-known and well documented risks and impacts. Identifying the disproportionate and often devastating impacts on Indigenous women as "environmental violence" for which States and corporations can be held accountable is an even newer concept. A review of some of the inter-related human rights affirmed in international standards can begin to provide the elements and framework for the development of this emerging concept. These include, inter alia:

1. The rights of all individuals to health, food and well-being (Article 25), and life and security of person (Article 3) as per the Universal Declaration on Human Rights.
2. The rights of Indigenous Peoples to self-determination and free prior informed consent, regarding matters which affect them including the use of hazardous materials on their lands, to determine their own priorities for development, and to maintain the productive capacity of their lands⁴, in particular, in this context, as applies to the economic, subsistence and cultural activities to which Indigenous women are directly tied.
3. The rights of Indigenous Peoples to attain the highest levels of health.⁵
4. The rights of Indigenous Peoples to practice and transmit their cultures and traditional knowledge to future generations.⁶
5. The rights of Indigenous women and children to special protection.⁷
6. The obligation of States to implement, promote and monitor the enjoyment of these rights, to implement effective solutions, remedies and mechanisms in conjunction with Indigenous Peoples and monitor the human rights impacts of corporations which they license as specifically recommended by the UN CERD in its periodic reviews of Canada and the US. (2007 and 2008)

The ongoing resistance of States to the mainstreaming of human rights into international environmental standard-setting processes may be directly related to their resistance to consider accountability mechanisms for the egregious and ongoing violations of human rights resulting from the deliberate production, sale and use of toxic substances with well-known and well-documented harmful effects on human health and development.

Specific relevant Human Rights Standards which can provide a useful framework for the UNPFII's consideration of "environmental violence" as new area of human rights include:

A. The United Nations Declaration on the Rights of Indigenous Peoples in its preamble affirms the principle of non-discrimination as well as the rights of Indigenous People to maintain their traditional economic, cultural and subsistence activities, protect their health and exercise free prior informed consent regarding decisions and activities affecting them, including the release of environmental toxics in their lands. These rights have been directly threatened and violated, both on an individual and collective level, by State policies and corporate activities which promote, allow and impose unsustainable economic development, including resource extraction and industrial agriculture.

⁴ Article 29, UN Declaration on the Rights of Indigenous Peoples as well as CERD General Recommendation XXIII

⁵ UNDRIP Article 24

⁶ various Articles of the UNDRIP as well as UNESCO, the Convention on the Rights of the Child and others

⁷ affirmed in both the UDHR Article 25 and UNDRIP Articles 21 and 22

A number of Preambular paragraphs and Articles of the UN Declaration on the Rights of Indigenous Peoples directly address the rights of Indigenous Peoples, and Indigenous women, as well as State obligations to take both preventative and restorative action. These include:

- Article 3 - Right to Self-Determination
- Article 7 – the Right to Life, physical and mental integrity and the security of person; right to live as distinct Peoples
- Article 8 - Right to not be subjected to destruction of culture
- Article 13 - Right to revitalize, use, develop and transmit histories, languages and oral traditions to future generations
- Article 19 – Free Prior and Informed Consent regarding legislative and administrative measures by states
- Article 20 - Right to be secure in subsistence and development
- Article 21 – Right to the improvement of their economic and social conditions, including, inter alia, health
- Article 22 - Attention to the rights and special needs of indigenous elders, women, youth, children and persons with disabilities
- Article 24 - Right to the highest attainable standard of health and the conservation of vital plants and animals
- Article 25 – Right to maintain spiritual relationships to land and resources for future generations
- Article 26 – Right to traditional lands, territories and resources
- Article 29 - Right to conservation and protection of the environment and productive capacity of lands, territories and resources; right to free prior and informed consent regarding hazardous materials and the obligations of States to take action to restore the health of the Indigenous Peoples affected
- Article 31 - Right to maintain, control, protect and develop cultural heritage, traditional knowledge and cultural expressions including genetic resources, seeds and medicines
- Article 32 - Right to determine and develop priorities and strategies for development including the right to free, prior and informed consent
- Article 37 – Treaty Rights
- Article 42 - Obligation for implementation and follow-up by States and UN agencies and processes

Article 29, paragraphs 2 and 3 are of particular relevance to this discussion with regards to the rights of Indigenous Peoples and the related obligations of States:

2. States shall take effective measures to ensure that no storage or disposal of hazardous materials shall take place in the lands or territories of indigenous peoples without their free, prior and informed consent.

3. States shall also take effective measures to ensure, as needed, that programmes for monitoring, maintaining and restoring the health of indigenous peoples, as developed and implemented by the peoples affected by such materials, are duly implemented.

B. The International Covenant on Civil and Political Rights (ICCPR)

Article 27 of the ICCPR states:

"In those States in which ethnic, religious or linguistic minorities exist, persons belonging to such minorities shall not be denied the right, in community with other members of the group, to enjoy their own culture, to profess and practice their own religion, or to use their own language."

General Comment 23 of the Human Rights Committee is meant to serve as guidance to the States in their compliance with Article 27:

“With regard to the exercise of the cultural rights protected under article 27, the Committee observes that culture manifests itself in many forms, including a particular way of life associated with the use of land resources, especially in the case of Indigenous Peoples. That right may include such traditional activities as fishing or hunting, and the right to live in reserves protected by law. The enjoyment of those rights may require positive legal measures of protection and measures to ensure the effective participation of members of minority communities in decisions that affect them.”⁸

C. The Right to Food, Food Security, Subsistence and Food Sovereignty

“...In no case may a people be deprived of its own means of subsistence.”

-- Article 1 in Common, International Covenants on Civil and Political Rights and on Economic, Social and Cultural Rights

The Rights to Health and Culture for Indigenous Peoples are closely linked to the Right to Food and Subsistence. It is well documented that environmental toxins have a serious impact on traditional foods, creating a false and forced choice for Indigenous Peoples, in particular, pregnant and nursing mothers. They are often forced to choose between the cultural and nutritional value of their traditional foods and subsistence way of life, and the health and development of their unborn children, as well as their ability to have children at all.

In 1997 the United Nations Rapporteur on the Right to Food, Jean Zeigler responded to a submission by the International Indian Treaty Council on behalf of Indigenous Tribes and Peoples in Northern California addressing mercury contamination and St. Lawrence Island, Alaska regarding military toxics and the impacts of this contamination on their traditional subsistence foods.

“The Special Rapporteur believes that the contamination of indigenous peoples’ land and water affecting their livelihood (traditional fishing) may contribute to a violation of the Government’s obligation to respect the right to food.”⁹

Indigenous Peoples have consistently identified toxic contaminants as one of the primary obstacles to their food sovereignty, also affirming the inter-related links to the health impacts on Indigenous women and children. The **“DECLARATION OF ATITLÁN”** from the **1st Indigenous Peoples’ Global Consultation on the Right to Food** in Atitlán, Sololá, Guatemala, April 17 - 19, 2002, identified toxic chemicals, in particular those used in industrial agriculture as a primary obstacles to their Food Security and Food Sovereignty, also noting the effects on women’s and children’s health, as follows:

“The growing imposition of the use of pesticides and chemical fertilizers that poison Mother Earth, the communities that work with the Earth, and the food resources on which Indigenous Peoples depend worldwide, affecting food production and hence nutrition and health, and increasing morbidity and mortality rates, in particular for our women and children;”¹⁰

⁸ General Recommendation No. 23, the rights of minorities (article 27), CCPR/C/21/Rev.1/Add.5, 08/04/1994

⁹ UN Special Rapporteur on the Right to Food Jean Ziegler, report to the 4th session of the UN Human Rights Council [A/HRC/4/30/Add.1, 18 May 2007]

¹⁰ **“DECLARATION OF ATITLÁN”** from the 1st Indigenous Peoples’ Global Consultation on the Right to Food, Sololá, Guatemala, April 17 - 19, 2002,

D. The United Nations Convention on the Rights of the Child (November 20, 1989) is the international instrument that directly addresses the rights of all children, including the female child. Significantly, it is the only human rights Convention which specifically mentions environmental pollution as a human rights concern affecting the health of children, as well as the closely interrelated issues of maternal and prenatal health:

Article 24

1. States Parties recognize the right of the child to the enjoyment of the highest attainable standard of health and to facilities for the treatment of illness and rehabilitation of health. States Parties shall strive to ensure that no child is deprived of his or her right of access to such health care services.
2. States Parties shall pursue full implementation of this right and, in particular, shall take appropriate measures:
 - (a) To diminish infant and child mortality;
 - (c) To combat disease and malnutrition, including within the framework of primary health care, through inter alia, the application of readily available technology and through the provision of adequate nutritious foods and clean drinking-water, taking into consideration the dangers and risks of environmental pollution;
 - (d) To ensure appropriate pre-natal and post-natal health care for mothers;

General Comment 11 of the Committee on the Rights of the Child [CRC/C/GC/11, 2009] further elaborates and underscores State parties' obligations under the Convention specifically with regards to Indigenous children. It also addresses the issue of maternal and family health and the impacts of environmental contaminants, specifically mentioning pesticides and herbicides:

Regarding "Right to Life, Survival and Development"

35. The Committee reiterates its understanding of development of the child as set out in its general comment No. 5, as a "holistic concept embracing the child's physical, mental, spiritual, moral, psychological and social development". The Preamble of the Convention stresses the importance of the traditions and cultural values of each person, particularly with reference to the protection and harmonious development of the child. In the case of indigenous children whose communities retain a traditional lifestyle, the use of traditional land is of significant importance to their development and enjoyment of culture. States parties should closely consider the cultural significance of traditional land and the quality of the natural environment while ensuring the children's right to life, survival and development to the maximum extent possible.

Regarding "Basic Health and Welfare"

53. States should take all reasonable measures to ensure that indigenous children, families and their communities receive information and education on issues relating to health and preventive care such as nutrition, breastfeeding, pre- and postnatal care, child and adolescent health, vaccinations, communicable diseases (in particular HIV/AIDS and tuberculosis), hygiene, environmental sanitation, and the dangers of pesticides and herbicides.

E. The United Nations Committee on the Elimination of Racial Discrimination (CERD)

Of particular relevance to the human rights framework pertaining to the theme and concerns of this Expert Seminar is General Recommendation No. XXIII on Indigenous Peoples, adopted by the 51st session of UN Committee on the Elimination on Racial Discrimination.¹¹

General recommendation XXIII, Paragraph 4 states as follows:

¹¹ CERD, the Treaty Monitoring Body for the International Convention on the Elimination of All Forms of Racial Discrimination, ICERD, adopted August 18th, 2007

4. The Committee calls in particular upon States parties to:

- (c) Provide indigenous peoples with conditions allowing for a sustainable economic and social development compatible with their cultural characteristics;
- (d) Ensure that members of indigenous peoples have equal rights in respect of effective participation in public life and that no decisions directly relating to their rights and interests are taken without their informed consent.
- (e) Ensure that indigenous communities can exercise their rights to practice and revitalize their cultural traditions and customs and to preserve and to practice their languages.

F. The Universal Declaration of Human Rights (1948) firmly establishes that health and well-being are human rights, and also recognizes that “Motherhood and childhood are entitled to special care and assistance”¹²

G. One of the 5 objectives for the Plan of Action for the 2nd International Decade the Worlds Indigenous Peoples adopted by the UN General Assembly in January 2005 is “*is “promoting full and effective participation of indigenous peoples in decisions which directly or indirectly affect their lifestyles, traditional lands and territories, their cultural integrity as indigenous peoples with collective rights or any other aspect of their lives, considering the principle of free, prior and informed consent”*. This objective is of direct relevance in challenging activities related to environmental contamination which violate Indigenous Peoples’ human rights, and provides a framework and criteria by which effective solutions and responses can be developed in full partnership with Indigenous Peoples.

H. UN Convention on the Elimination of Discrimination Against Women (CEDAW)

Although CEDAW does not specifically mention Indigenous women or impacts of environmental toxins, its provisions that address employment and rural women are relevant to these concerns:

Article 11

1. States Parties shall take all appropriate measures to eliminate discrimination against women in the field of employment in order to ensure, on a basis of equality of men and women, the same rights, in particular:
 - (f) The right to protection of health and to safety in working conditions, including the safeguarding of the function of reproduction.

Article 14

1. States Parties shall take into account the particular problems faced by rural women and the significant roles which rural women play in the economic survival of their families, including their work in the non-monetized sectors of the economy, and shall take all appropriate measures to ensure the application of the provisions of the present Convention to women in rural areas.
2. States Parties shall take all appropriate measures to eliminate discrimination against women in rural areas in order to ensure, on a basis of equality of men and women, which they participate in and benefit from rural development and, in particular, shall ensure to such women the right:
 - (a) To participate in the elaboration and implementation of development planning at all levels
 - (b) To have access to adequate health care facilities

¹² Article 25

I. Nation to Nation Treaties between States and Indigenous Nations and the consensual relationships they are based on, if honored, respected and put into practice by all Parties, can be the foundation and model for respectful partnerships addressing this and a range of other issues. This is true, in particular, when there is an urgent need for joint and or/shared decision-making in order to correct current injustices, respond to critical violations and redress historic and ongoing wrongs.

The following and other preambular paragraphs, along with Articles 3, 18, 19, 27, 28, 32, 37 and 40, inter alia, of the UN Declaration on the Rights of Indigenous Peoples make important contributions to a human rights framework incorporating Treaty rights and relationships based on FPIC and full participation in decision-making:

“Considering also those treaties, agreements and other constructive arrangements, and the relationship they represent, are the basis for a strengthened partnership between indigenous peoples and States”

Indigenous Peoples have also affirmed the **“Treaty Right to Health”** as a legally binding and sacred obligation of the Colonial governments, including the British Crown, which entered into Treaties with Indigenous Nations:

*“That the medicine chest clause binds the federal government to provide medicines and all that is required to maintain proper health.”*¹³

III. Case Studies: Environmental Toxics and their impacts on Women and Girls in Indigenous Communities

A. Rio Yaqui, Sonora Mexico: Threats to women’s, girl’s and future generations’ health and development

In 1997, Dr. Elizabeth Guillette, a scientist from the University of Arizona carried out a study of the health effects of industrial agricultural pesticides in the homelands of the Yaqui Indians in Sonora, Mexico,¹⁴ a few hours south of the US/Mexico border. Yaqui Indigenous communities in the agricultural areas have been exposed to frequent aerial and ground spraying of pesticides since the government’s implementation of the “Green Revolution” in the late 1940’s. For some, their only source of water is contaminated irrigation canals.

In addition to the impacts of pesticides sprayed from airplanes affecting the entire community, Yaqui farm workers who are not provided by growers with any protective gear in the fields. Workers unintentionally carry poisons home in pesticides-soaked clothing and skin, unknowingly spreading the contamination to their families. The maternal health of Yaqui women working in the fields or living nearby, or whose husbands bring the contamination home on their clothing, is particularly impacted. Dr. Guillette’s study documented the resulting high levels of pesticides found in the cord blood of newborns and in mother’s milk (see table below).

Table 1: Mean concentrations in the cord blood at time of birth and in mothers milk one month post partum from women, Pueblo Yaqui, Sonora, Mexico. [Data from Garcia and Meza, 1991¹⁵]

¹³ “Treaty Right to Health” resolution adopted by the Chiefs in Treaty No. 6, No. 7 and No. 8, March 16-17, 2005, reaffirmed at the International Indian Treaty Council Conference, Ermineskin Cree Nation, Alberta Canada (Treaty No. 6 Territory) August 7th 2005

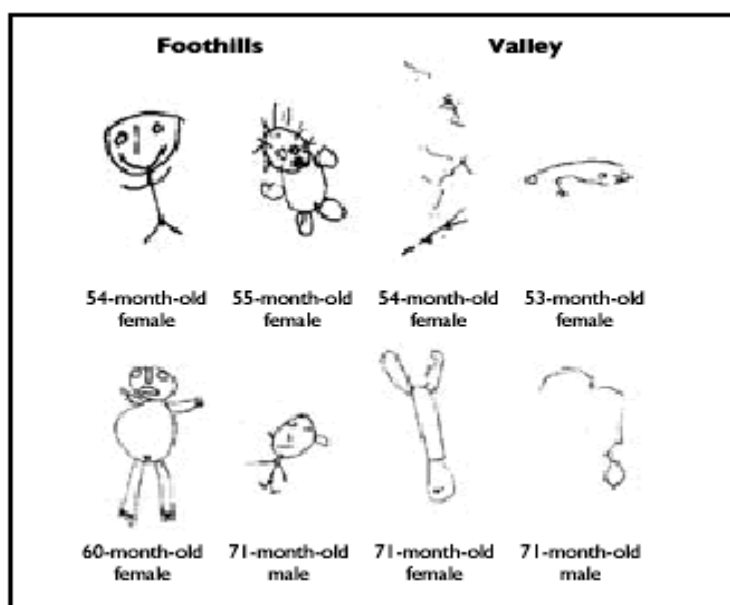
¹⁴ “An Anthropological Approach to the Evaluation of Children Exposed to Pesticides in Mexico”, Elizabeth A. Guillette, María Mercedes Meza M. Maria Guadalupe Aquilar A, Alma Delia Soto A., and Idalia Enedina Garcia C., Bureau of Applied Research in Anthropology, University of Arizona, Tucson, AZ, U.S.A. and Direccion de Investigacion y Estudios de Postgrado, Instituto Tecnológico de Sonora, Cd. Obregón, Sonora Mexico, published in *Environmental Health Perspectives* Volume 106, Number 6, June 1998

¹⁵ Ibid

Pesticide	Cord Blood (ppm)	Milk (ppm corrected for fat)
N	19	20
α -HCH	0.030 ± 0.03	0.8599 ± 2.75
β -HCH	0	0.3791 ± 1.08
Lindane	0.084 ± 0.06	$0.6710 \pm 0.59^*$
Δ -HCH	0.0039 ± 0.1	0.4432 ± 0.84
Heptachlor	0	$1.269 \pm 1.65^*$
BHC	0.003 ± 0.002	$0.6270 \pm 0.66^*$
Aldrin	0	$0.2363 \pm 0.59^*$
Dieldrin	0.159 ± 0.12	0.0487 ± 0.08
Endrin	0.022 ± 0.02	$0.5238 \pm 1.1^*$
p,p'-DDE	0.03 ± 0.03	6.31 ± 5.9
DDDE	0.0434	6.52*

*All exceed FAO/OMS established limits

This study also found birth defects, learning and development disabilities, leukemia and other severe health problems in Yaqui children. Combined with personal testimonies from community members collected over years, it also provides strong and compelling evidence of the detrimental impacts of pesticide exposure on the development of exposed Yaqui children. The comparison of Yaqui children in the valley (where pesticide use is heavy) with Yaqui children in the foothills of the Sierra Madre Occidental mountains (where pesticide and insecticide use is minimal to none) showed dramatic differences in motor skills—eye-hand coordination and balance. It showed marked developmental differences included in cognitive skills which were observed in recall, simple problem solving and ability to draw simple stick figures of people:



Her study also found that Valley children had significantly less stamina and hand-eye coordination, poorer short-term memory and were less adept at drawing a person (right) than were children in the foothills (left) where traditional methods of intercropping control pests in gardens and insecticides are rarely used.¹⁶

Of particular significance to the issues addressed at this EGM is a follow-up study carried out by Dr. Elizabeth Guillette et al examining impacts of in utero pesticides exposure on breast development among girls in Rio Yaqui Sonora Mexico, **“Altered Breast Development in Young Girls from an Agricultural Environment”** published in 2006. This second study was designed to test the hypothesis that abnormal breast development was caused by in utero exposure to agricultural chemicals with endocrine action. The principal difference between the two groups of girls studied was parental exposure to agricultural chemicals which are known to cause endocrine disruption in utero. The study noted that “Various pesticides, mainly organophosphates and organochlorines, were used extensively in the agricultural areas of the Yaqui Valley near the time of the girls’ birth (1992–1994), and many of these compounds are known to cross the placenta. A study of newborn children from the Yaqui Valley performed close to the period these children were conceived reported elevated pesticide levels, with cord blood values of lindane, heptachlor, benzene hexachloride, aldrin, and endrin all exceeding World Health Organization established limits (International Programme on Chemical Safety 2005)”¹⁷

This study was carried through medical examinations (with parental permission) of 50 girls ages 8 – 10 and noted an accelerated rate of breast size development (fatty tissue) in the girls from the high-pesticide use agricultural (valley) areas where their mothers had been exposed to greater levels of pesticides during pregnancy as compared to the girls in the foothill regions where exposure was minimal. Of particular concern to the scientists was the relative lack of and/or abnormal mammary gland development noted in the girls from valley communities, which could have an impact on lactation (breast feeding) later in life as well as a potential links to breast cancer. This first-of-its-kind study (as per Dr. Guillette) examining the relationship between human breast development and environmental contaminants is a unique and alarming confirmation of the impacts of pesticides exposure on the health and development of Indigenous women and girls.

Since 2002, the IITC’s **“North-South Indigenous Network against Pesticides Project”** collected and submitted over 50 testimonies from Yaqui community members in Sonora Mexico documenting cancer and leukemia, other illnesses, birth defects and deaths including many from mothers, community midwives and healers (“curanderas”). These community testimonies have been submitted consistently to the UN Rapporteurs on the adverse effects of the illicit movement and dumping of toxic and dangerous products and wastes on the enjoyment of human rights, the Right of everyone to the enjoyment of the highest attainable standard of physical and mental health, Right to Food and Rights of Indigenous Peoples. However, this issue has yet to be addressed as a specific area for in depth investigation by any of the UN mandate holders.

Following are translations into English of two of the most recent testimonies submitted to IITC by Yaqui community mothers and a midwife addressing women’s and girl’s health impacts, which have not as yet been submitted to any other UN body:

Mrs. Flor Reyna Osuna, (mother of the young woman)

Young woman, Flor Osuna García.

Jesús Gonzales, (midwife)

¹⁶ Ibid

¹⁷ “Altered Breast Development in Young Girls from an Agricultural Environment” by Elizabeth A. Guillette, Craig Conard, Fernando Lares, Maria Guadalupe Aguilar, John McLachlan, and Louis J. Guillette Jr.

Interviewer: Francisco Villegas Paredes

DECEMBER 15, 2011.

Mrs. Flor Reyna, the mother of a young woman who was born with deformities. Currently the young woman is 30 years old and is 1.20 meters [3'11"] tall. She says that when her daughter was born, the child's body was WATERY and JELLY-LIKE. The girl, due to her scant growth, is unable to move her legs. She can only move her arms. Her vital organs are atrophied. Studies conducted on her reveal that the girl developed deformities while in her mother's womb.

The physicians, as an important conclusion of the studies conducted, consider that the young woman's housing location, on the periphery of agricultural lands and exposed to spraying with agrochemicals, quickly leads to CONGENITAL DISEASES. Also, some biochemists specializing in clinical analysis have analyzed certain products. As a result they have reached important conclusions: mixtures of two or more chemicals applied in inhabited areas also lead to CANCERS.

The midwife, Jesús made the following comments: These deformities are the product of tumors produced by chemicals when young women are exposed to their application while working in the field without personal safety measures or other similar protection.

Mrs. Xóchitl Valdés, (mother of the girl)

Girl: Mariana López Valdés

Interviewer: Francisco Villegas Paredes

DECEMBER 20, 2011.

The girl's mother, Mrs. Mariana López Valdés stated that her pregnancy was very delicate. She was constantly going to the doctor. Even some midwives told her that her girl was not developing well. When the girl was born, she had deformities on her face, principally to her lips. She also stated that the girl's grandfather, Mr. Manuel Valdés works in agriculture and would generally leave chemical residues behind at his house. Some doctors told him, based on studies conducted on the girl that the agro-chemicals are having a direct effect.

The contact she had with the residues while still young caused deformations to some parts of her body when she was a fetus. The girl is alive. She is 1 year 6 months old and her deformities are growing.

The testimonies of these Indigenous women translated from Yaqui into Spanish and then into English, are tragically typical in the highly-impacted Yaqui communities of Sonora Mexico.

B. California, USA

"Indigenous women are life givers, life sustainers and culture holders. Our bodies are sacred places that must be protected, honored and kept free of harmful contaminants in order for the new generations of our Nations to be born strong and healthy."¹⁸

Data on health impacts of pesticides and the particular danger to maternal health and unborn generations is also well-documented in other regions, including in "developed" countries. For example, results of a 12 year

¹⁸ "The Declaration for Health, Life and Defense of Our Land, Rights and Future Generations", *International Indigenous Women's Environmental and Reproductive Health Symposium*, Alamo, CA in June 30 – July 1, 2010 [E/C.19/2011/CRP. 9

study by the University of California and other agencies of over 600 mothers and their children in the California's Central Valley exposed to pesticides during pregnancy was published in December 2010. The study confirmed that at age 2, the children of mothers who had the highest levels of organophosphate metabolites in their blood had the lowest levels of mental development in the group. They also had the most cases of pervasive developmental disorders. Prenatal exposure to pesticides has been consistently linked to ADHD and other developmental defects as well as cancers in children such as leukemia.¹⁹

This work, led by University of California Public Health Professor Brenda Eskenazi, served as a model for a recently launched National Children's Study by the National Institutes of Health (USA), which seeks to examine the effects of the environment on 100,000 children, tracking them from before birth until age 21. It is apparent that the continuing tragic impacts of pesticides on Indigenous women, girls, babies including coming generations is finally beginning to generate greater attention among scientists and policy makers.

Indigenous women in California and elsewhere have stressed the cultural effects of pesticides, which are closely related to health impacts of Indigenous women, and produce a double impact. Traditional cultural activities carried out specifically by Indigenous women, which include food gathering, preparation and production as well as the activities related to the creation of traditional cultural items and art forms, create additional exposure to environmental toxins. The following testimony was presented by Monique Sonoquie, Chumash, of the Traditional California Indian Basket Weavers and Indigenous Youth Foundation at the Native Forum preceding the North America Indigenous Peoples preparatory session for UPFII10, March 18th 2011, in Arcata California:

"Pesticides are particularly dangerous to traditional native basket weavers. The Forest Service, Caltrans, governmental agencies, as well as the general public spray pesticides without thought to the natural environment, plants and animals, as well as those of us that work in the forests, parks, rivers, lakes, and oceans. Weavers are affected when gathering in areas sprayed with pesticides, we are constantly at risk as we breathe in, handle and ingest these toxins as we gather, weave and split reeds with our teeth. These pesticides also affect the life and quality of the plants, making them less bug resistant, more fragile, smaller and harder to find, as well as food sources for animals, and traditional medicines for practitioners"

Indigenous women have also expressed concerns regarding the developmental and neurological impacts of neurotoxins such as mercury, many pesticides and industrial chemicals, on the long-term ability of Indigenous peoples to retain and pass on their complex cultural systems which include oral histories, stories, songs language and ceremonies to the next generations. This is a primary responsibility of Indigenous women for girls and young women throughout their learning years, and for young children of both sexes.

It is clear that the use of toxic pesticides in these and other regions causes widespread suffering, injury and death, specifically impacting Indigenous women and girls on a level that constitutes "environmental violence" with a pattern of pervasive and brutal human rights violations that remain, by and large, unchallenged.

C. St. Lawrence Island, Alaska and the Arctic: Military Contamination and Global Transport of Persistent Chemicals

The Yupik Indigenous People of St. Lawrence Island, Alaska (USA) have been harmed and displaced by contamination from formerly used US military bases, with particular effects on women whose breast milk and adipose tissues concentrate chemical contaminants. The US military and Department of Defense disposed of

¹⁹ "Study by the Center for Health Assessment of Mothers and Children of Salinas, a joint project of UC Berkeley, the Natividad Medical Center, Clinica de Salud Del Valle de Salinas and other community organizations, December 2010.

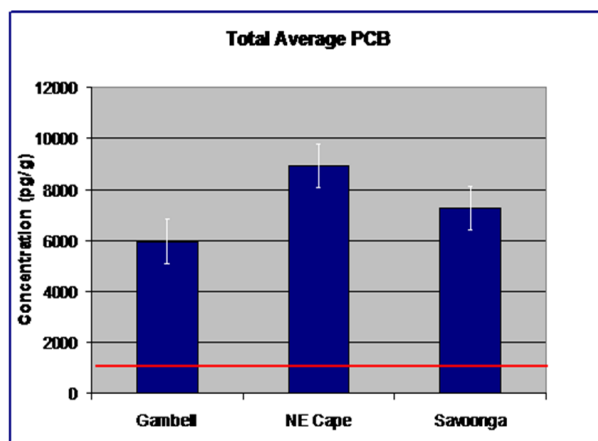
toxic waste on the Island, located in the Arctic Circle between Alaska and Russia, including massive amounts of fuels, solvents, PCBs, PAHs and, mirex (flame retardant), unexploded ordnance, and other persistent pollutants.

Annie Alowa, a respected elder and community health aide from the village of Savoonga, begin to raise concerns in the late 1970's about the adverse health effects she attributed to contamination from the abandoned military site at Northeast Cape, including particular effects on women and children. These included miscarriages, cancer, low-birth weight, and other reproductive health problems. Cancer deaths among the people of St. Lawrence Island are nearly ten times higher than in the general population in Alaska. Contamination from the military sites, which were closed in 1972 but which the US government never removed or adequately cleaned up, continues to adversely affect the health and well-being of the Islands' Indigenous Peoples to this day.

As a result of its strategic importance to the U.S. military during World War II and into present times, Alaska now has 700 formerly used defense sites (FUDS). Two of the most contaminated are located on St. Lawrence Island. The village of Gambell was used as a base for the military beginning in 1948. Hazardous wastes, military debris, unexploded ordnance and spills remain in the soil and groundwater beneath the village. The vulnerability of the drinking water source in Gambell is heightening due to increasing storm surges that accompany rapid climate warming. Northeast Cape is a former U.S. Air Force Base and was also used as a "White Alice" site, part of a military communications network established during the Cold War. Northeast Cape is a traditional food gathering and hunting camp for the residents of Savoonga. A village at Northeast Cape was displaced.

The military installed and later abandoned major facilities at Northeast Cape and Gambell with little or no consideration for the impact on the Island's residents. The Yupik People of St. Lawrence are doubly impacted because the Arctic has become a hemispheric sink for persistent chemicals that travel hundreds of miles into the region and accumulate in the bodies of wildlife and humans.

Hazardous chemicals from military waste sites combined with global transport of POPs to the north contaminate traditional subsistence foods, water supplies, medicinal and food plants (berries, herbs, greens, roots, etc.) that women use, gather and prepare, further exposing them in particular. This double source of toxic contamination undermines the health, cultural practices and development of the Yupik People of St. Lawrence Island, the reproductive health of Yupik women, and the right to survival of their future generations. This pattern is repeated in many other Arctic Indigenous communities.



*Levels of PCBs in the blood of St. Lawrence Island Yupik people are **6-9 times higher** than the average in the continental United States populations (indicated by the red line).*

Tribal members from the Villages of Savoonga and Gambell on St. Lawrence Island have levels of PCBs in their blood serum that are 6-9 times higher the average levels in people living in the continental United States due to global transport, with discernibly higher PCB levels among the people who lived or worked at the military base at Northeast Cape. Community health researchers on the island have documented health outcomes of concern including cancers, thyroid disease, learning and developmental problems, diabetes, heart disease, and reproductive health problems. As stated by Dr. David Carpenter, Director of the Institute for Health and the Environment at the University at Albany: “The evidence that there are health hazards from exposures to PCBs in the range of 6-9 ppb is very strong, with disease outcomes ranging from cancer to neurobehavioral effects to endocrine disruption and immune suppression.”

Temperatures in the Arctic are warming 5-10 times faster than elsewhere in the world. These outcomes of climate change also cause more rapid dispersal of contaminants into freshwater and marine environments, affecting the health of fish and marine mammals that serve as the main traditional foods for Arctic and northern Indigenous Peoples. Atmospheric loading of contaminants to the ocean surface is increased as sea ice retreats.

D. Global Transport of Persistent Organic Pollutants (POPs) and Impacts on Arctic Indigenous Peoples

Persistent organic pollutants (POPs) are long-lasting pesticides and industrial chemicals that bioaccumulate through the food web, are capable of long-range transport and are toxic to humans and wildlife.²⁰ The highly toxic organochlorine (OC) pesticides DDT, toxaphene, chlordane, endosulfan, and lindane, and other POPs such as PCBs have been found in human and animal tissue as well as human breast milk in the Arctic at levels several times higher than in the rest of the world. The levels keep rising long after certain of these substances have been banned. For instance, even though DDT agricultural uses have been banned for 30 years in the U.S, it is still accumulating in the Arctic in peregrine falcons, orcas, and human beings

Through a well-known process known as ‘global distillation’ POPs travel northward and bioaccumulate in high quantities in the bodies of fish, marine mammals and other components of the traditional diets of the Indigenous Peoples in the Arctic. Prevailing ocean and wind currents bring contaminants to the Arctic where they are subsequently trapped by the cold climate. This process is often referred to as the “grasshopper effect”, as chemicals repeatedly evaporate and condense while in their journey toward the Arctic. The Arctic is known as the ultimate sink because these contaminants concentrate in the cold environment and fat-based food web.

Levels of OC pesticides such as DDT, chlordane and endosulfan have been increasing in the Arctic. DDT in people is higher in the Arctic than in the rest of the world. PCB levels are 8 to 12 times higher than in the “lower 48 states” of the U.S. and Chlordane levels are 8 to 10 times higher in the people of St. Lawrence Island. Yupik women of the Yukon-Kuskokwim Delta region of Alaska have the highest levels of the POPs chemicals known as PBDEs (polybrominated diphenyl ethers) used as flame retardants in furniture, mattresses and electronics.²¹

POPs chemicals are causing changes in the very DNA of the people living in these areas, which has implications related to intergenerational health effects. The health impacts of POPs on Indigenous Peoples are well-documented on St. Lawrence Island. Much of the contamination by PCBs and other POPs is attributed to past

²⁰ Stockholm Convention on Persistent Organic Pollutants. <http://chm.pops.int/Convention/ThePOPs/tabid/673/Default.aspx> accessed November 2011.

²¹ Alaska Community Action on Toxics. 2009. Persistent Organic Pollutants in the Arctic: a report for the delegates of the fourth conference of parties of the Stockholm Convention; http://www.akaction.org/Publications_FactSheets_and_Video.htm

and present U.S. military base operations.^{22, 23} However, POPs pesticides also continue to build up in Indigenous Peoples' and animals' bodies as these chemicals move northward.

In 1991, the United States joined several other Arctic States in adopting the Arctic Environmental Protection Strategy (AEPS). The AEPS addresses the monitoring, assessment, protection, and conservation of the Arctic zone. The U.S. and the other signing countries made a commitment to, among other things, "monitor the levels of, and assess the effects of, anthropogenic pollutants in all components of the Arctic environment" and "take preventive and other measures directly or through competent international organizations regarding marine pollution in the Arctic irrespective of origin."

In a statement made to U.S. officials of the Environmental Protection Agency, St. Lawrence Island tribal leaders asserted: "The Indigenous Arctic peoples are suffering the most from these chemicals because the chemicals – DDT, endosulfan, lindane, perfluorinated compounds and toxic flame retardants, to name a few—are long lasting, and drift North on wind and water currents from where they are applied in the Southern latitudes. That means these chemicals are also in our traditional foods and affecting our health and the health of our children."

The Arctic is home to approximately half a million Indigenous Peoples, who face significant cultural, food security/subsistence and human health threats from global contaminants combined with climate change which also threatens their food security and traditional subsistence food sources. Indigenous communities of the north are reliant on a traditional diet of foods from the land and ocean for their physical, cultural, and spiritual sustenance. In a 2010 study, researchers found levels of PCBs in the traditional foods of the Yupik people of St. Lawrence Island at 200-400 times the levels considered safe for consumption, particularly in the rendered oils that are so vital for survival in the cold Arctic environment.

The cost of store-bought food is almost six times higher for the same products in rural Alaska compared to other U.S. states. Loss of subsistence foods causes an unbearable economic and nutritional hardship for Arctic Indigenous Peoples and undermines cultural practices handed down through generations.

Specific impacts on women, children and maternal health are well documented. Disparities of health problems in the Alaskan Arctic include high levels of birth defects and neonatal deaths among Alaska Native infants that cannot be explained by the usual risk factors of maternal use of tobacco or alcohol. Data from the Alaska Birth Defects registry shows that the prevalence of birth defects in Alaska is twice as high as in the United States as a whole and that Alaska Native infants have twice the risk of birth defects as white infants born in Alaska. Mothers residing in villages with high hazard ranking are 43% more likely to have a low birth weight baby, 45% more likely to give birth prematurely and more likely to have babies afflicted with intrauterine growth retardation.²⁴

IV. Scientific Evidence: Impacts of these Environmental Contaminants Women, Children, and Maternal Health

***"We must never forget that it is at this most critical window of development in the mother's womb, the child's first environment and first relationship, where the embodied wealth of indigenous nations is determined."*²⁵**

²² Henifin, Kai A. 2007. Toxic Politics at 64N, 171W: Addressing Military Contaminants on St. Lawrence Island. (Graduate thesis) http://ir.library.oregonstate.edu/dspace/bitstream/1957/4531/1/Henifin_Thesis_Revised.pdf

²³ Christopherson, S., M. Hogan, & A. Rothe. 2006. Formerly Used Defense Sites in the Norton Sound Region: Location, History of Use, Contaminants Present, and Status of Clean-up Efforts. Prepared for Alaska Community Action on Toxics

²⁴ Gilbreath, S. and Philip Kass. 2006. Adverse birth outcomes associated with open dumpsites in Alaska Native villages. American Journal of Epidemiology 164(6):518-528.

²⁵ ---Tekatsitsiakwa Katsi Cook, Akwesasne Mohawk: "Protecting the Child in the First Environment: Preconception Health To Save Native Future": Journal of the National Museum of the American Indian, Winter, 2011, 24-27

---Tekatsitsiakwa Katsi Cook, Akwesasne Mohawk: "Protecting the Child in the First Environment: Preconception Health to Save Native Future": Journal of the National Museum of the American Indian, Winter, 2011

A growing body of scientific evidence demonstrates that harm to women's health, particularly reproductive health, is closely associated with exposure to endocrine-disrupting chemicals, which include many POPs and pesticides, often at extremely low levels. In 2009, the Endocrine Society, a medical association of 14,000 endocrine researchers and specialists from more than 100 countries, warned that "even infinitesimally low levels of exposure [to endocrine-disrupting chemicals]—indeed, any level of exposure at all— may cause endocrine or reproductive abnormalities, particularly if exposure occurs during a critical developmental window. Surprisingly, low doses may even exert more potent effects than higher doses."²⁶ Studies from various fields are converging to implicate endocrine disrupting chemicals as a significant concern to public health. These are substances in our environment, food, and consumer products that interfere with "hormone biosynthesis, metabolism, or action resulting in a deviation from normal homeostatic control of reproduction. Effects of endocrine-disrupting chemicals may be transmitted to further generations through germline epigenetic modifications or from continued exposure of offspring to the environmental insult."²⁷

*"On top of our basic genetic inheritance lies epigenetics, or those environmental influences that drive changes in the gene function of the developing fetus. Many external agents during critical windows of a child's development, including maternal stress during pregnancy, maternal behaviors, exposures to toxic chemicals, radioactivity, cigarette smoke, diesel exhaust, heavy metals, and persistent organic pollutants like PCBs have lifelong effects on the child's physical, mental and emotional health and well-being. These epigenetic effects and their "reprogramming" of our mammalian physical functions during fetal development and through the end of adolescence can persist across generations."*²⁸

A 2005 peer-reviewed study by the Environmental Working Group found an average of 200 industrial chemicals and pollutants in the umbilical cord blood of ten babies born in U.S. hospitals.²⁹ In a study of infants born in 2007 and 2008, the Environmental Working Group commissioned five laboratories in the U.S., Canada, and Europe to analyze umbilical cord blood collected from 10 "minority" infants born in 2007 and 2008. "Collectively, the laboratories identified up to 232 industrial compounds and pollutants in these babies, finding complex mixtures of compounds in each infant. This research demonstrates that industrial chemicals cross the placenta in large numbers to contaminate a baby before the moment of birth." The developing child is particularly vulnerable. Exposures in the womb can result in immediate harm to the child's development; however "some adverse effects may not manifest themselves for years or decades. Scientists refer to this phenomenon as the "fetal basis of adult disease."³⁰

²⁶ Diamanti-Kandarakis, Evanthia. Jean-Pierre Bourguignon, Linda C. Giudice, Russ Hauser, Gail S. Prins, Ana M. Soto, R. Thomas Zeller, Andrea C. Gore. 2009. Endocrine-Distrupting Chemicals: An Endocrine Society Scientific Statement. *Endocrine Reviews* 30(4):293-342. <http://www.ncbi.nlm.nih.gov/pubmed/19502515>

²⁷ Diamanti-Kandarakis, Evanthia. Jean-Pierre Bourguignon, Linda C. Giudice, Russ Hauser, Gail S. Prins, Ana M. Soto, R. Thomas Zeller, Andrea C. Gore. 2009. Endocrine-Distrupting Chemicals: An Endocrine Society Scientific Statement. *Endocrine Reviews* 30(4):293-342. <http://www.ncbi.nlm.nih.gov/pubmed/19502515>

²⁸ Cook, Tekatsitsiakwa Katsi. 2011. Protecting the Child in the First Environment: Preconception Health to Save the Native Future. *Journal of the National Museum of the American Indian* Winter 2011:24-27.

²⁹ Environmental Working Group Report Industrial Pollution Begins in the Womb, a Benchmark Investigation of Industrial Chemicals, Pollutants, and Pesticides in Human Umbilical Cord Blood. 2005. Accessed at: www.ewg.org.

³⁰ Environmental Working Group Report Pollution in Minority Newborns. 2009. Accessed at: www.ewg.org.

Exposure to chemicals can damage women's reproductive health by causing structural malformations and disease, adversely affect tissues or cells of the reproductive organs, and interfere with the endocrine system. Exposure to chemicals is linked with impaired fertility and ability to carry a baby to term. Chemical exposures also confer a higher risk of cancers and disorders of women's reproductive system. Some examples include:

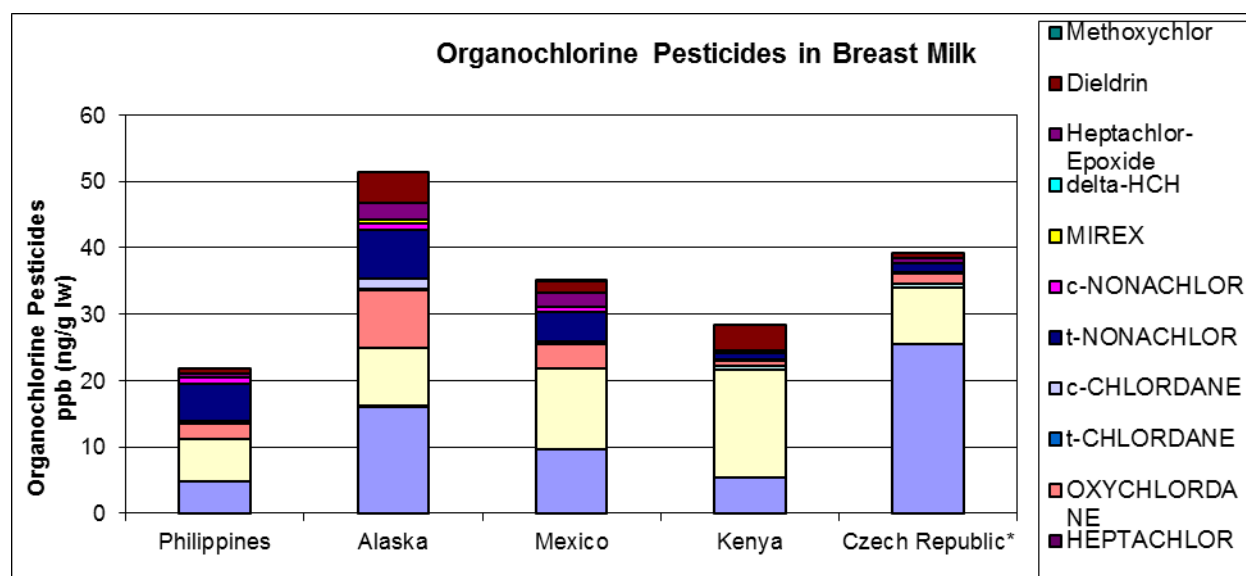
- Uterine fibroids—these noncancerous tumors of muscle lining of the uterus occur in 50% or more of women and are the major cause of hysterectomy in women of reproductive age. They can cause pain, abnormal bleeding, infertility and complications in pregnancy. Although all of the causes are not well understood, exposure to endocrine-disrupting chemicals (xenoestrogens) may cause fibroids. For example, researchers have found that exposure to the chemical bisphenol-A (BPA), found in certain hard plastics and the material lining canned foods and beverages is associated with fibroid development in laboratory studies.
- Endometriosis—is a painful disease occurring when the endometrium, tissue lining the inside of the uterus, grows outside of the uterus into the abdomen, pelvis, or ovaries. Endometriosis affects 10-20% of women of reproductive age and is a leading cause of infertility and hysterectomy. Dioxins and PCBs are among the chemicals associated with endometriosis in animal and human studies. Higher levels of phthalates (an endocrine-disrupting chemical found in personal care products and soft plastics) were found in women with endometriosis.
- Reproductive tract development and disease—exposure to certain xenoestrogenic chemicals such as BPA and the pesticide methoxychlor can interfere with the implantation of fertilized eggs in the uterus or harm the developing bones and uterus of developing babies.
- Effects on ovarian follicles—exposure to endocrine-disrupting chemicals during fetal development can adversely affect the quality and quantity of ovarian follicles. A recent study found that when laboratory animals are exposed to bisphenol-A at levels commonly measured in people, that high percentages (nearly 50%) of their eggs have chromosomal abnormalities. This genetic defect is then also found in the embryos that develop from these eggs. Chromosome abnormalities are the leading cause of miscarriages, birth defects, and mental retardation in people. Bisphenol-A is also associated with recurrent miscarriages in humans.
- Early puberty—research demonstrates that exposure to chemicals such as PCs, PBDEs (polybrominated diphenyl ethers), dioxins, and phthalates is associated with earlier onset of puberty in girls.
- Breast cancer—more than 200 chemicals, including a number of endocrine-disrupting chemicals, are associated with increased incidence of breast tumors. Breast cancer incidence rates increased in the U.S. more than 40% between 1973 and 1998, a period that coincides with increasing production and use of pesticides and other industrial chemicals. A woman's lifetime risk of breast cancer is one in eight, as of January 1, 2006 (the most recent point in time for which data are available).
- Miscarriages—exposures to BPA and pesticides such as DDT are associated with miscarriages. Miscarriages affect 21% of known pregnancies and although there are a variety of factors, there is strong evidence that toxic chemicals are significant risk factors.
- Shortened lactation—PCBs and pesticides such as atrazine are associated with a reduction in the length of time that women can breastfeed her baby. Shortened lactation is a critical problem because it has long-term consequences for the development of a healthy child, including increased risk for infection and impaired immunity, obesity, and learning disorders.³¹

V. Contamination of Breast Milk Threatens Current and Future Generations

³¹ Information in this section from the report *shaping Our Legacy: Reproductive Health and the Environment*. 2008. A report by the Program on Reproductive Health and the Environment, Department of Obstetrics, Gynecology, and Reproductive Sciences, National Center of Excellence in Women's Health, University of California, San Francisco.

Levels of contaminants found in breast milk demonstrate disproportionate effects in Indigenous communities. Human breast milk is a bioresource at the foundation of subsistence economies and traditional food ways of Indigenous communities. Biomonitoring of human breast milk has shown the ubiquity of persistent organic pollutants in the environment.³² One study noted that in the Akwesasne Mohawk population with lifetime exposures to consuming fish near contaminated sites, women produced breast milk with higher concentrations of PCBs; yet when later generations of Akwesasne Mohawk mothers heeded fish advisories and did not have such lifetime exposures, the breast milk concentrations of PCBs went down.³³ Unfortunately, in many tribal jurisdictions, where subsistence foods provide an economic and healthy means to eat, and where other sources of food are less available and less desirable, tribal women may not have such a choice.

In a more recent study looking at body burdens of persistent organic pollutants in the Akwesasne Mohawk youth ages 17 to 21 years old, significantly higher levels of PCBs were found among individuals who were breastfed as infants, were first born, or had consumed local fish within the past year.³⁴ Comparing levels of various persistent organic pollutants (POPs) reported by the U.S. Centers for Disease Control (CDC) for youth between the ages of 12 and 19 years old, the geometric mean of several congeners was significantly higher than the reported CDC 90th percentile. This suggests continued higher than acceptable exposures and body burdens in Indigenous communities either through diet or other sources. Of five women tested from Czechoslovakia, Kenya, Mexico, Philippines and Alaska, levels of pesticides and the industrial chemicals PBDEs (polybrominated diphenyl ethers—used as flame retardants in furniture, mattresses and electronics) were highest in the breast milk of a Yupik woman from Arctic Alaska (see charts below).³⁵



Contamination of human milk in Arctic mothers by POPs has been documented at levels considered unsafe. Impacted Indigenous Peoples have stated that they consider the contamination of breast milk as a clear human rights violation, making the most nutritious food for infants poisonous and contaminated in the pursuit of profit.

³² Fitzgerald, E. Hwang, S. et al. 1998. Fish Consumption and Breast Milk PCB Concentrations among Mohawk Women at Akwesasne, American Journal of Epidemiology 148:164-172.

³³ Fitzgerald et al. 1998.

³⁴ Gallo et al. 2011. Levels of persistent organic pollutant and their predictors among young adults. Chemosphere 03/2011; DOI: 10.1016/j.chemosphere.2011.02.071.

³⁵ Commonweal. 2009. Report: Monitoring Mother Earth by Monitoring Mother's Milk. www.ipen.org.

Indigenous women continue to strongly encourage breastfeeding for a number of nutritional, spiritual, social, cultural, health and economic reasons. However they demand an immediate halt to all activities which cause it to be contaminated.

VI. State and International Complicity: the Manufacture and Exportation of Banned Pesticides from the United States to Mexico and others countries

"Just because something is not illegal, it may still be immoral. Allowing the export of products recognized to be harmful is immoral."

- UN Special Rapporteur on Adverse effects of the illicit movement and dumping of toxic and dangerous products and wastes on the enjoyment of human rights, Ms. Fatma-Zohra Ouhachi-Vesely on her first official country visit to the United States, 2001

In 2001, the Special Rapporteur on Adverse effects of the illicit movement and dumping of toxic and dangerous products and wastes on the enjoyment of human rights, Ms. Fatma-Zohra Ouhachi-Vesely visited the United States. She found that the United States allowed the manufacture and exportation of pesticides that were banned for use in the United States to other, primarily developing, countries. She cited a report on the alarming levels of this exportation:

*"United States Customs records reveal that 3.2 billion pounds of pesticide products were exported in 1997-2000, an average rate of 45 tons per hour. Nearly 65 million pounds of the exported pesticides were either forbidden or severely restricted in the United States [...]. In the 1997-1999 periods, shipments of banned products were found in Customs Records [...] 57 per cent of these products were shipped to a destination in the developing world. Nearly half of the remaining 43 per cent were shipped to ports in Belgium and the Netherlands. Though it is not possible to make a final determination from available data, it is likely that the final destinations of a large number of these shipments were also developing countries."*³⁶

The same report further stated that:

*"[B]etween 1996-2000, the United States exported nearly 1.1 billion pounds of pesticides that have been identified as known or suspected carcinogens, an average rate of almost 16 tons per hour [...]"*³⁷

These figures have particular importance in regard to girls and boys in developing countries. According to the International Labor Organization, 65 to 90 per cent of the children estimated to be working in Africa (80 million), Asia (152 million) and Latin America (17 million) are working in agriculture. Evidence that children have heightened susceptibility to the carcinogenic effects of pesticides has even greater significance for developing countries. There, children live and work in conditions that involve almost continuous exposure, ranging from contact in fields to contaminated water, pesticide-contaminated clothing, and storage of pesticides in homes.

A more recent report based on US Government Custom Service Records, *"Pesticide Exports from U.S. Ports, 2001-2003"* states that:

³⁶ Carl Smith, "Pesticide Exports from US ports, 1997-2000", vol. 7 *International Journal of Occupational and Environmental Health* (2001), 266-274.

³⁷ Ibid

*"Analysis of U.S. Custom Service records for 2001-2003 indicates that nearly 1.7 billion pounds of pesticide products were exported from U.S. ports, a rate >32 tons/hour. Exports included >27 million pounds of pesticides whose use is forbidden in the United States. WHO Class 1a and 1b pesticides were exported at an average rate of >16 tons/day. Pesticide exports included >500,000 pounds of known or suspected carcinogens, with most going to developing countries; pesticides associated with endocrine disruption were exported at an average rate of >100 tons/day."*³⁸

The United Nations Declaration on the Rights of Indigenous Peoples as well as CERD General Recommendation XXIII requires the Free Prior Informed Consent by Indigenous Peoples who are exposed and detrimentally affected by exposure these highly toxic substances. The IITC has received extensive documentation from many such communities, in particular in Mexico and Guatemala, affirming that this is, in fact, not the case.

During her visit to the United States Mme. Vesely also met with government officials, reporting that "US officials told me that pesticides banned in the United States but exported cannot be regulated if there is a demand overseas, because of free-trade agreements."³⁹ The Rapporteur, Ms. Vesely justifiably found that the US policy is based upon, among other unacceptable premises, "... on an untenable premise that pesticides deemed unacceptable for the residents and environment of the United States are somehow acceptable in other countries. Clearly, countries such as the US often choose to offer their citizens a higher degree of protection than they insure for others in other countries and fail to monitor the human rights impacts of this practice by US corporations. One of the most common reasons for doing so is to acknowledge different levels of economic and social development among States. However this disparity is difficult to justify in respect of pesticides found to be so dangerous that they are banned from sale or use."⁴⁰

As one farm worker who is a member of a Yaqui community in Mexico expressed in a meeting with the US's Environmental Protection Agency in the San Diego, California USA in 2001, commenting on the US's policy of banning pesticides for use in the US but still permitting their production for export, "Why are the lives of our Yaqui children in Mexico worth less than the lives of your children here in the US?"

There are a great many difficulties in tracing the use abroad of banned pesticides manufactured in the US. In Mexico and Guatemala, for example, there is no labeling of origin or content of pesticides. They are given names like "Veloz" (speedy), or "Ninja" in Guatemala. As the Special Rapporteur pointed out, "Even if something is marked 'poison' it tends to be shipped in large amounts, and then transferred to smaller containers without proper labeling for local sale and use. And the people actually using the products often cannot read anyway."⁴¹

In an investigation conducted by the International Indian Treaty Council in Sonora, Mexico, on Indigenous Yaqui ancestral lands received testimony from an indigenous agricultural worker who was told by the agricultural companies involved in aerial spraying to bury large pesticide canisters because they knew that the pesticide was banned. As stated above, many Yaqui family members, farm workers and midwives and mothers have presented testimonies about increasing levels of birth defects, cancers and deaths due to toxic exposure from

³⁸ Pesticide Exports from U.S. Ports, 2001–2003 CARL SMITH, KATHLEEN KERR, MD, AVA SADRIPOUR, ESQ. International Journal of Occupational and Environmental Health ,VOL 14/NO 3, JUL/SEP 2008

³⁹ U.N. Deems Export of Banned Pesticides Immoral, U.S. Newswire, 202-347-2770/ 12/17 16:09

⁴⁰ Special Rapporteur on Adverse effects of the illicit movement and dumping of toxic and dangerous products and wastes on the enjoyment of human rights, Ms. Fatma-Zohra Ouhachi-Vesely , Mission to the United States, UN Doc. E/CN.4/2003/56/Add.1.

⁴¹ U.N. Deems Export of Banned Pesticides Immoral, U.S. Newswire, 202-347-2770/ 12/17 16:09,

indiscriminate aerial spraying, storage and use of highly toxic pesticides in communities and unsafe working conditions with no safely precautions or information about the dangers provided.

The export of banned and dangerous toxics from the “developed/industrialized” to the “developing” countries continues, with impacted Indigenous and other communities at the bottom end uniformed, sickened and killed. It should be noted with concern that the production and export of banned pesticides by the US is permitted under federal law (the Federal Insecticide, Fungicide, and Rodenticide Act, FIFRA) as well as under the International Rotterdam Convention, as long as the receiving country is informed of this status. Unfortunately no one informs the Indigenous communities “on the ground” who suffer grave human rights consequences.

VII. Holding States and Corporations Accountable

“The agrochemical industry is valued at over \$42 billion and operates with impunity while, according to the World Bank over 355,000 people die from pesticide poisoning every year.”⁴²

On December 3rd 2011, 27 years later after the Bhopal disaster caused by the release of toxic pesticides from the Union Carbide factory in Bhopal India killed over 25,000 people, the **Permanent Peoples Tribunal** convened in Bangalore India with an international panel of 5 judges. Based on testimonies and statements about health and other human rights violations caused by pesticides from communities around the world, including Indigenous communities from Alaska, Mexico, Peru and elsewhere, the Tribunal delivered a scathing indictment of the pesticide industry. It focused on the “Big 6” agrochemical giants, the Multi-national Corporations (MNC’s) Monsanto, Syngenta, Dow, DuPont, Bayer, and BASF (Dow bought Union Carbide in 2001).

Blame for the agrochemical industry’s human rights abuses was also assigned to the three States where these corporations are headquartered—the United States, Switzerland, and Germany. As stated in the PPT’s findings, these countries “*failed to comply with their internationally accepted responsibility to promote and protect human rights, especially of vulnerable populations.*”

Other findings included:

“The Tribunal makes the following declaration of responsibility for the six indicted MNCs and three Governments in particular and further also declares the responsibilities of all States, international organizations, UN Specialist Agencies, all other institutions of global governance.”

“AS CONCERNS THE INDICTED SIX CORPORATIONS (BASF, BAYER, DOW CHEMICAL, DUPONT, MONSANTO

-- The Tribunal finds on all evidence presented before it the six MNCs responsible for gross, widespread and systematic violations of the right to health and life, economic, social and cultural rights, as well as of civil and political rights, and women and children’s’ rights.

-- The Tribunal also finds these corporations responsible for their systematic conduct resulting in violation of indigenous peoples’ human rights and other entitlements.

AS CONCERNS THE THREE SPECIFICALLY INDICTED STATES:

⁴² Pesticides Action Network North America, January 10th, 2012

*“The United States of America (USA), the Swiss Confederation (Switzerland) and the Federal Republic of Germany (Germany) have failed to comply with their internationally accepted responsibility to promote and protect human rights, especially of vulnerable populations and their specific customary and treaty obligations in the sphere of environment protection...”*⁴³

The Permanent Peoples tribunal was convened by Non-Governmental organizations and its findings are considered non-binding upon the States and corporations in question. However similar conclusions were reached by a legally binding UN Treaty Monitoring body process, the UN Committee on the Elimination of Racial Discrimination in its Concluding Observations for the periodic review of the United States which took place in February 2008. The International Indian Treaty Council coordinated a joint Indigenous Peoples shadow report which includes testimony and documentation addressing the human rights impact of the production and export of toxic pesticides, including tons of pesticides banned for use in the US due to ample proof of severe health impacts including cancers and birth defects.

In response, the CERD issued the following recommendation to the US, following up on a similar recommendation to the Canadian government during its periodic review the previous year (March 2007):

“30. The Committee notes with concern the reports of adverse effects of economic activities connected with the exploitation of natural resources in countries outside the United States by transnational corporations registered in the State party on the right to land, health, living environment and the way of life of indigenous peoples living in these regions.

In light of article 2, paragraph 1 (d), and 5 (e) of the Convention and of its general recommendation no. 23 (1997) on the rights of indigenous peoples, the Committee encourages the State party to take appropriate legislative or administrative measures to prevent acts of transnational corporations registered in the State party which negatively impact on the enjoyment of rights of indigenous peoples in territories outside the United States. In particular, the Committee recommends that the State party explore ways to hold transnational corporations registered in the United States accountable. The Committee requests the State party to include in its next periodic report information on the effects of activities of transnational corporations registered in the United States on indigenous peoples abroad and on any measures taken in this regard.”⁴⁴

The IITC Shadow report submitted to the CERD for the US review specifically documented the export of banned pesticides by the US to Mexico. The issue of Mexico’s continuing IMPORT and use of dangerous and banned pesticides and their use in agricultural area of Mexico as impacting Indigenous communities (Yaqui and Huichol) was also submitted by IITC and addressed in the recommendations of the UPR review of Mexico by the UN Human Rights Council in September 2008.

Clearly, United States policies and laws as well as International Conventions allowing banned pesticides to be manufactured and exported by US based corporations are immoral and wrong, and violate the human rights of the impacted Indigenous communities where they are applied without their free, prior and informed consent,

⁴³ DRAFT FINDINGS AND RECOMMENDATIONS, PERMANENT PEOPLE’S TRIBUNAL ON AGROCHEMICAL TRANSNATIONAL CORPORATIONS, Bangalore, India, 3-6 December 2011

⁴⁴ Concluding Observations of the UN Committee on the Elimination of Racial Discrimination, United States of America [CERD/C/USA/CO/6 May 8th 2008]

and also where they travel as a result of global transport. As Mme. Ouachi-Veseley stated in her report to the Commission of Human Rights, “[i]n particular, the right to life, the right to health, the right to found a family, the right to a private life are most commonly violated by the effects of pesticide use.”⁴⁵

The National Congress of American Indians also affirmed the human rights impacts on Indigenous Peoples of the export of banned pesticides by the United States and US based corporations in a resolution adopted by consensus at its annual conference in November 2007:

*“WHEREAS, the production, export and unmonitored use of banned, prohibited and dangerous toxics including pesticides violates a range of human rights for Indigenous Peoples around the world including the Rights of the Child, Right to Health, Food Security, Development Life, Physical Integrity, Free Prior Informed Consent, Cultural Rights, the Right to be Free from all Forms of Racism and Racial Discrimination and the Right of All Peoples not to be Deprived of Their Own Means of Subsistence.”*⁴⁶

This NCAI resolution also called for a formal Hearing by the United States Senate to further address this matter.

VIII. Advances and Challenges in International Environmental Standards Regarding Environmental Toxics: An opportunity for the UNPFII to exert pressure in support of Indigenous Women and communities’ voices, rights and participation

A. The Stockholm Convention on Persistent Organic Pollutants

The Stockholm Convention was adopted by States from around the world in 2001 and entered into force in 2004 when 50 States had ratified it. Currently, the Convention includes 176 State parties that agree to work together toward global elimination of the world’s most dangerous chemicals. The Stockholm Convention is a living Treaty that includes provisions to add new chemicals that meet scientific criteria for persistence, long-range transport, adverse effects, and bioaccumulation. In addition to the initial list of twelve chemicals including nine pesticides, which were included in the Convention, the “dirty dozen” (aldrin, chlordane, DDT, dieldrin, endrin, heptachlor, mirex, toxaphene, hexachlorobenzene, PCBs, dioxins, and furans), the Parties agreed to add 9 new substances in 2009 and an additional pesticide, endosulfan, in 2011. The scientific committee of the Stockholm Convention, the POPs Review Committee (POPRC), works to determine whether chemicals that are nominated for inclusion under the Convention meet the scientific criteria and warrant global action.

The Preamble of the Convention recognizes the serious health concerns including “*particular impacts upon women and children and, through them, upon future generations;*” and that “*Arctic ecosystems and indigenous communities are particularly at risk because of the biomagnification of persistent organic pollutants and that contamination of their traditional foods is a public health issue.*” Because exposure to even low levels of POPs can harm human health and development, the Convention is strongly based on the Precautionary Principle.

However major challenges remain. The chemical industry remains a strong political force in this process, exerting constant and well-funded pressure on States to avoid or delay adding new chemicals. Despite the recognition of impacts on health of women, children and Indigenous Peoples in the Convention’s preamble,

⁴⁵ Special Rapporteur on Adverse effects of the illicit movement and dumping of toxic and dangerous products and wastes on the enjoyment of human rights, Ms. Fatma-Zohra Ouahachi-Vesely, Mission to the United States, UN Doc. E/CN.4/2003/56/Add.1, para 39.

⁴⁶ National Congress of American Indians Resolution #DEN-07-050, “Impacts on the Contamination of Subsistence Food Resources, Health, Human Rights and Development of Tribes and Indigenous Communities

Human rights including the Rights of Indigenous Peoples most often take a back seat to industry concerns or are not addressed at all in the States' deliberations. Also, there is no formal mechanism for the participation of Indigenous Peoples in the implementation of the Convention. This continues to be a key demand of Indigenous Peoples participating in this process, along with unqualified recognition of human rights.

In the closing statement of the Global Indigenous Peoples Caucus at the 2011 4th Conference of the Parties to the Stockholm Convention (April 6 – 10, 2011, Geneva), these ongoing concerns were emphasized:

*“For Indigenous Peoples, the impacts of the production, export and use of dangerous toxics violates and threaten human rights protected under International Laws, norms and Conventions, including the UN Declaration on the Rights of Indigenous Peoples. Reproductive health and justice, which includes our right to bear and raise healthy children, also continue to be undermined for Indigenous Peoples living at the source of application as well as in Arctic communities, far from the original point of exposure. Indigenous Peoples reiterate our call for formal participation in this process so that we are able to work more effectively with the State parties for the realization of the Stockholm Convention’s goals.”*⁴⁷

B. The Rotterdam Convention

The **Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade** is an important tool to protect human health and the environment by controlling trade in hazardous chemicals and pesticides that meet the requirements of the Convention. However, as with the Stockholm Convention, there is no formal mechanism for the participation of Indigenous Peoples or to address the human rights abuses caused by the export of hazardous substances when they are used in the lands and territories of Indigenous Peoples without their free prior and consent.

In fact, the Rotterdam Convention specifically allows for the export of pesticides and other chemicals that have been banned for use in the producing State as long as the receiving (importing) State is properly notified. There is no provision to ensure that Indigenous Peoples are afforded the right of Free Prior Informed Consent as stipulated by Article 29 of the UN Declaration of the Rights of Indigenous Peoples, CERD General Recommendations XXIII and other human rights standards. Also, there is no formal process for consideration by State parties of the widespread, brutal Human Rights impacts caused by this practice as have been documented in this paper, putting this UN Convention directly at odds with a number of existing UN human rights standards.

C. Agenda 21 and Rio + 20, the World Conference on Sustainable Development, June 2012

In 1972, the United Nations held the World Conference on the Human Environment in Stockholm, Sweden. The resultant Declaration of the United Nations Conference on the Human Environment was the first pronouncement by the international community on the world's environment. Calling for an environment of a quality that permits a life of dignity and well-being, the Conference established the United Nations Environmental Programme (UNEP).

The Stockholm Declaration addressed the issue of the environment and development but left it up to the States to deal with the growing problem of environmental degradation as a result of development throughout the

⁴⁷ United Nations Stockholm Convention on Persistent Organic Pollutants , 5th Conference of the Parties, April 25th 29th, 2011, Geneva Switzerland , Global Indigenous Peoples Caucus Closing Statement , Presented by Monique Sonoquie, International Indian Treaty Council I

world. The Stockholm Declaration did recognize the connection between human right and the environment, but in its formulation of a right to the environment, it framed this right as an individual right even though the right to the environment, like the rights of self-determination, development, and peace, are all so-called “third generation” collective rights of peoples.

The World Conference on the Environment and Development (Rio) was held twenty years later, in 1992, in Rio de Janeiro, Brazil, leading to an explosion of international activity, including development of international conventions addressing the environment.

Principle 22 of the Rio Declaration recognizes that:

Indigenous Peoples and their communities... have a vital role in environmental management and development because of their knowledge and traditional practices. States should recognize and duly support their identity, culture and interests and enable their effective participation in the achievement of their sustainable development.

Indigenous Peoples are addressed in Agenda 21, Chapter 26 which calls for a “full partnership” with Indigenous Peoples in the accomplishment of the goals of Agenda 21. Chapter 26.3 calls upon the States to “strengthen and facilitate” Indigenous Peoples’ participation in their own development and in external development activities that may affect them.

Another important advance, which was also included in the Stockholm Convention, was the key concept of the “Precautionary Principle” placing the burden of proof on the corporation or State that chemicals are safe for human and environmental health BEFORE they are produced, used or released. This formula stands as a rights-based alternative to current practices supported by governmental regulatory models such as “risk assessment”, “safe management”, and “acceptable risk” which allow the continued use and proliferation of chemicals known to be dangerous if their impacts can be “controlled” or limited to low or “acceptable” rates of illness and death.

Agenda 21 Section I, Chapter 6: “Protecting & Promoting Human Health, E. Reducing health risks from environmental pollution and hazards” recognizes that pesticides pose a serious threat to human health. Although Agenda 21 also endorses partnership with Indigenous Peoples, the Precautionary Principle and Free Prior and Informed Consent, in Chapter 19 and 20 it endorses another model altogether regarding the Management of Chemicals and Hazardous Wastes.

In Chapter 19 it states that “the principle of the right of the community and of workers to know those risks [of chemicals] should be recognized. However, the right to know the identity of hazardous ingredients should be balanced with industry's right to protect confidential business information”.⁴⁸ In other words, it proposes that the fundamental right of exposed communities to FPIC be “balanced” with corporate business interests. Chapter 19 paragraph 52 f) also allows for the “export of chemicals that are banned, severely restricted, withdrawn or not approved for health or environmental reasons, except when such export has received prior written consent from the importing country”⁴⁹ This provides the basis for similar provisions in the Rotterdam Convention.

⁴⁸ Agenda 21, Chapter 19 paragraph 8

⁴⁹ Agenda 21 Chapter 19, “Environmentally Sound Management Of Toxic Chemicals, Including Prevention Of Illegal International Traffic In Toxic And Dangerous Products”, paragraph 52) f

Indigenous Peoples have challenged these provisions of Agenda 21, and the health and human rights threats they pose, in their statements in preparation for the upcoming World Conference on Indigenous Peoples, “Rio + 20” in June 2012, based on the minimum standard in the UN Declaration on the Rights of Indigenous Peoples, in particular Article 29, in this regard. Indigenous Peoples are optimistic regarding the inclusion of the UN Declaration on the Rights of Indigenous Peoples in the “Zero-draft outcome document” for Rio+20 as drafted by the United Nations Secretary General⁵⁰ and encourage the UNPFII to urge that this reference remain or be strengthened in the final outcome document.

D. The United Nations Legally-Binding Instrument on Mercury: A Current International Standard-setting opportunity to incorporate the right to health for Indigenous Women, Girls and Future Generations

Mercury is highly toxic. Some levels of inorganic mercury are found in nature. Metallic mercury is used in batteries, thermometers and dental amalgams. The largest amounts of mercury are released into the environment by coal-fired power plants, paper milling, mining and other industrial processes. The most toxic form is “methylated mercury”, created when mercury is exposed to decaying plant matter, for example in marshes or lakes created by dams. This form of organic mercury “bio-accumulates” or builds up in the cells of fish and other animals, moving up the food chain in higher and higher concentrations. Humans are most commonly exposed by eating contaminated fish. Mercury contaminates our air, water, lands and traditional foods, in particular the fish upon which so many Indigenous communities depend, producing serious health impacts for persons of all ages. But the gravest danger is to the health and development of our children. Exposure to mercury impairs the neurological development of infants, babies and children, including those still in those mothers’ wombs.

The Second Ministerial Meeting of the Arctic Council met in Barrow, Alaska in 2000. Participants were concerned about effects to human health and the environment of mercury and its impacts globally, particularly the Arctic. The Arctic Council asked UNEP to complete a global assessment of mercury to provide information for next steps. UNEP released “Global Mercury Assessment” report in 2002. In summary the report acknowledged that mercury, due to its long range transport, its ability to bioaccumulate in the environment, its persistence and its harm to human health and the environment, is of global concern. In 2009, UNEP agreed to negotiate a global, legally binding mercury-control Treaty. The Treaty was to be drafted in five “Intergovernmental Negotiating Committee” or INC meetings to begin in 2010 and to be completed in early 2013. The first three took place in Japan, Sweden and Kenya. The next session, INC 4, is scheduled in Uruguay in June 2012.

About two-thirds of the mercury released in the environment can be attributed to human activity. The largest source of global mercury pollution comes from burning fossil fuels, primarily coal. The second largest source appears to be artisanal and small scale gold mining, as well as continued run offs from abandoned gold mines. Mercury can also be found in a number of products (batteries, dental fillings, cosmetics etc.)

Mercury contamination is bound to the protein tissue rather than the fatty tissue, unlike contamination from POPs. Although mercury can travel far from the source, contamination is of particular concern for waterways that are near coal-fired power plants, waste dumps, pulp and paper mills, cement kilns, gold mines, sites of fossil fuel extraction for oil, coal and tar sands and chlor-alkali facilities.

⁵⁰ “The Future We Want”, Zero-Draft text for Rio+20, January 10, 2012, para. 21

Abandoned mercury and gold mines in areas such as California, South Dakota and Alaska continue to emit mercury. Current gold mining and processing taking place in many countries in Latin America, Asia and Africa as well as North America produce new mercury contamination. For example, in 2003, gold mining and processing at Placer Dome's Cortez mine and Barrick's Gold strike in Northern Nevada released 2435 pounds of mercury into the environment.

Methylmercury is known to affect the neurological system of both the developing as well as the adult brain. Prenatal exposure can cause irreversible damage to the developing nervous system resulting in reduced IQ, abnormal muscle tone and losses in motor function and attention. Heart disease and high blood pressure have also been associated with methylmercury consumption as well as damaged immune systems kidney damage and reproductive effects.

As a mother accumulates mercury in her body she can then pass this pollution onto her unborn child. Babies can be exposed by consuming breast milk with high levels of mercury. Indigenous Peoples that rely primarily on fish for their physical, economic and cultural survival are at highest risk. In 2000, the National Academy of Sciences estimated that 60,000 babies born each year in the US are at risk for learning disabilities and other kinds of neurological damage due to mercury contamination. The Academy concluded that there is "little or no margin of safety" for consumption of mercury by women of childbearing age. In 2004, the US Environmental Protection Agency estimated that over ten times that many babies may actually be at risk. Umbilical cord blood has been found to contain almost twice the level of mercury than that found in the mothers' blood, further increasing the risks to unborn generations.

Mercury is an international problem affecting Indigenous Peoples around the world. In British Columbia Canada, the dam holding Teck Cominco's mercury mine tailings burst in 2004, releasing large amounts of mercury into water used for traditional subsistence fishing. In Northern Ontario, paper mill emissions containing mercury had devastating effects on the health and subsistence fishing of the Grassy Narrows First Nation Peoples. The UN Environmental Programme estimates that over one million people in Latin America, including many women and children, are currently involved in small-scale mining activities in which mercury is used.

Indigenous Peoples participating in the INC sessions have proposed including references to Indigenous Peoples in several places in the current Treaty negotiating text, in addition to the current language recognizing "vulnerable populations" as well as a new operative article addressing specific impacts for Indigenous Peoples. The Indigenous Peoples' Global Caucus at INC 3 in Nairobi Kenya (31 October – 4 November 2011) also strongly supported the inclusion of a new operative paragraph on "Health Aspects" currently proposed as Article 20 bis by the GRULAC (Latin American) countries. Their statement to the INC3 plenary linked health impacts to cultural concerns and also called for better data regarding specific impacts on Indigenous women and children.

*"Harms from all mercury releases and a need for more and better data on impacts to Indigenous Peoples and vulnerable populations, such as pregnant women, the developing fetus, children, and workers, need to be better tracked and communicated. For us, these harms are linked to traditional foods and diets, and cultural values. This expanded definition of vulnerability includes other factors of poverty, poor nutrition, reproductive concerns of our women, learning disabilities of our children, and the retention of our languages."*⁵¹

Indigenous Women have taken a strong stand regarding the continued release of mercury into the international environment, the lack of political will by States to conduct effective cleanup of lands and waterways that are

⁵¹ Indigenous Peoples Global Caucus intervention on Health Aspects, INC 3, Nairobi Kenya, November 3rd, 2011

contaminated and the need for a strong international instrument on mercury guided by health and human rights concerns rather than priorities set by industry.

The “Indigenous Mothers against Mercury Open Letter to National, State and regional Policy- Makers”, was finalized on May 18th 2011 and has received over 1000 signatures from Indigenous mothers around the world. It reiterates the health impacts of mercury as a neurotoxin which most severely damages the developing fetus. It reminds policy makers that this represents “a violation of our human rights to health, cultural practices, Treaty rights, subsistence, Rights of the Child, and our Right to Free Prior and Informed Consent as recognized by the UN Declaration on the Rights of Indigenous Peoples and other international human rights instruments, norms and standards.”⁵²

Regarding the international standard setting process currently underway, the letter stresses the need for full and effective participation of Indigenous Peoples, including women, and for a strong and effective outcome. The letter concludes with the following 3 proposals to policy-makers:

As policy-makers, we call upon you to take a strong stand for the development of the Global Mercury Treaty, and through policies on the national and international levels that will:

1. *Halt emissions of mercury into the environment from all sources, including the burning of coal, current and past gold mines and production and disposal of medical products that use mercury*
2. *Commit to thorough cleanup of sources of current contamination including legacy mine sites, working in full collaboration with Indigenous Peoples when their homelands, waters, sacred areas and subsistence foods have been impacted.*
3. *Ensure the full, formal and effective participation of Indigenous Peoples, including Indigenous women, in the development of a Global Mercury Treaty and in measures to implement its provisions on the national, regional and local levels.”*⁵³

IX. RECOMMENDATIONS

In light of the information and concerns presented in this paper, we suggest that the following recommendations be included in the report of this Expert Group Meeting of the UN Permanent Forum on Indigenous Issues, and be considered for inclusion in the final report of the UNPFII 11th Session in May 2012. These include support for relevant recommendations that have already emerged from a number of consensus documents and processes agreed to by Indigenous Peoples in response to the concerns raised in this paper:

1. This EGM calls upon States to eliminate the production and use of pesticides, industrial chemicals and toxic byproducts that disrupt the endocrine system, affect learning and neurological development, cause cancers and other illnesses, undermine women’s and maternal health, contaminate lands, waters and traditional food sources, cause harm to reproduction and affect any aspect of the health and development of our future generations. This EGM also calls upon States to take responsibility for

⁵² “Indigenous Mothers against Mercury Open Letter to National, State and regional Policy- Makers”, International Indian Treaty Council and the Indigenous Women’s Environmental Justice and Reproductive Health Initiative May 18th 2011

⁵³ “INDIGENOUS MOTHERS AGAINST MERCURY OPEN LETTER TO NATIONAL, STATE AND REGIONAL POLICY-MAKERS”, MAY 8TH, 2012, Submitted by the International Indian Treaty Council and the Indigenous Women’s Environmental Justice and Reproductive Health Initiative, May 8th 2011

effective and immediate clean-up of contaminated sites created by activities which it either permitted or approved, in collaboration and coordination with the impacted Indigenous Peoples.

2. The EGM calls upon States to report on their progress at the 12th session on the UNPFII towards full and effective implementation of Article 29 of the UN Declaration on the Rights of Indigenous Peoples, in particular paragraphs 2 and 3 regarding their obligation to ensure free prior and informed consent regarding hazardous materials and to implement programs to restore the health of impacted Peoples in conjunction with these Peoples, ensuring the participation of Indigenous women.
3. We recommend that the “precautionary approach” (principle 15 of the Rio Declaration on Environment and Development) be reaffirmed at Rio + 20, together with a renewed commitment by States to eliminate the production, use and dumping of chemicals that are toxic, persistent and hazardous that pose dire threats to the health of impacted communities and ecosystems, and most of all violate human rights; including the rights of Indigenous Peoples to free, prior and informed consent as stated in Article 29 of the UN Declaration on the Rights of Indigenous Peoples. We call upon States to make a commitment to utilize and implement the Precautionary Principle as an alternative to the models of “risk assessment” and “management” of toxic chemicals presented in sections 19 and 20 of Agenda 21. In addition, we recommend that agricultural methods and practices used traditionally by Indigenous communities based on safe alternatives to toxic pesticides be recognized and supported.⁵⁴
4. The EGM calls upon the UNPFII to urge States and the UN Secretary General to ensure that the reference recognizing “the importance of the UN Declaration on the Rights of Indigenous Peoples in the global, regional and national implementation of sustainable development strategies”⁵⁵ be maintained and strengthened in the final Rio + 20 Outcome Document.
5. We recommended that the practice of exporting banned pesticides and other chemicals by the USA and other States cease immediately. We also recommend that the provisions within UN Conventions and national laws which permit this practice without the free, prior and informed consent of the Indigenous Peoples and communities who may be impacted at the source of exposure as well as through global transport, be reviewed immediately and revised.⁵⁶
6. The EGM calls upon the United Nations, its agencies and members to ensure that Human Rights principles and standards must be mainstreamed in all international standard setting processes addressing environment and development, including, inter alia, including the Rights to Health, Free Prior Informed Consent, Food and Subsistence, Treaty Rights, Rights of Women and Children and Right to Life, and all rights affirmed in the United Nations Declaration on the Rights of Indigenous Peoples.
7. The EGM recommends that all relevant national and international bodies and processes respect the traditional knowledge of Indigenous women regarding sustainable development, environmental protection, cultural practices, food production and health and take action to strengthen their roles as participants, leaders, and experts in all levels of discussions and decision-making on these matters.

⁵⁴ Conclusions and recommendations, from the “Rio + 20: Indigenous Peoples in Route to the Rio +20 Conference” from the Global Preparatory Meeting of Indigenous Peoples on Rio +20 and Kari-Oca 2, August 22 - 24, 2011, Manaus, Amazonia, Brazil”

⁵⁵ “The Future We Want”, Zero-Draft text for Rio+20, January 10, 2012, para. 2121

⁵⁶ Conclusions and recommendations, from the “Rio + 20: Indigenous Peoples in Route to the Rio +20 Conference” from the Global Preparatory Meeting of Indigenous Peoples on Rio +20 and Kari-Oca 2, August 22 - 24, 2011, Manaus, Amazonia, Brazil”

8. The UN Permanent Forum on Indigenous Issues, the UN Special Rapporteur on the Situation of Human Rights and Fundamental Freedoms of Indigenous Peoples and other UN bodies and mechanisms addressing Indigenous Peoples' rights are requested to focus attention and collect information from Indigenous Peoples, in particular Indigenous women, on the links between environmental contamination and reproductive health and justice, for the purpose of recommending effective solutions and remedies at the international level.⁵⁷
9. States and their Territories must be accountable for the implementation, with the full and effective participation of Indigenous Peoples of all international Treaties, Standards and Conventions entered into including the Nation to Nation Treaties with Indigenous Peoples and Nations. Processes and mechanisms to ensure accountability must be put in place, with the full participation of affected Indigenous Peoples.⁵⁸
10. Women, children and families who have suffered the impacts of toxic contaminants require special care. States and corporations which have allowed contamination to damage our communities must be held accountable to cover the costs and ensure that adequate care and services are provided, with the full participation and collaboration of the affected Indigenous Peoples.⁵⁹
11. We encourage the development and dissemination of educational materials explaining the links between environmental toxics and reproductive health and justice. We also encourage the development of training programs to inform Indigenous women of opportunities for their participation locally, nationally and internationally, and to build their capacity as strong voices for their families and Nations.⁶⁰
12. Regarding the current process being carried out by UNEP for the development of a legally-binding International Treaty on Mercury, we support the recommendations proposed by the "Indigenous Mothers Against Mercury" open letter, representing the voices of over 1000 Indigenous women worldwide regarding the development of strong language to: *halt emissions of mercury into the environment from all sources, including the burning of coal, current and past gold mines and production and disposal of medical products that use mercury; to commit to thorough cleanup of sources of current contamination including legacy mine sites, working in full collaboration with Indigenous Peoples when their homelands, waters, sacred areas and subsistence foods have been impacted; to Ensure the full, formal and effective participation of Indigenous Peoples, including Indigenous women, in the development of a Global Mercury Treaty and in measures to implement its provisions on the national, regional and local levels.*⁶¹

Further, we fully support the proposal of the Global Indigenous Peoples Caucus made at INC3 to include an operative paragraph addressing the health impacts, aspects and concerns regarding mercury in the context of human rights and the health of Indigenous women, children and unborn generations.

⁵⁷ Declaration for Health, Life and Defense of Our Land, Rights and Future Generations", 1st International Indigenous Women's Environmental and Reproductive Health Symposium, June 30 – July 1, 2010, UN Permanent Forum's 10th session Conference Room Paper [E/C.19/2011/CRP. 9], "Recommendations to the United Nations System and International bodies"

⁵⁸ Ibid, "Recommendations to States and their Territories"

⁵⁹ Ibid, "Recommendations to States and their Territories"

⁶⁰ Ibid, "Recommendations to Indigenous Peoples, Communities, Nations, Tribal Governments and Organizations"

⁶¹ "INDIGENOUS MOTHERS AGAINST MERCURY OPEN LETTER TO NATIONAL, STATE AND REGIONAL POLICY-MAKERS", MAY 8TH, 2012, Submitted by the International Indian Treaty Council and the Indigenous Women's Environmental Justice and Reproductive Health Initiative, May 8th 2011

13. We call for disaggregation of data and studies carried out with the consent and full participation of Indigenous women and communities, to provide better information about specific impacts of environmental toxics, including pesticides, mercury, mining runoffs, uranium mining and processing, waste dumping, and Persistent Organic Pollutants, on the health of Indigenous women, girls and children.
 14. States, international financial institutions, United Nations programmes and actions, as well as private investors and corporations must do due diligence and fully disclose to all Indigenous Peoples, Nations, tribes, and communities, their activities and potential risks. Peoples and individuals who may be affected by or exposed to pesticides, mining, dumping, incineration and other forms of toxic chemical production, the complete known or suspected effects of the chemicals in question, the location and names of corporations producing them, any current or prior legal sanctions or cases filed against them, the Indigenous Peoples in the same or other countries who have experiences with the given process or corporation, so that informed decisions can be made as part of Indigenous Peoples right to free, prior and informed consent.⁶²
 15. Based on paragraph 33 of the report of the UN Permanent Forum on Indigenous Issues 10th session affirming that “the Permanent Forum notes the intention of the International Indigenous Women’s Environmental Justice and Reproductive Health Initiative to organize an expert group meeting on the environment and indigenous women’s reproductive health and requests that the organizers invite members of the Permanent Forum to participate in the meeting...”⁶³ that this EGM requests the Symposium, scheduled for April 2012 in Alaska, to collect additional data, testimonies and case studies to submit to the UNPFII at its 11th session documenting environmental violence against Indigenous women.
 16. We affirm that the rights and relationships affirmed in the legally-binding Nation-to-Nation Treaties between States and Indigenous Peoples, including self-determination, free prior and informed consent, partnership, mutual respect, full and effective participation in decision-making and the “Treaty Right to Health” are fundamental for developing solutions to critical problems affecting Indigenous Peoples, including all forms of violence against Indigenous Women.
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⁶² From “Contributions to the UN Secretary General for preparation of the Rio + 20 “Zero-draft outcome document”, submitted by the International Indian Treaty Council (IITC), Dene Nation (Northwest Territories, Canada), Nishnawbe Aski Nation (Thunder Bay, Ontario, Canada), Indigenous Environmental Network (IEN), Indigenous Peoples Council on Biocolonialism (IPCB), Indigenous World Association (IWA), Alaska Community Action on Toxics (ACAT), and Ms. Mirna Cunningham, President, UN Permanent Forum on Indigenous Issues and CADPI (Nicaragua), October 31, 2011

⁶³ United Nations Permanent Forum on Indigenous Issues Report on the tenth session (16-27 May 2011), Economic and Social Council Official Records, 2011, [E/2011/43-E/C.19/2011/14]

Andrea Carmen and Vi Waghiyi wish to thank:

Pamela K. Miller, Executive Director, and Karla L. Brollier, Environmental Health and Justice Organizer, Alaska Community Action on Toxics; Monique Sonoquie, California Traditional Basket Weavers; Jaquelynn Warledo, IITC Environmental Health Program Coordinator; Dr. Elizabeth Guillette; Tekatsitsiakwa Katsi Cook; the participants in the 1st International Indigenous Women's Environmental and Reproductive Health Symposium; the community members of Savoonga and St. Lawrence Island, Alaska; Francisco "Paco" Villegas Paredes, Jittoa Bat-Natika Weria, traditional curanderas, midwives and traditional authorities of the Yaqui Pueblos of Rio Yaqui, Sonora Mexico; Kathryn Gilje, Pesticides Action Network North America; and Sherri Norris and Angela Berry-Phillip, California Indian Environmental Alliance for their invaluable contributions to this paper.

We also wish to thank the UNPFII for its interest and attention to this critical issue in the context of the theme "Violence against Indigenous Women". This context provides an innovative approach for consideration of the urgent issues presented in this paper, bridging several areas of the UNPFII's mandate and priority focus areas, including human rights, environment, health, development, indicators of well-being and the specific situations affecting Indigenous women and girls.



*Participants in the 1st International Indigenous Women's Environmental and Reproductive Health Symposium
June 30 – July 1, 2010*

