

TO:

Water Pollutants Investigation Committee
Chaco Province

The neighbors of Las Palmas and La Leonesa, from the Department of Bermejo, Chaco Province, solicit urgently to this Committee to take over the study of water contamination of: lakes, streams, rivers, creeks and all sources of superficial water. Also all the groundwater drawn from wells, considering that approximately 60% of the population has no connection to potable water and relies entirely on groundwater for consumption. This last point (groundwater) needs to be given special attention since this department (the Department of Bermejo) is located in the RAMSAR CHACO – which is one of the most important reservoirs of fresh water in the country and because of its biological diversity it also has great importance internationally.

Just as important is the El Palmar Lake, which covers 4,453 hectares and where the Government's House of Representatives has presented projects for the creation of a National Park.

This request has its basis in the fact that there have been constant fumigations/aerial spraying performed in the rice mills in the zones: SAN CARLOS and CANCHA LARGA; which are located on or around the bodies of water above mentioned and also around urban and rural population. This spraying affects not only the health and well being of people but also other living beings, thus jeopardizing and interfering with other productive activities such as **other** farmed crops and those who have apiary (bee-keeping) production.

During the days when the spraying occurs one can notice immediately health issues such as eye and skin irritation, allergies, dizziness, nausea, etc. On the days that follow the spraying, other issues that have to do with the digestive and hepatic (liver) systems occur.

In the case filed before Federal Justice for infraction to Law 24051 – for hazardous waste– it has been proven that these companies are generating hazardous waste and have not complied with the requirements established by law in regards to those who discard water containing agro toxins used for their crops. They have not presented either, any studies regarding the environmental impact caused. Given the aerial fumigations they have also violated the Province's Biocides Law.

The company SAMEEP presented only one study on pesticides residues found in water performed in 1998, even though the companies in question have actually expanded in the last 10 years.

On the other hand, we would like to warn and inform you that in addition to the use of glyphosate (a type of herbicide) in the rice crops, there are other agro toxins being used (this claim is based on a research study published by Sofia Olmos:

“Environmental Investigation on two rice mills of the Department of Bermejo, Chaco Province” – Ed. Moglia 2008 – Corrientes)

Other agro toxins found include: endosulfan, clorpirifos, carbofuran, fipronil, metamidofós, dimetoato, cipermetrina, imazapir-imazapic. Also, the formula for the glyphosate used contains other compounds which are just as toxic (sometimes even more toxic) as the glyphosate itself and that when sprayed together trigger the toxic effect.

The diagnosis for leukemia, cancer, tumors, and cases of malformations and spontaneous abortions, etc., has considerably increased in the last few years in these communities.

Because of the above mentioned, we ask for environmental studies on water contamination and health issues of the population, to be performed urgently through gathering of samples and constant monitoring for a real diagnosis of the situation.

Also, we are asking this committee to inform the appropriate authorities so that they can take action against the arbitrary and illegal activities performed in the rice establishments above mentioned.

We invite the members of the commission to visit our village with the purpose of knowing the reality that we live every day.

February 2010

Resistencia, April 8 2010

To: the Governor of the Province of Chaco.
C.P.N. Jorge Milton Capitanich

Re: Water Pollutants Investigation Committee Report (province decree #2655, Dec. 2, 2009)

We address you with the purpose of letting you know about the Water Pollutants Investigation Committee, presented to the Public Health Minister, Dr. Francisco Baquero, and in response to the complains expressed by the “Neighbors of LA Leonesa-Las Palmas”, in regards to serious health problems issues and the deterioration of the environment, coinciding with the establishment – more than a decade ago– of a rice mill right next to La Leonesa.

In regards to **infant** (younger than 15 year olds) **cancer pathologies, leukemia, brain tumors and lymphomas**, data obtained from the Statistics Services Department of the Pediatric Hospital show an increased number of these types of cases starting in 2002. Specifically, in La Leonesa, from 2000-2009, there is a significant increase of these pathologies. It triples the recurrence of cancer cases in children younger than 15 years. It is important to point out that approximately 25% of these patients go directly to Hospital Garrahan and other hospitals in Buenos Aires and so we have no data regarding them.

In regards to **congenital malformations in newborn babies**, on this first report, we can only show data from the Neonatology Department at the Perrando Hospital:

Date	# of cases per month
From 1997 to 1998	4.9 cases
From 2001 to 2002	7.5 cases
From 2008 to 2009	16.8 cases

It is also important to emphasize that this statistical data, both for the infant cancer pathologies and newborn malformations, doesn't include private health institutions (even though the data is very similar). The fact that the data of private health institutions also shows an increase in these types of cases would make the real and complete statistics even more drastic. The statistics shown above represent only the public sector.

This committee promises to periodically present reports regarding this issue.

Kind Regards,

Dra. Ana Otaño (Federal Sanitation Representative)

Beatriz Correa (Environmental Health – Public Health Ministry)

Shirley Palomares (Dermatological Center)

Ministry of Public Health - Province of Chaco
Dr. Francisco Baquero
Health Minister

Re: Water Pollutants Investigation Committee Report

This is a report from the **Water Pollutants Investigation Committee** in response to the formal complaint received by the “Neighbors of La Leonesa-Las Palmas”.

We are attaching other formal complaints from villages in the interior of the province (from previous years). This other complaints represent very similar situations; they have to do with transgenic crops, which require aerial and ground spraying (dusting) with agrochemicals. They all fail to comply with the distance required for urban and suburban populated zones, and violate **Biocides and Environmental Laws**

We are also attaching illustrative maps, with pictures of the zones that are being affected.

We suggest an **epidemiologic sanitary** study throughout La Leonesa-Las Palmas zone. Both the urban and suburban (small producers and villages) areas should be included in this study. We request collaboration to the **National Program of Prevention and Control of Intoxications for Pesticides**, created by resolution of the Nation's Public Health Department on February 9th, 2010.

There will be upcoming reports regarding this issue.

Best Regards,

Dra. Ana Otaño (Federal Sanitation Representative)

Beatriz Correa (Environmental Health – Public Health Ministry)

Shirley Palomares (Dermatological Center)

WATER POLLUTANTS INVESTIGATION COMMITTEE – FIRST REPORT

Introduction

This first report presents data on the current situation and considerations related to cancer (Ca) in children and newborn malformations.

Regarding Childhood Cancer, in Argentina, according to the 2001 census the population of children under 15 years old amounted to 10,247,695.

Considering a global incidence rate of 12 to 14 cases for every 100,000 children under 15 years, it is estimated an occurrence of 1,300 1,400 new cases per year in Argentina (ROHA).

The distribution of pathologies in Argentina agrees with the data published internationally and leukemia constitutes the most common occurrence of childhood cancer followed by brain tumors and lymphomas.

If we look at the Province of Chaco, which on the 2001 Census had a population of 354,991 children under 15 years old, the expected number of new cases would be 48 per year.

Since the establishment of the Oncology Department at Children's Hospital "Dr. A. Castelán" in 1984, we have a record of the population attending the Pediatric Hospital. However the incidence of Childhood Cancer in the Province of Chaco can be evaluated more precisely since 2000, when ROHA (ONCOLOGY REGISTRATION HOSPITAL ARGENTINO). Before that date, there was no record of those patients who migrated to the Capital (federal assistance), a factor that strongly influenced the final data being analyzed. Currently, the federal hospitals serve 20 to 25% of patients from the Chaco Province that are affected by this disease.

The members of this Committee have noted that, starting in 2001, there has been an increased number of cases per year (discussed more deeply further along on this paper). While we are aware of the multiple causes that may trigger these conditions, due to complaints by neighbors of the town of Leon, Department of Bermejo, and taking into account that this settlement is bordering on a rice producer, is that we started to investigate some aspects of the health condition of the population, since the interaction of genetic and environmental factors lead to the development of these diseases.

Even though a much more detailed analysis of the town of La Leonesa later on this paper, it is important to say that the expansion of the agricultural frontier that the Province of Chaco has undergone in the last decade, together with the exponential increase of the application of pesticides through aerial spraying in the vicinity of populations has produced a number of complaints that deserve much more attention from authorities, as well as much more detailed studies of the situation.

State of Affairs

Judging from the analytics of data provided by the Pediatric Hospital Oncology Service, we can see what has happened, throughout the province, at three different times:

Year	Registered Cases	Population under 15 yrs. old	Incidence
1985	23 cases of Child Ca + 25% outside of the province: TOTAL: 29	275,858	10.5 for every 100,000
1991	21 cases of Child Ca + 25% outside of the province: TOTAL: 26	323,788	8.03 for every 100,000
2001	32 cases of Child Ca + 25% outside the province: TOTAL: 40	354,991	11.3 for 100,000

If we analyze what happened in the Department of Bermejo, according to data provided by the Oncology Department at Children's Hospital and ROHA and taking into account the causes we can see that, during the period of 1990-1999, the values are similar to the expected means, however in the period 2000-2009, if we specifically analyze the three most important locations: La Leonesa, Las Palmas and Puerto Bermejo (look at table below), we can see that in the last two, the figures are similar to the expected average or even below it. Although, not so in La Leonesa where values are actually above expectations, increasing significantly in the decade 2000 - 2009, period in which the number of reported cases tripled the occurrence of cancer in children under fifteen years.

Consider that this increase coincides with expansion of the agricultural frontier, as a rice plantation reaches with its sown fields the vicinity of Barrio La Ralera in the town of La Leonesa (see attached map) in contravention of the law in force (further discussed below) and putting in jeopardy the health of the population, due to aerial spraying with herbicides, whose active ingredient is glyphosate and other pesticides, constitutes the pest control for the crop.

As noted earlier, we agree in the fact that there might be many different causes for these diseases; however there must be compliance with the laws in order to safeguard the health of the population.

Municipality	Total Population	Number of Children under 15 yrs. old	Expected Cases of Children Ca – per year	Registered Cases	Yearly Incidence
La Leonesa	10,067	2,960	0.35 to 0.41 cases per year (1 case every 24-36 months)	'95: 1 case '97: 1 case '00: 1 case '03: 2 cases '04: 1 case '08: 1 case '09: 1 case	1990-1999 0.2 cases/yr 1 case/60 months 2000 -2009 0.6 cases/year 1case/20 months
Las Palmas	6,593	2,146	0.25 to 0.3 cases per year (1 case every 36-42 months)	'93: 1 case '95: 1 case '06: 1 case	1990-1999 0.2 cases/yr 1 case/60 months 2000 -2009 0.1cases/year 1case/120 months
Puerto Bermejo	1,832	652	0.08 to 0.09 cases per year (1 case every 96 years)	'95: 1 case '08: 1 case	1990-1999 0.1 cases/yr 1 case/20 months 2000 -2009 0.1cases/year 1case/120 months

Other data that may contribute to this first report are those obtained in the ICU (intensive care unit) Neonatal Unit-Hospital Perrando in Resistencia. There, the following data was recorded. This data compares the incidence of defects in newborns throughout three different years (Mothers came from different parts of the province)

From January 1997 to June 1998(18 month period): 69 malformed children
From September 2001 to August 2002(12 month period): 60 malformed children
From March 2008 to April 2009(14 month period): 218 malformed children

Considering these data in relation to the population, we get the following table:

Year	Registered cases in a year	Number of births	Incidence
1997-1998	46 malformations	24,030	19.1 for every 10,000
2001-2002	60 malformations	21,339	28.1 for every 10,000
2008-2009	186 malformations	21,808	85.3 for every 10,000

Recommendations

Taking this first report into consideration, we think that competent authorities and enforcement agencies/bodies should strengthen their actions towards the compliance of current standards, and these from our perspective include:

- That precautionary measures be taken until an Environmental Impact Study is performed in the influence zones in the rice plantations in the town of La Leonesa, since because La Leonesa borders the town of La Ralera, the plane turns around the neighborhood spraying them as well (proximity of the town:30 meters, see attached map)
- That precautionary measures contemplated as established by Reglamentary Decree N ° 454/89, Articles 14,15 and 16 (Transcribed below) which establishes a distance of 4 km for sensitive crops. This is taking into account that the year of enactment of the Decree was 1989, when the problem was focused on crops and not on human populations, and so it would be advisable that the cultivation of rice takes place 4 km distant from people.
- That a very similar situation be considered, concerning the proximity of the crops to the populated centers in the villages of Gancedo, Napenay, Santa Sylvina, Tres Isletas, Avia Terai, and Colonia Elisa, as verified by complaints on several different occasions and also evidences in the satellite photos that are attached.

ARTICLE 14 .- Companies performing aerial fumigations should take into consideration wind direction and wind speed in order to make the application efficient. It should also be taken into consideration the proximity of other crops and animals, for which the spraying might put at risk.

ARTICLE 15 .- In regards to the effects indicated in the preceding article and when aerial machinery is used, the following recommendations should be established:

- A. Make no herbicides or pesticides applications when wind speed exceeds 8-10KM/hour.
- B. Do not make use of volatile esters of 2,4 D or similar herbicides when the distance from the place of treatment of sensitive crops (sunflower, tomato, cotton, etc) is less than 4Km.

ARTICLE 16 .- Agro-enterprises shall not operate or perform aerial fumigations with tanks filled with herbicides at a distance inferior to 1,000 meters from populated areas. They shall not fly over these areas even after exhausting their load. An exception to this prohibition are aerial applications performed by the Department of Public Health and "Social Action" from the Chaco Province.

ARTICLE 19. - Land or air fumigations shall be properly communicated to the population using mass media, at least 24 hours prior to the act. The purpose of this is for the apiarist (beekeepers) could have time to take the necessary precautions. These same obligations, which are mentioned above, apply to individual farmers and other people who might perform herbicide applications.

Given that the manufacturers of pesticides, investigate the direct effects of the product, Minimum Lethal Dose (DL50 or LD50) was able to kill 50% of the population under study (Rats, bees, fish, etc.), The State has a responsibility to study the side effects of these fumigations, which could come up and be discovered many years after use the product, i.e. Agent Orange, chlorine, phosphorus, that were recalled and banned only after more than 20 years of use.

We consider absolutely necessary to respect and enforce this legislation, both at the provincial level (Ley 3378), regarding the use of Biocides and also, environmental federal laws.

(1)

**LAS PALMAS****LA LEONESA**

Dos vistas del mismo lugar

Superior: Imagen oblicua
panorámica

Inferior: Imagen vertical

(2)

**EXPLORACIONES****AGRICOLAS**

No se advierte
adecuada distancia
entre el asentamiento
poblacional y las
explotaciones
agropecuarias

Las Palmas - La Leonesa
Two views of the same place
Superior (1): Panoramic Oblique Image
Inferior (2): Vertical Image.

Agricultural Exploitation

There isn't proper
distance between
the human settlement
and the agricultural
exploitations

Yellow: rice crops
Red: Human
Settlement

OTHER FORMAL COMPLAINTS

Gancedo, Chaco	Argentina	1/2003	Human	Urban	There are complains from different sectors (legislators, superintendent, Air Force, ONG's, etc.), regarding the contamination of aquifers, irrigation channels, reservoirs, due to aerial fumigation of the town, rinsing of machinery in reservoirs and urban washing places, as well as the improper disposal of pesticides containers, etc.
Napenay, Chaco	Argentina	2005	Human, animal and vegetal	Rural	Organized small producers complain about the crop and animal loss, and also about health problems (headaches, respiratory problems, etc), due to fumigations.
Santa Sylvina, Chaco	Argentina	11/2005	Human, animal and vegetal	Rural	Doctors from the organization "Vivir" complain about extended environmental contamination due to the indiscriminate use of agro toxics. Polluted water is detected (phosphorus and arsenic present)
Tres Isletas, Chaco	Argentina	2004	Human, animal and vegetal	Rural	As part of a more general complaint, organized small producers from the region provide evidence that also in their region aerial fumigations of soy crops have harmed other crops, animals, and people
Avia Terai, Chaco	Argentina	12/2005	Human	Suburban	Forty neighbors from the neighborhood "Quebracho" complain about the breaking and non-compliance of the Biocides Law. Spraying of soy crops with Glyphosate and that start only 12 meters from the limits of the neighborhood and worsened health issues of a child.
Colonia Elisa, Chaco	Argentina	2005	Vegetal	Rural	Small Producers organizations claim to be affected by fumigations of the soy and GMO cotton crops, affecting their own non-GMO cotton crops.

Dominguez, Diego; Sabatino Pablo. "Death comes with the wind". **Contamination due to GMO agriculture in Argentina and Paraguay**. Contest's Final Report: Sociocultural and Economic Impact of the Introduction of GMO agriculture in Latin America and the Caribbean. 2005.



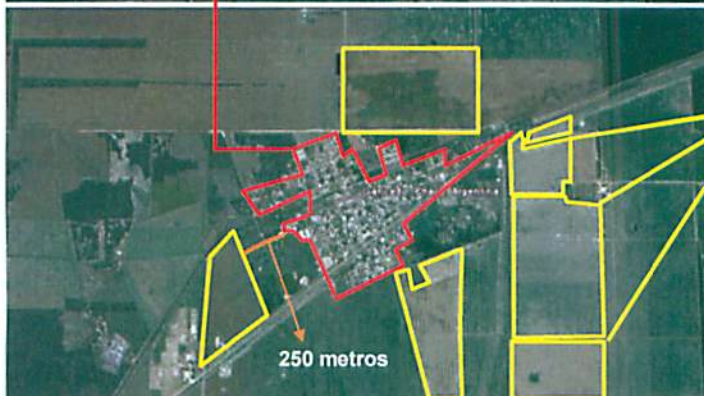
GANCEDO

Dos vistas del mismo lugar

Superior: Imagen oblicua
panorámica

Inferior: Imagen vertical

Gancedo
Two views of the
same place.



EXPLORACIONES AGRICOLAS

No se advierte
adecuada distancia
entre el asentamiento
poblacional y las
explotaciones
agropecuarias

Red: Gancedo
Human
Settlement

Yellow: Rice crops
Only 250 meters
in between

There isn't proper distance between
human settlement and agricultural exploitations



NAPENAY

Dos vistas del mismo lugar

Superior: Imagen oblicua
panorámica

Inferior: Imagen vertical

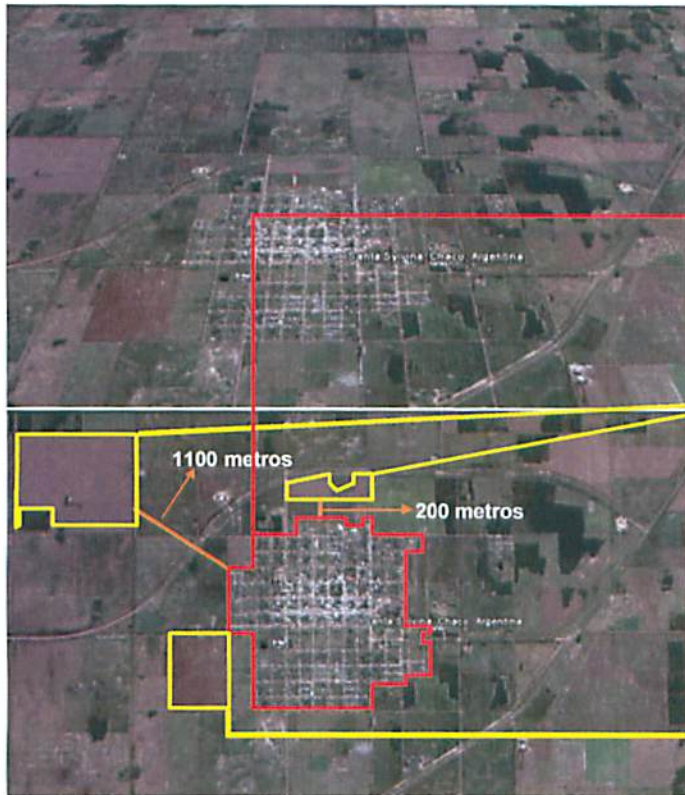
Red: Napenay

Yellow: Agricultural
exploitations



EXPLORACIONES AGRICOLAS

No se advierte
adecuada distancia
entre el asentamiento
poblacional y las
explotaciones
agropecuarias



SANTA SYLVINA

Dos vistas del mismo lugar

Superior: Imagen oblicua
panorámica

Inferior: Imagen vertical

*Two views of
the same place.*

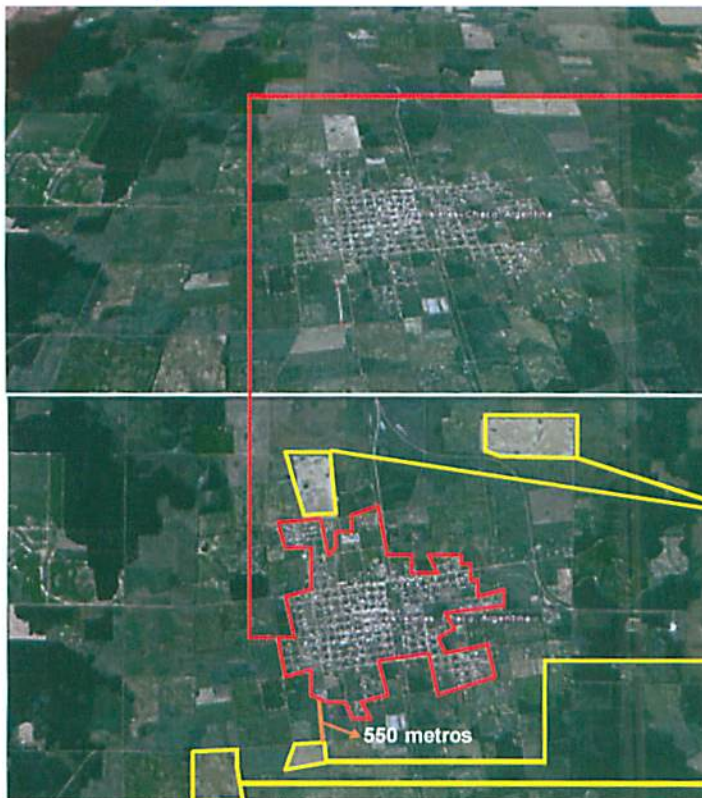
*Superior:
Panoramic
Oblique Image
Inferior: Vertical
Image.*

EXPLORACIONES

AGRICOLAS

No se advierte
adecuada distancia
entre el asentamiento
poblacional y las
explotaciones
agropecuarias

*There isn't proper distance between the human settlement
& agricultural exploitation.*



TRES ISLETAS

Dos vistas del mismo lugar

Superior: Imagen oblicua
panorámica

Inferior: Imagen vertical

EXPLORACIONES

AGRICOLAS

No se advierte
adecuada distancia
entre el asentamiento
poblacional y las
explotaciones
agropecuarias



AVIA TERAÍ

Dos vistas del mismo lugar

Superior: Imagen oblicua
panorámica

Inferior: Imagen vertical

*Two views of
the same place.*



EXPLORACIONES

AGRICOLAS

No se advierte
adecuada distancia
entre el asentamiento
poblacional y las
explotaciones
agropecuarias

*There isn't
proper distance
between the human
settlement & the
agricultural exploitation*



COLONIAS ELISA

Dos vistas del mismo lugar

Superior: Imagen oblicua
panorámica

Inferior: Imagen vertical

*Two views
of the same
place.*



EXPLORACIONES

AGRICOLAS

No se advierte
adecuada distancia
entre el asentamiento
poblacional y las
explotaciones
agropecuarias

Resistencia, Chaco, abril de 2010.-