Depleted Uranium
Facts for All the World to See

"Once a war starts, the value system changes and anything you can do to hurt the adversary and cause him problems, you find justification for doing."
((Admiral Eugene Carroll, U.S Centre for Defence Information))

Almost eight years after the 1991 military aggression against Iraq, alarming facts are coming to light concerning the extremely dangerous effects of the use of radioactive weapons on the environment and population. This applies in particular to projectiles made from depleted uranium, these being weapons internationally banned under the terms of the 1980 Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons Which May Be Deemed to Be Excessively Injurious or to Have Indiscriminate Effects.

Such weapons and munitions can cause unjustifiable pain and suffering to both the civilian population and the belligerents. In fact, they are an expression of hatred and of a desire to engage in random destruction and slaughter bordering on genocide, which the international community regards as a prohibited act, the perpetrators of which must be punished. Their use also constitutes a flagrant and gross violation of human rights.

Depleted uranium (DU) is the highly toxic and radioactive byproduct of the uranium enrichment process. "Depleted" uranium is so called because of the content of the fissionable U-235 isotope is reduced from 0.7% to 0.2% during the enrichment process. The isotope U-238 makes up over 99% of the content of both natural uranium and depleted uranium. Depleted uranium is roughly 60% as radioactive as naturally occurring uranium, and has a half life of 4.5 billion years.

The long-term effects of internalized depleted uranium are not fully known, but the Army has admitted that "if DU enters the body, it has the potential to generate significant medical consequences." Inhaled DU particles or respirable size may become permanently trapped in the lungs. Inhaled DU particles larger than respirable size may be expelled from the lungs and ingested.

DU may also be ingested via hand-to-mouth transfer or contamination of water or food supplies. DU which is ingested, or enters the body through wind contamination, will enter the bloodstream and migrate throughout the body, with most of it eventually concentrating in the kidney, bone, or liver. The kidney is the organ most sensitive to DU toxicity.

Much of the ingested DU will be excreted by the body shortly after the exposure, but the DU that remains acts as a chemical and radiological toxin in organs and bones for the remainder of a person's lifetime.

DU shells, known as depleted uranium penetrators, were developed by the Pentagon in the late 1970s as anti-tank, armour-piercing projectiles. DU, which makes up the shell's core, is a radioactive byproduct of the enrichment process used to make atomic bombs and nuclear fuel rods. The material is extremely hard and abundant, and provided free to weapons manufacturers by the nuclear industry.

When fired, the core bursts into a searing flame that helps it pierce the armour of tanks and other military targets. Diesel vapors inside the tank are ignited, and the crew is burned alive.

Most doctors and scientists agree that even mild radiation is dangerous and increases the risk of cancer. The health risk becomes much greater once the projectile has been fired. After they have been fired, the broken shells release uranium particles. The airborne partciles enter the body easily. The uranium then deposits itself in bones, organs and cells. Children are especially vulnerable because their cells divide rapidly as they grow. In pregnant women, absorbed uranium can cross the placenta into the bloodstream of the foetus.

In addition to its radioactive dangers, uranium is chemically toxic, like lead, and can damage the kidneys and lungs. Perhaps, the fatal epidemic of swollen abdomens among Iraqi children is caused by kidney failure resulting from uranium poisoning. Whatever the effect of the DU shells, it is made worse by malnutrition and poor health conditions.

In their attack on Iraq following the events that took place in Kuwait in 1990, the coalition forces used internationally prohibited weapons of mass destruction.

Iraq holds the United States and Britain legally and morally responsible for the grave health and environmental impact of the use of depleted uranium (DU) during the 30-state aggression against the country in 1991.

These weapons resulted in the mass slaughter of individuals due to the highly destructive nature of the rounds, and the contamination of persons outside the theatre of military operations due to the toxicity of the radioactive substance used, as well as the strange and unprecedented pathological symptoms with which they were afflicted. Moreover, they resulted in widespread contamination of the environment in Iraq and human suffering to which not only the present generation but also the future generations will be subjected.

British Foreign Secretary Robin Cook admitted that his country and the United States had used depleted uranium against Iraq during the 1991 war.

In a letter to the Bradford-based Humanitarian Relief Institution, Cook said the United States had fired much more than the 100 DU-tipped shells fired by British forces at Iraqi troops.

Malcolm Rifkind, the British Minister of Defence, also admitted in a letter addressed to the British Member of Parliament David Steel, that depleted uranium had been used by the British forces in order to improve their ability to confront Iraqi armoured vehicles. In that letter, the minister also stated that, in their armoured units and A-10 aircraft, the United States forces had used much larger quantities of depleted uranium than the British forces.

In his letter, the British minister acknowledged that DU shells could disperse small quantities of toxic radioactive substances when they impacted on a hard surface and those substances posed a health hazard if they were inhaled or ingested. However, he thought that it was improbable that persons other than those targeted by such shells would be exposed to sufficient quantities of those substances to endanger their health. Rifkind claimed that those shells had been used in sparsely populated desert areas and that the direct and immediate danger, namely the dust produced by those shells, dissipated rapidly, although the hazards arising from the contact with destroyed vehicles remained. He claimed that the residual hazards were considered to be limited.

In its edition published in April 1995, the newspaper *Le Monde Diplomatique* quoted William M. Arkin, president of the Washington-based Institute of Science and International Security, as saying that the number of 30mm rounds containing three hundred grams of depleted uranium fired by A-10 aircraft amounted to 940,000, while the number of 120mm shells containing 1 kg of depleted uranium fired by tanks amounted to 4,000. Thus, the total amount of uranium dropped during 1991 war could be estimated at about three hundred tons.

A confidential report submitted by the United Kingdom Atomic Energy Authority to the British government in November 1991 stated that there would be specific areas in which any rounds would have been fired where localized contamination of vehicles and the soil might exceed permissible limits and these could be hazardous to the local population. According to the report, the real danger arose from the inhalation of airborne particles of uranium dust produced when DU shells hit and burned armoured vehicles since, when the shell impacted, a large proportion of its metallic mass was pulverized and the resulting fine airborne particles, which were toxic to the kidneys and lungs, could easily be swallowed.

The report, written in April 1991 and leaked to *The Independent* newspaper of London in November of that year, estimates that at least forty tons of depleted uranium were dispersed during the war.

The U.S army claims that “more than 14,000 large calibre DU rounds were consumed during the military operations. As many as 7,000 of these rounds may have been fired in practice. Approximately 4,000 rounds were reportedly fired in combat. The remaining 3,000 rounds are losses that include a substantial loss in a fire at Doha compound in Kuwait. The U.S army now concedes there were at least fourteen thousand depleted-uranium shells fired into Iraq.

Among other things, the depleted uranium rounds forced the Pentagon to concede additional friendly fire casualties when traces of radioactivity were found on destroyed coalition military vehicles.

The Pentagon insists that depleted uranium is “very, very mildly radioactive” and that the shells are not radioactive enough to be classified as a “radiological weapon”.

The danger posed by the uranium shells is widely recognized. In July 1993, German authorities arrested Professor Siegwart-Horst Guenther, director of the Albert Schweitzer Institute, when he arrived in Berlin carrying a spent round retrieved from Iraq. He was charged with illegally “releasing ionizing radiation”. The shell, its radioactivity confirmed by two laboratories, was sealed in a lead-lined box. Guenther was later fined by a Berlin court for violating Atomic Energy Law.

Guenther, also president of the Australian Yellow Cross International, traced down an American war crime that had been previously kept secret and made it public internationally. He conducted extensive studies in Iraq on the effect of DU on Iraqi population. These studies produced ample evidence to show that contact with DU ammunition has the following consequences, especially for children:

*A considerable increase in infectious diseases caused by most severe immunodeficiencies in a great part of the population;
*Frequent occurrence of massive herpes and zoster afflictions, also in children;
*AIDS-like Syndrome;
*A hitherto unknown syndrome caused by renal and hepatic dysfunctions;
*Leukemia, elaptic anemia and malignant neoplasms;
*Congenital deformities caused by genetic defects, which are also to be found in animals.

In his book *The Fire This Time,* former U.S attorney-general

Ramsey Clark said there were about fifty thousand depleted-uranium missiles and rockets fired from U.S aircraft in more than 110,000 aerial sorties over Iraq. He said U.S aircraft had dropped over eighty-eight thousand tons of bombs on the country, the equivalent of seven-and-one-half bombs of the size of the atomic bomb that incinerated Hiroshima. But later research proved that there were probably more than nine hundred thousand rounds of depleted uranium ammunition fired on Iraq

Research has also been conducted by three American specialists (Grace Bukowski, Damacio Lopez and Fielding McGehee from three American organizations) on the use of DU by the U.S Department of Defence during the attack on Iraq by the thirty-state coalition. Their research confirmed that depleted uranium rounds had been used, for the first time in the history of modern warfare, during the “Gulf War” and countless Iraqi soldiers had been killed either directly by the DU shells or as a result of exposure to their radiation. They estimated that fifty thousand Iraqi children had probably died during the first eight months of 1991 from various diseases, including cancer, kidney failure and previously unknown internal diseases, caused by the use of DU.

The researchers indicated that the reluctance of governments, particularly the USA, to study and publicize the hazardous effects of the use of depleted uranium was attributable to their desire to avoid having to pay compensations to the victims of radiation exposure, since the use of that type of uranium led to a wide variety of health hazards and incurable diseases, ranging from cancer to kidney failure, respiratory disorders, congenital abnormalities, skin diseases and other obscure, unknown and fatal diseases.

Depleted uranium may have already contaminated soil and drinking water in Iraq. If this is the case, Iraqis could be exposed to the radioactive and toxic effects of uranium for generations to come.

Health and environmental conditions inside Iraq are deteriorating, and bad conditions generated by the war are spreading, creating a catastrophe of accelerating proportions and unknown ramifications. This is the time when data from within the country are essential, and when Iraqis are well placed to offer first-hand data and important comparative material.

The Pentagon would doubtless want to keep any Iraqi source of information silent on the matter. It had already tried so hard to suppress information about the extent, occurrence and possible source of “Gulf War” Syndrome. Even scientists researching the hazardous effects of the war may find themselves effectively blocked from reporting such information.

The competent Iraqi authorities formed specialized teams from medical

and other scientific research institutions to conduct medical and scientific field and clinical research and surveys concerning the effects on human health of the use of radioactive weapons by the coalition forces in the war against Iraq, as illustrated by the abnormal increase in the incidence of cancer of the blood, the lungs, the digestive system and the skin. There as also been a notable increase in the incidence of congenital diseases and foetal deformities, such as the presence of additional abnormal organs, hydrocephaly, anencephaly, eye diseases and even the total absence or deformity of eyes.

Cases of twin births with Down's syndrome have appeared, in addition to skeletal abnormalities, congenital syndromes and chromosomal trisomies, as well as unexplained cases of hair fall and rare skin diseases among persons affected by, or living in the vicinity of the bombarded areas. There has been an increase in the number of persons afflicted with attacks of epidemic vertigo and severe vertigo accompanied by nausea and loss of balance, and also in the numbers of patients afflicted with attacks of distorted vision and loss of sight in part of the eye, accompanied by severe migraine, in addition to unexplained cases of sterility among both sexes and an increase in the incidence of miscarriages and of still, premature and difficult births.

In hospitals, you can see infants with obvious genetic deformities who could not live long, and wards of children wasting away from cancers such as leukemia, lymphomas and Hodgkin's disease. Because of the sanctions, Iraqi doctors lacked even basic medicines and were helpless to intervene. They could only note the escalating numbers.

Many health experts suspect that the post-war increase in childhood cancer and mysterious swollen abdomens in Iraq is at least in part due to the radioactive shells. U.N personnel and aid workers have seen children playing with empty shells, abandoned weapons and destroyed tanks. In Basra, a foreign doctor saw a child using depleted uranium shells as hand puppets. Perhaps the fatal epidemic of swollen abdomens among Iraqi children is caused y kidney failure resulting from uranium poisoning.

Dr. Huda Ammash, an Iraqi environmental biologist and professor at Baghdad University, calculates that "the prolonged effect of ionization caused by the enormous energy emission and light energy from the massive bombing is, over a period of more than ten years, equal to one hundred Chernobyls."

Dr. Ammash and other scholars note that an outbreak of meningitis in children concentrated in one Baghdad locality is highly unusual and may be a manifestation of high ionization levels. It has never been seen in Iraq before. She notes the alarm among doctors she interviewed who report that "ninety-nine percent of the victims of this disease are children." Ammash

accumulated reports that show cancer increasing at rapid and abnormal rates; child leukemia is especially rampant with some areas of South Iraq showing a four-fold rise in these few years. Breast cancer in young women (age 30 and under) is also many times higher than in 1990 in certain parts of Iraq.

Today the entire population of Iraq are besieged by diseases. Evidently, waterborne parasites and bacteria and malnutrition in Iraq are responsible for many recognizable diseases, and for wasting and death. But what about reports of a sharp rise in spontaneous abortions, cancers, and other new diseases? The Iraqi Ministry of Health is systematically documenting some of these health problems.

Following is a report prepared by Iraqi Ministry of Health on the impact of depleted uranium weapons on health and environment in Iraq:

Impact of Radioactive Weapons on Health

The population in Iraq was exposed to the explosion of thousands of tons of ammunition in the course of military operations of the U.S-led allies. The ammunition used were so immense and diversified, among which some were used for the first time in history such as depleted uranium (DU). In addition to the severe direct effects of those weapons on civilians, their use caused a serious pollution of the environment. After many years, the long-term effects started to appear. These health effects were studied and the related data were analyzed. These effects include cancer, congenital anomalies, abortion, neuropathy and myopathy. Epidemiological and statistical studies are still being carried out to measure the extent of the immoral and illegal use of these weapons against Iraq. The collected data were tested for their statistical significance to assess their scientific value, and to prove the causal relationship of using DU with the impact on health and environmental pollution.

This report is not but a scientific proof put before the researchers and scientists for their consideration, and to enhance their work in this field in order to uncover the immoral and illegal use of DU by the U.S. The report also gives a clear picture of the environmental pollution in Iraq which greatly affected and is still affecting the citizens of Iraq, specially in the bombarded areas. We put this scientific document before the world to reveal the intentions of the U.S aggression on Iraq. After all, will the claim of the aggressors that what they so call “Second Gulf War” was “clean”?!!!

The research includes the following:

1- Field Environmental Studies

1st. Many studies were carried out to determine the types of weapons and ammunition used and their impact on people and environment. Special emphasis was placed on the southern areas of Iraq that were subjected to intensive bombing in the course of military operations.

B. A study revealed that vast areas in the south are polluted due to the use of radioactive weapons. On top of the large number of casualties in those areas due to the instantaneous effect of these weapons, unusual diseases were registered later on. Also, many unexploded projectiles were found, among which were DU ammunition.

C. Tables 1, 2 and 3 clearly reflect the results of radiological pollution in the southern region, and present the material proof against the claim that the "Gulf War" was clean.!!!

Table (1) Field Measurements at North Rumaila Area

Radiation Exposure (Micro Roentgen/hr)

	Type of Chose Sample	Background	Chosen Sample
1	Armoured Personnel Carrier BMB-1	8.1	24.6
2	Armoured Personnel Carrier MTLB	8.2	9.7
3	T-72 Tank	8.7	15.1
4	Rescue Tank	7.2	13.2

Table (2) Field Measurements at Shamia Airffield /Gudairat al-Audhaimi Area

Radiation Exposure (Micro Roentgen/hr)

	Type of Chose Sample	Background	Chosen Sample
1	T-72 Tank	7.0	60.8
2	Armoured Personnel Carrier (Watercan)	7.2	60.3
3	Far away area from	7.1	7.3

	chosen sample (1)/ T-72		
4	Far away area from chosen sample (2)/ Watercan	7.3	7.2

Table (3) Field Measurements at DMZ and Surrounding Area
Radiation Exposure (Micro Roeentgen/hr)

	Type of Chose Sample	Background	Chosen Sample
1	Unexploded DU Warhead (near Karrange Oil Pumping Station on the Iraqi-Saudi border	7.4	83
2	Tank/T-55 (between crossroads Nos. 13 and 14)	7.6	21
3	Tank/T-72 (No. 16107)	7.2	23
4	Tank/T-55 (left of crossroads No. 9)	7.4	67
5	Tank/T-72 (near international observation post between crossroads Nos. 12 and 13)	7.6	69
6	Tank/T-72 (south west on Mount Sanam)	7.0	65

4th. The long-term effects of DU on the environment are still not fully developed. This presents a potential risk with time. This situation imposes the need to further field and specialized studies and research.

2- Medical Studies

Many epidemiological and analytical studies were carried out on samples of unusual cases and diseases, and were statistically compared to control groups according to academic and scientific methodology.

2.1 First study

1st. This study dealt with five diseases; cancer, abortion, congenital anomalies, neuropathy and myopathy.

2nd. The study sample was selected from the cases that occurred for each of these five diseases for each governorate of Iraq.

3rd. For statistical analysis, a control group for each disease was selected from the same governorate.

4th. Being subjected to bombardment or being in the bombarded areas was taken as indicator in this study.

5th. Five forms were carefully designed for this study. These included personal, environmental, social, epidemiological. Health history, disease history and exposure to bombardment (place and time) data. The same applies to the control groups.

6th. Data were statistically examined and analyzed to find out (Relative Risk), (Odds Ratio) and (Test of Significance).

7th. The total number of forms was 5764. Among those were 1314 abortion, 752 congenital anomalies, 667 cancer, 68 neuropathy and 81 myopathy, i.e., totaling 2882 cases. The number of control group was also 2882. (Table-4)

8th. The study concluded that there is statistically significant relationship between the exposure to bombardment and the increase in cancer, abortion and congenital anomalies with odds ratios (4.6), (3.2) and (2.8) respectively. (Table-8)

9th. Diyala, Basra, Meisan, Muthanna and Thi-Qar governorates had the highest increase in cancer among other governorates. (Table-5)

10th. Nineveh, Diyala, Baghdad, Basra, Meisan and Najaf governorates had higher increase of abortion cases. (Table-6)

11th. Tameem, Diyal, Baghdad, Basra, Meisan, Muthanna and Najaf governorates had the highest increases in congenital anomalies. (Table-7)

Table(4) Sample and Control Groups for the Fve Diseases according to Governorates of Iraq

	Governorate	Abortion	Congenital Anomalies	Cancer	Neuropathy	Myopathy
1	Baghdad	44	42	16	4	13
2	Nineveh	90	30	39	14	6
3	Basra	42	94	31	28	10
4	Ta'meem	98	61	112	4	2
5	Meisan	96	89	58	0	0
6	Anbar	92	77	54	3	12
7	Salahudin	97	51	39	3	2
8	Thi-Qar	98	76	45	2	6
9	Muthanna	82	15	42	2	7
10	Wasit	96	37	33	4	11
11	Diyala	97	42	44	3	6
12	Babil	90	16	30	0	0
13	Najaf	111	79	43	1	6
14	Kerbala	90	16	30	0	0
15	Qadissiya	91	17	31	0	0
	Total	1314	742	667	68	81

Table (5) Registered Cancer Cases in Baghdad and Other Governorates

	Governorate	1989	1994	Relative Risk
1	Baghdad	4183	6427	1.53
2	Nineveh	1500	1629	1.09
3	Basra	180	461	2.56
4	Ta'meem	86	114	1.33
5	Meisan	37	218	5.89
6	Anbar	51	95	1.86
7	Salahudin	90	94	1.04
8	Thi-Qar	72	489	4.01
9	Muthanna	27	59	3.18
10	Wasit	44	69	1.56
11	Diyala	69	134	2.19
12	Babil	73	166	2.27
13	Najaf	70	126	1.80
14	Kerbala	28	45	1.61
15	Qadissiya	53	86	10.62
	Total	6563	10212	

Table (6) Abortion Cases in Baghdad and Other Governorates for the Years 1989 and 1994

	Governorate	1989	1994	Relative Risk
1	Baghdad	6281	7729	1.2
2	Nineveh	2364	3440	1.5
3	Basra	2137	3618	1.7
4	Ta'meem	1458	1826	
5	Meisan	1879	3196	1.3
6	Anbar	2351	2622	1.1
7	Salahudin	1611	1507	0.9
8	Thi-Qar	1491	2728	1.8
9	Muthanna	1015	707	0.7
10	Wasit	1234	1882	1.5
11	Diyala	1382	3314	1.4
12	Babil	1219	1724	1.4
13	Najaf	987	2480	2.8
14	Kerbala	1138	2316	2.1
15	Qadissiya	1223	2627	2.1
	Total	27770	41716	

Table (7) Registered Cases of Congenital Anomalies in Baghdad and Other Governorates for the Years 1989 and 1994

	Governorate	1989	1994	Relative Risk
1	Baghdad	138	294	2.1
2	Nineveh	65	77	1.1
3	Basra	40	117	2.9
4	Ta'meem	45	122	2.7
5	Meisan	41	86	2.1
6	Anbar	34	71	2.1
7	Salahudin	64	68	1.1
8	Thi-Qar	29	32	1.1
9	Muthanna	35	81	2.3
10	Wasit	49	54	1.1
11	Diyala	34	36	1.1
12	Babil	38	44	1.2
13	Najaf	0	1235	
14	Kerbala	25	27	1.1
15	Qadissiya	37	42	1.1
	Total	674	2386	

Table (8) Odds Ratio of the Exposure to Bombardment for the Study and Control Groups for the Five Diseases in Iraq

Cases	Sample Size	No. of Cases	Control	Odds Ratio
Abortion	1314	988 75%	637 48.7%	3.2
Congenital Anomalies	752	463 61.5%	318 42.2%	2.8
Cancer	667	519 77.8%	224 33.5%	4.6
Neuropathy	68	63 92.6%	58 85.3%	1.7
Myopathy	81	77 95%	73 90%	1.4

Conclusions

1- The odds ratio in retrospective epidemiological studies has shown substantial deviation towards the exposure to bombardment and its relation to each of the five diseases that were examined in this study. The significance test assures that this relationship can in no way happen by chance.

2- The increase in cases and their geographical distribution among the governorates coincide with the actual bombardment and military operations and their intensity.

3- The cancer cases that had higher incidence were leukemia, lung cancer, Ca bronchus, Ca bladder, Ca skin, Ca stomach for males and Ca breast for females. This goes with WHO publications and the results of international researches and studies on the impact of ionizing radiation. The increase in these types of cancer took place within three years after the aggression. Other types of cancer, such as Ca thyroid, needs more time to appear, 10-40 years after the exposure to radiation, according to WHO literature.

4- The increases in abortion and congenital anomalies are considered to be rapid consequences of exposure to radiation. There are other

congenital anomalies that continue for three to four generations for parents that were exposed to radiation.

2.2 Second Study

Another study was conducted after analyzing available data for cancer, congenital anomalies and abortion cases for some governorates. The study concluded the following:

1st. There is a statistically significant relationship (odds ratio: 3.85) for the sample group of cancer patients compared to the contro group. This proves that there is 'Causal Association' between exposure to bombardment and increase in cancer cases. (Table-9)

2nd. The study also concluded that there is a statistical relationship for the sample group of congenital anomalies cases, compared to the control group (odds ratio: 2.05). Statistically, this is considered to be highly significant, and proves that there is a relationship between exposure to pollution and the cases. (Table-10)

3rd. The above also applies for the abortion cases where odds ratio was 2.9. (Table-11)

4th. There is a change in the epidemiological pattern for the most prevailing cancer types in Iraq. Leukemia and Non-Hodgkin's Lymphoma became the 2nd and 3rd rank respectively, while rank of Ca bladder changed after being the 2d rank for a long period (25 years) next to Ca bronchus. (Table-12)

5th. The incidence rate for age groups (40-45) and (50-55) had become the highest after January 1991. Prior to that, the age group (60-65) had the highest cancer incidence in Iraq. (Cancer Registry, 1976-1991, Ministry of Health)

6°. New types of cancer emerged. These types were not of importance prior to January 1991. These include osteosarcoma, teratoma, nephroblastoma and rhabdomyosarcoma.

Table (9) Study Group for Cancer Cases vs. Control Group

	Study Group	Control Group
Yes	**197**	**286**
No	**5**	**28**

Total	202	314

Odds Ratio: 3.85

Cause: Exposure to Bombardment
[redacted]

Table (10) Study Group for Congenital Anomalies Cases vs. Control Group

	Study Group	Control Group
Yes	41	39
No	6	13
Total	47	52

Odds Ratio: 2.05

Cause: Exposure to Bombardment
[redacted]

Table (11) Study Group for Abortion Cases vs. Control Group

	Study Group	Control Group
Yes	24	41
No	3	15
Total	27	56

Odds Ratio: 2.9

Cause: Exposure to Bombardment
[redacted]

Table (12) Percentage of Cancer Types of the Study Group

Ca Bronchus	16.4%
Leukemia	14.3%
N-Lymphoma	13.7%
Ca Larynx	10.6%
Ca Bladder	9.4%
Ca Skin	8.6%
Others	27.0%

Others include Osteosarcoma, Teratoma, Medull Blastoma, Nephroblastoma 3rd Verticle Tumours and Rhabdomyosarcoma.

3- Recommendations

1st. Some types of cancer cases do not appear until a long period of time elapses after exposure to radiation. WHO, in its publication on exposure to radiation, estimates that period to be 40 years for Ca thyroid. The same applies to other long-term diseases and health problems that do not show until more time passes. This implies continuous monitoring and surveillance.

2nd. All medical studies recommended that researches and studies should be enhanced and continued. They also recommended future prospective studies be conducted.

4- Summary

In 1991, the environment in Iraq was exposed to the greatest ever damage due to the aggression led by the U.S. In order to highlight the extent of that damage, this report was presented to the exceptional session of the U.N General Assembly on Environment and Development. All friends and international and humanitarian organizations are called upon to join us to overcome the burden of pollution caused by the aggression and the continuation of U.N sanctions imposed on Iraq, and hence to put and end to this human catastrophe. And, simply because the environmental impact is not stopped by political borders, the damage does not affect Iraq only, but it, as well, affects all the countries of the region and the global environment.

Distribution of Leukemia in the Southern Provinces/ Iraq
1989-1996

Province	1989		1993		1994		1995		1996	
	Total No. of Cases *	Leukemia	Total No. of Cases *	Leukemia	Total No. of Cases *	Leukemia	Total No. of Cases *	Leukemia	Total No. of Cases *	Leukemia
Wasit	226	5.3 %	200	7.0 %	203	7.4 %	191	7.3 %	224	4.9 %
Meisan	134	4.5 %	129	6.2 %	121	5.8 %	81	7.4 %	118	11.9%
Qadissiya	176	6.8 %	225	15.1%	185	13.0%	169	5.9 %	145	6.2 %
Thi-Qar	283	4.6 %	312	8.7 %	274	8.4 %	234	7.7 %	248	6.9 %
Basra	294	5.4 %	294	8.5 %	230	6.1 %	319	9.1 %	286	14.3%
Muthanna	104	3.8 %	165	10.9%	112	8.0 %	111	9.9 %	99	5.1 %

*Total No. of Different Types of Ca Cases