Toxic bases in the Pacific

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US and French military bases in the Pacific are polluting the environment with radioactive and toxic chemicals. The Nuclear Free and Independent Pacific movement calls for the closure of all foreign bases in the Pacific. But this survey around the region shows that the US and French military must also take responsibility for clean-up and compensation for their military-related toxic pollution. The practice by Washington and Paris of dumping wastes in their Pacific colonies and possessions is exposing islanders to serious environmental and health hazards.

Wake Island

In early 2000, the US military shipped more than 110 tons of military waste contaminated with *polychlorinated biphenyls* (PCBs) from Japan. These wastes were collected from US military bases in Japan and include surplus electrical transformers, circuit breakers and other electrical equipment that contain traces of PCBs. These materials were manufactured outside the United States and used by US military forces in Japan. Under US law, a 1997 court ruling held that PCBs cannot be imported into any territory of the United States governed by US Customs Service rules.

PCBs are highly toxic carcinogenic chemical compounds whose production has been banned worldwide. PCBs are listed as one of the "dirty dozen" persistent organic pollutants (POPs) by the United Nations Environmental Program for global elimination in an international treaty presently being negotiated by over 100 governments.

The PCB wastes were originally shipped to Canada in March 2000, but dockworkers and government officials in Vancouver refused to let the Panamanian-registered ship *Wan He* enter their city. The ship carrying the wastes then tried to enter the US port of Seattle on 1 April. It was denied entry to mainland United States by local authorities and returned to Yokohama, Japan in mid-April. The Japanese government did not allow disposal in Japan and reached an agreement with the US government to remove the waste from Japan within 30 days.

The US military considered shipping the waste to Guam, where the United States maintains a number of military bases. But US law prohibits the shipping of hazardous waste from a foreign source into the United States, including all its territories. Guam’s Congressman Robert Underwood and local Chamorro activists have spoken out against the use of Guam for waste dumping, calling on the US military to clean up existing PCB pollution in Guam and the Northern Marianas.

The US Department of Defence, in collaboration with the US Environmental Protection Agency (EPA), then made the decision to ship the waste to Wake Island as the holding site until a decision is

reached on the final destination. Wake Island is a US possession outside the US customs territory located about 3,700 kilometres west of Hawai'i. The island is used by the US military as a missile launch support facility for the Ballistic Missile Defence program. There are about 100 contract workers on the 3-square-mile island.

On 21 May, a spokesperson for the US Defence Logistics Agency stated the waste will be stored on Wake Island for up to a year. She also said there is no firm deadline for its removal (*Honolulu Advertiser*, 22 May 2000). Workers on the island will take the shipping containers that hold the PCB waste and bolt them to concrete slabs. The island sits less than 3 metres above sea level.

In its editorial of 12 May, 2000, the *Honolulu Advertiser* stated: "What is it about the Defence Department that makes it want to store hazardous waste on low-lying atolls? No matter how you slice it and no matter which atoll you choose – and no matter which atoll you choose – it's a terrible idea. The Defence Logistics folks, in their wisdom, have decided to dump the stuff on Wake Island instead. That's Wake Island, maximum elevation 12 feet, just as the hurricane season begins. It doesn't matter whether storm waves wash the PCBs from Johnston or Wake. It's the same ocean that will be contaminated. The Fish and Wildlife Service objects to that choice, too, and so do we."

Johnston Atoll

Kalama Island (Johnston Atoll) is an US-controlled island located between Hawai'i and the Marshall Islands, about 700 miles south-west of Honolulu. (Flights from Hawai'i to Majuro often stop at Johnston, but non-military personnel are not allowed to leave the aircraft).

In April 2000, protests from around the region aborted early plans for the PCB shipment from Japan to go to Johnston Atoll, and it ended up at Wake. But Johnston Atoll, which hosts the Johnston Atoll Chemical Agents Disposal System (JACADS), is already heavily polluted because of US military activities.

The northern part of Johnston has a range of environmental pollution, including plutonium contamination from failed nuclear tests in the 1960s (In October and November 1962, nine atmospheric nuclear tests were conducted at Johnston Atoll including four tests at high altitude). Johnston was also used after the Vietnam War for the storage of hundreds of drums of Agent Orange. Many of these drums have leaked, polluting the atoll environment with dioxin. Agent Orange was sprayed by American planes during the war to destroy jungle, expose enemy bases and ruin crops needed to feed the Vietnamese population. It has caused major health problems among both Vietnamese citizens and Vietnam veterans from the United States, Australia and New Zealand.

Since 1990, the US Army has been destroying chemical weapons at the Johnston Atoll Chemical Agents Disposal System (JACADS) facility. After the Cold War, the US government wanted to destroy chemical weapons stored in Europe. These toxic chemical weapons, such as mustard gas and nerve agents, threaten human life as well as the environment. In August 1985, the US Environmental Protection Agency (EPA) issued a ten-year permit for the JACADS chemical incineration facility, allowing hazardous waste storage and treatment. In 1990, the US government shipped rockets and other weapons containing chemical agents from Germany to the Pacific. Since June 1990, these weapons have been incinerated at high temperatures at the JACADS facility, together with other weapons sent from Okinawa and the Solomon Islands.

From the beginning, JACADS has been plagued by serious technical and procedural problems that have threatened the Pacific environment and the health and safety of workers at the facility. For nearly half its scheduled operating time, the JACADS facility has been shut down - sometimes for months. There have been four documented cases where nerve agents have been released into the

environment. On 14 March 1994, there was a rocket explosion in the Explosive Containment Room at JACADS. On two occasions when the atoll was threatened by hurricanes, the US Commander on Johnston Atoll evacuated all civilian and military personnel to Honolulu.

When a civilian group visited Johnston Island in April 1998 (including PCRC staff member Losena Salabula), JACADS Project Manager Gary McKloskey indicated that the plan now is to close down the JACADS facility by the year 2001, and convert it to a bird sanctuary!

Saipan and the Northern Marianas

In 1999, a cemetery at the coastal village of Tanapag in the Northern Marianas was closed after PCBs were found leaking in the area.

The environmental problem in Tanapag began when ceramic capacitors containing PCBs – including Arochlor 1254 and PCB oil – were shipped to Saipan in the 1960s by the US Department of Defence. The capacitors were manufactured by Cornell-Dublier Electronics as part of the US Defence Department's Nike-Zeus contract for its ballistic missile early warning radar installation. The radar was originally stationed at Kwajalein Atoll in the Marshall Islands, but moved in 1967 to the island of Saipan in the US Commonwealth of the Northern Marianas Islands (CNMI).

PCB contamination in Tanapag village began when capacitators dumped in the village by the US military were used by local residents as boundary markers, windbreaks for barbecue sites, roadblocks for driveways and even headstones in the local cemetery. Some capacitors were found open and their inner linings were used to decorate rooftops and cemeteries in the village.

The CNMI government was only told about the capacitators in 1988 and removed them to allow a clean-up to begin. But the US Army Corps of Engineers failed to do a proper clean-up when the radar installation was closed.

Now, the US Army Corps of Engineers, the Environmental Protection Agency (EPA), and the Agency for Toxic Substances and Disease Registry (ATSDR) are collecting samples of soil, water, food and fish in Tanapag as well as conducting health screening for villagers in an effort to determine the extent of the contamination. In September 1999, the US Army Corps of Engineers shipped some 1,094,000 pounds of PCB- and dioxin-contaminated soil to the mainland for disposal at a hazardous waste facility in the United States. However, piles of contaminated soil are still left in the cemetery.

Authorities are testing about 3,000 people from Tanapag village for cancer and other illnesses. This is the first time that the level of PCB contamination among villagers has been assessed, after over ten years of federal and local awareness of the contamination in Tanapag. Results of the blood tests will be provided in about two months, after the analysis is concluded in the US mainland. Health authorities in the Northern Marianas say tests for cancer may have to be extended throughout the Commonwealth.

PCB contamination is not the only environmental hazard facing CNMI residents. In April 2000, the US EPA agreed to sample groundwater in the Northern Marianas to check if it is contaminated with Agent Orange. The sampling work will focus on wells located within a golf course in northern Saipan. Containers of Agent Orange were buried on the island after the Vietnam War and the US government wants to determine whether the chemical has migrated into the groundwater.

Residents of Saipan have uncovered four other sites they believe are abandoned dumping grounds used by the United States military. World War II material has been found in Marpi, Capitol Hill, Upper San Roque and Upper Tanapag. Tons of debris from military equipment can be found in

Upper Tanapag.

However the US Army Corps of Engineers says that the Upper Tanapag site is not listed in the Department of Defence archives as a dumping ground. Local officials believe there could be more such sites across the island and on neighbouring Tinian, which was used as a military airstrip during World War II.

More than 1,000 World War Two bombs have been found littering a proposed housing development site in Saipan. Most of the bombs were found near Suicide Cliff on the northern part of the island, piled waist-high on top of one another. Although the US Naval Administration combed Saipan for war debris – including mortar shells and hand grenades – after the war, much remained buried across the island, especially at sites of fierce battles between American and Japanese forces. These include the coastal villages of San Antonio, San Jose, Oleai, Garapan and Tanapag where the US forces landed, and Marpi, where the Japanese forces held out at the height of the invasion.

Guam

Guam was a major US military base in the Second World War, the Korean War and the Vietnam War, and today over one third of the island's land area is under the control of the US military. The US armed forces have transported and stored vast quantities of war materials to Guam to support their activities. Over the years, these materials included nuclear weapons; chemical weapons such as phosgene and mustard gas; cleaning compounds now proven to be hazardous to human health and the environment; and insecticides and pesticides that are now banned as being carcinogenic or dangerous to human health and the environment.

Unexploded munitions continue to be found around the island – these are serious potential threats to human life and safety. The severity of the threat is increased by the age of the unexploded munitions, as the type of chemical used in Second World War explosives is known to become unstable with age. The military has not made a concerted effort at locating and disposing of these unexploded munitions and their discovery today is often by accident during civilian construction projects.

A US nuclear submarine discharged radioactive reactor water in Apra Harbour in the late 1980s, but the military did not inform the Government of Guam of the discharge. The people of Guam only found out about the discharge when it was published in a San Diego, California newspaper. We can only conjecture how many other unreported discharges happened in the past when Guam was a major base for the Polaris missile-equipped nuclear submarines.

Guam, today, is a major site for environmental clean-up under the US Super Fund program. The required clean-up is ongoing but the pace at which it is being undertaken is not satisfactory for the indigenous Chamorro people; especially as the promised return of former military lands cannot occur until the land is deemed to be environmentally safe.

The major source for potable water for Guam is the northern aquifer. This aquifer enjoys federal protection by being designated as a sole-source aquifer for Guam. However, several of the production wells have had to be shut down because of chemical contamination. It should be noted that the bulk of the US government's land holdings are over or adjacent to this aquifer.

Since 1987, Chamorro organisations have been calling for the return of land not actively being used for military purposes. However, instead of returning the bases to their former customary landowners, the US military has been transferring bases to other US federal agencies, such as the US Fisheries and Wildlife Service. The US government has put 20% of Guam property into a "wildlife

refuge", but they do not fund programs to preserve the environment or endangered species on that land.

The Philippines

In the Philippines, community groups have formed the People's Task Force for Bases Clean-Up, to lobby for the clean-up of toxic pollution at former US bases. Even with the closure of US installations at Subic Bay and Clark Airforce Base after 1991, there are many ongoing hazards. When the United States military pulled out of Clark and Subic, it left dozens of sites where toxic chemicals and asbestos had been dumped or buried in unsealed landfills.

The following are worst case scenarios of chemicals left in Clark and Subic Bay. All of the toxins mentioned below have been found to exceed World Health Organisation standards in soil and waters in and around Clark and Subic.

Mercury has been detected in some of the sediments of Subic Bay. There is a potential for health impacts to subsistence fishermen and women from the accumulation of toxins in fish and other marine life residing in Subic Bay waters. Mercury bioaccumulates in fish, and is a toxic metal that can cause irreversible brain damage to infants. Mercury has been known to cause birth defects such as severe cerebral palsy, mental retardation, weakness, visual loss, delayed development, spontaneous abortions, and neurological effects.

Toluene, Benzene, methyl ethyl ketone, xylene, and trichloroethylene are several of the solvents left in the Clark Air Force base. Solvents have been linked to increased risk of spontaneous abortions with maternal exposure during pregnancy. There is increased likelihood of central nervous system, heart urinary tract, lip, and palate birth defects in children of solvent exposed women, increased risk of preeclampsia, and damage to fertility and male reproductive functions.

Aldrin, dieldrin and PCBs, three of the 12 most hazardous persistent organic pollutants (POPs), have been found at Clark. Some scientists are linking POPs with falling sperm count, rising rates of testicular and breast cancer, behavior disorders, immune system changes, and decreased birth weight and brain development. Aldrin, Dieldrin, PCBs, and 1,1,2,2 tetrachlorine are suspected causes of cancer.

Benzene can cause Leukemia. Lead induces renal dysfunction, anemia, and neonatal mortality, infertility in men and spontaneous abortions with high doses of exposure, and developmental delay in children with very low doses of exposure.

Sister Rosalie Bertell's long awaited study "Health for All" revealed that certain communities around Clark Air Force Base report conspicuously and disparate levels of kidney, urinary, nervous, and female system health problems. The highest prevalence of these problems occurred in CABCOM, Margot, Macapagal, Sapang Bato, Poblacion, and San Joaquin. These communities are located on the base or closest to highly contaminated sites. Examples of problems presented are tremors, cramps, spasms, frequent dizziness, frequent painful urination, irregular menstruation and premenstrual syndrome.

Bertell found serious evidence of poor health of the children. She found that weight and height of the older children were abnormally low, despite adequate nutritional status. It is from these findings, that Bertell suggested something abnormal is in the dust and water. With the realization that people cannot buy or be provided bottled water forever, Bertell called for comprehensive clean-up, a process which would require people to be evacuated. Her final advisory was that Clark, Margot, Sapang Bato, Macapagal, Poblacion and San Joaquin be given clean-up priority, and

permanent living conditions be found for CABCOM residents.

In response to the release of the “Health for All” Survey, the mayors of Mabalacat and Angeles City ordered the distribution of clean water to ten barangays near the former air base. Mayor Marino Morales ordered the immediate dispatch of safe drinking water to San Joaquin, Poblacion, San Francisco, Mabiga, Dau, and Mawaque. Mayor Cornelio Lazatin of Angeles City stated that the city would provide clean water to Sapang Bato, Margot, Macapagal, and Marcos. However the city does not have the equipment like water tanks and trucks, to provide potable water.

Through studies of hospitals in Olongapo City and Metro Manila it has been found that Olongapo and Zambales (which are near the former Subic Naval Base) have an alarming number of leukemia cases. Of the 385 leukemia patients between 1992 and 1996, 282 were below 18 years old. (*Philippine Daily Inquirer*, 17 February 2000)

Many cases have been found in Kalaklan village. The People’s Task Force for Bases Clean-Up learned from former base workers that Upper Kalaklan used to be a dump.

The Santa Rita River cuts across Kalaklan village and drains into the Subic Bay. An environmental baseline study for Subic collected 41 sediment samples from the bay’s harbor floor and various river and drainage canals and analyzed these for a range of heavy metals and organic compounds. Sediments from the bay showed that metals like arsenic, barium, copper, lead, mercury and zinc exceeded the standard levels. During high tide, water from the bay enters the Santa Rita River.

Hao, Moruroa and Fangataufa

France’s presence in the South Pacific is well known because of its nuclear testing program in French Polynesia. Between 1966 and 1996, France conducted 193 atomic and hydrogen bomb tests at Moruroa and Fangataufa atolls.

After the end of French nuclear testing, the French government has started to relocate the military presence from Moruroa, Fangataufa and Hao atolls. In 1996, the Nuclear Testing Centre (CEP) and French military began to dismantle the bases at Moruroa and Fangataufa. Some of the equipment and material was transferred to the armed forces, some given to the Territorial government and some scrapped. Low-level radioactive waste was buried in old test shafts, then covered in concrete. A 1998 International Atomic Energy Agency (IAEA) report also found that high-level radioactive waste, including plutonium, was dumped into two shafts on Moruroa. The IAEA report estimates that there are 8 kilograms of plutonium in the sediments of the lagoons at Moruroa and Fangataufa as a result of the nuclear tests. There is also evidence of plutonium and caesium pollution on the northern rim of Moruroa.

From the mid-1960s to the mid-1990s, a major priority for the armed forces was the smooth functioning of France’s nuclear bases in Polynesia. The bases had to be provisioned, and their equipment maintained. For decades, Hao Atoll in the Tuamotu Islands served as a staging post between France, Papeete and the nuclear sites at Moruroa and Fangataufa Atolls. Its 3000-metre military airstrip is one of the longest in the Pacific (it serves as an emergency landing site for NASA's space shuttle).

In January 2000, French authorities announced that the Foreign Legion will be withdrawn from French Polynesia, and the military base at Hao Atoll will be closed. The cost of maintaining the 350 men of the French Foreign Legion 5th Regiment in French Polynesia amounts to nearly one billion Pacific francs (55 million French francs). This money was being deducted from the *Fond de conversion de la Polynésie* (the ten-year grant given to French Polynesia by President Chirac

between 1997 – 2007 to lessen the blow from the end of nuclear testing in 1996). The French government has been charging the territory for the cost of monitoring the radioactive pollution left by three decades of nuclear testing! Now the Territory will be responsible for funding 20 soldiers of the RIMAP Regiment to monitor the former test sites, even though France has refused to return the atolls to the control of the Territorial government (see *Tahiti Pacifique*, April 1999 and February 2000 for details).

Today, the Territorial Government of French Polynesia is trying to turn Hao Atoll into a tax haven for foreign corporations. An advertisement in the April edition of *The Economist* magazine urges foreign corporations to invest in “a genuine tax haven in the heart of the Pacific!” The ad states that Hao Atoll offers “exemption from corporate taxes, exemption from registration and property taxes, exemption from custom duties and no personal income tax”. It also highlights the range of infrastructure left behind by the French military forces: “communication satellite network; international airport runway; wharf for deep sea ships; desalination unit; nautical base; power plant; hospital”. Many of the 1700 Maohi inhabitants of Hao atoll are facing unemployment with the closure of the military facilities – the question remains: will they have their land returned to them, or will it be handed as a tax free zone to a corporate entrepreneur?

What can be done

On 30 May, the CNMI House of Representatives joined the protest against dumping of toxic US military waste in the Pacific region as it expressed concern over its environmental and health impact on the islands. Members adopted a resolution during a special session calling on the US government to properly dispose of these poisonous chemicals to prevent pollution of the earth, particularly its oceans: "In solidarity with our Pacific Island neighbours, and for the future of our environment we feel that the US should properly clean and dispose of its toxic waste rather than put it in our backyard".

According to a US Congressional document dated March 1999, the US military has PCB wastes stockpiled at bases around the world. If the current shipment of waste from Japan remains on Wake Island, this will open the floodgates to hundreds, if not thousands of tons of US military wastes being dumped in the Pacific.

As part of our call for the closure of foreign military bases in the Pacific, we must call on the US and French military to fulfil their responsibility for clean-up and compensation for the health and environmental impacts of military related pollution.

A Seattle-based environmental group, the Basel Action Network, says existing mobile technology allows for the destruction of PCBs. A viable, safe, on-site destruction technology is available, without the need to burn the PCBs (incineration of the PCB waste will give rise to dioxin and other toxic emissions). Rather than exporting and importing toxic wastes, government authorities should be using appropriate, safe waste-minimisation and destruction technologies.

There is a need for greater transparency by the military. They can begin by opening the military archives so that local residents can discover the source of past environmental and health hazards that affect them today. In Tahiti, Church and non-government groups are now campaigning for France to open its archives on the thirty years of nuclear testing, to allow study of health and environmental impacts.

There is also a need for Pacific Island governments to sign and ratify several international conventions aimed at controlling the manufacture storage and disposal of toxic chemicals, both regionally and around the world. The Basel Convention will enable the world to monitor and control

the trade of dangerous chemical waste, by giving importing countries the option to choose which chemicals they want to receive and turn away those that cannot be handled safely. There is a need to develop policies for Prior Informed Consent in which importing countries can decide whether they wish to receive future shipments of particular chemicals.

References

Compiled from reports by: Rufo Lujan (Guam); Nuclear Free Philippines Coalition (Manila); *The Saipan Tribune* (Northern Marianas); *Tahiti Pacifique* (French Polynesia). Detailed references can be supplied by contacting PCRC.

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