***Marshall Islands -*** a tragic confluence of nuclear testing and climate change[[1]](#endnote-1)

***A chosen people***

In 1946, after a Sunday church service, the people of Enewetak Atoll (also known as Bikini Atoll) were told they are a chosen people, like the Israelites, who would deliver humanity from future wars as the US perfected the atomic bomb. Within weeks after the people being relocated, the first tests began. The so-called ‘promised land’ was a destroyed land.[[2]](#endnote-2)

***‘We located the one spot on Earth that hadn’t been touched by the war and blew it to hell.’[[3]](#endnote-3)***

***Background***

The Marshall Islands **(RMI),** with its 29 coral atolls, lie between Hawaii and Australia. In 1914, they were captured by Japan. When Japan was defeated by the US in 1944, the Japanese bases became U.S. military bases. Its remote location, sparse population, and proximity to other U.S. military bases, made it seem ideal for testing of U.S. nuclear weapons.[[4]](#endnote-4) Between 1946 and 1958, the United States conducted 67 nuclear tests in the Marshall Islands, 23 at Bikini Atoll, and 44 near Enewetak Atoll, but the fallout was not contained to these atolls.[[5]](#endnote-5) It became the most contaminated place on Earth and the people are still dealing with the fallout more than 70 years later.

Since 1945, the U.S. expanded nuclear research and development programs as they conducted 67 tests in the RMI between 1946 to 1958. Their combined explosive power if parcelled evenly over that 12-year period would equal 1.6 Hiroshima-size explosions per day.[[6]](#endnote-6) [The ‘Castle Bravo’ test](https://www.youtube.com/watch?v=ZQEgndKhQ-U) in 1954 was detonated with 1,000 times the force of the Hiroshima explosion.[[7]](#endnote-7)

Nuclear issues are forever.

Once subjected to the ravages of nuclear testing and its effects, the people now face oblivion due to

climate change. Both are connected. Having endured burns to the bone, forced relocation, nightmarish birth defects, and short and long term cancers, the people have inherited a world unmade, remade and then conveniently forgotten by the USA. Washington has tried to close the book on a history of destruction and sadness. Over the years following the testing, the Marshall Islanders living on the fallout-contaminated islands ended up breathing, absorbing, drinking and eating considerable amounts of radioactivity.[[8]](#endnote-8)

Most of the people live in Majuro, and the ocean or lagoon can be seen from every part of town. The people depend on the ocean but rising sea-levels due to global warming now threaten their homes and lives. The effects of contamination by nuclear testing and climate change have embraced. Assurances by the USA that the well-being of the islanders would secured have not eventuated. Though an independent nuclear claims tribunal awarded the RMI $2.3 billion in health and property damages, there was no mechanism to force the USA to pay it. Washington does not acknowledge ongoing liability apart from the tens of millions of dollars it grants annually to environmental, food and health-care programs. The claim is that the US acquitted itself reasonably. In 2014, lawsuits against the United States and the eight other nuclear-armed nations, alleging noncompliance with the Non-Proliferation Treaty, were filed. The U.S. Justice Department labelled it a stunt. The suit was dismissed. For the international court, it was not an issue because the USA does not recognise its jurisdiction.

‘We have basically destroyed a culture.’ ‘We’ve stolen their future. When you take the future from a people, you’ve destroyed them.’[[9]](#endnote-9)

The RMI has no permanent oncologists, no way to provide chemotherapy for cancer treatment, and no true consensus between it and the USA regarding the effects of exposure to the tests. Cancer and birth defects are the modern connections to the past. More insidious is the cultural fallout. People are reluctant to marry those from exposed atolls for fear that genetic mutations will be passed on. Rampant alcohol abuse and a suicide epidemic are emergent problems. U.S. food aid which is mainly processed has contributed to an epidemic of obesity and diabetes – the No. 1 cause of death. Cancer comes second.[[10]](#endnote-10) When the nuclear testing began, the Marshallese were not aware of the potential dangers. Since U.S. nuclear testing began, there has been concern over the health risks that occur as a result of fallout and radiation. Many Marshallese have suffered from forced relocation, burns, birth defects, and cancers. Researchers have conducted numerous studies on the health effects of nuclear tests conducted by the U.S. in the Marshall Islands. A Report in 2005 found that the risk of contracting cancer for those people exposed to fallout was greater than one in three.[[11]](#endnote-11) [[12]](#endnote-12)

***‘The Tomb’***

A hulking legacy of years of US nuclear testing is the presence of the Runit Dome on Enewetak Atoll. This Dome, combined with rising sea levels, could cause radioactive debris to spill into the ocean. This vast structure looks like a downed UFO. Locals call it ‘The Tomb’. They fear that its concrete mantel could be torn wide open by a storm surge, typhoon or other cataclysmic event and release its contaminated contents into the Pacific Ocean. There is no warning on the beaches or the dome itself to stay away or even to indicate radioactivity. The least they could have done is correct their mistakes. Ironically, its gradual submersion is due to sea level rises from gas emissions by industrial countries led by the United States.[[13]](#endnote-13) This nuclear waste dump in the Pacific is leaking and climate change is to blame as well as lack of responsibility.[[14]](#endnote-14)

Both problems are at risk of converging because the main holding container for the atoll’s nuclear waste is being compromised by rising waters. The dome has been compromised by rising sea levels. So the Marshall Islands face a double jeopardy. ‘That dome is the connection between the nuclear age and the climate change age,’[[15]](#endnote-15) If it leaks it will be devastating for the Marshall Islands and the whole Pacific.[[16]](#endnote-16)

111,000 cubic yards (85,000 cubic metres) of radioactive debris has been covered by the dome. The 18-inch (45 cm) thick dome was supposed to prevent the radioactive debris from spilling into the oceans is not doing its job properly. Radioactivity has penetrated the surrounding soils along with irrevocable damage and contamination of the wildlife. Millions of dollars’ worth of military gear dumped by the USA into the Pacific will threaten surrounding ocean waters.[[17]](#endnote-17)

When the dome was built in the late 1970s, climate change and sea level rise were not a factor, so the site was built right next to the shore on the ocean side of the island. The Marshall Islands, with an average height of six feet above sea level, is one of the most low-lying countries on the planet. In the intervening years, storm surges have driven sea water clean across some of the atolls.[[18]](#endnote-18)

The Marshall Islands government wants the United States to take responsibility for what it considers as a United States problem. In 1986, the US government made a deal with the Marshall Islands, where they would take over their own affairs. Some $150 million was paid out but the USA will not look at any more compensation requests. Some in the US Government believe there is no obligation to clean up its mess or fix the dome. What remains is a stalemate.[[19]](#endnote-19)

Whilst the US may have improved the capability of its nuclear weapons, the costs to the Marshallese peoples’ wellbeing was miscalculated in a big way. The USA used its power to gain control of this territory and abused the islands for ‘self-gain’. USA failures between the 1940’s-1950’s are still felt by the Marshallese.[[20]](#endnote-20)

A potential nuclear risk and a climate emergency have embraced. The failures of the past and present abrogation of responsibility by the US for its moral, political and human lapses that have caused social breakdown and cultural ruin are made more poignant by its refusal to a support a treaty to ban nuclear weapons.[[21]](#endnote-21)

1. Michael Gerrard, director of the Sabin Center for Climate Change Law at Columbia University, who visited the dome in 2010***.*** [↑](#endnote-ref-1)
2. April L. Brown*No Promised Land: The Shared Legacy of the Castle Bravo Nuclear Test* ***Arms Control Association*** <https://www.armscontrol.org/act/2013_03/No-Promised-Land-The-Shared-Legacy-of-the-Castle-Bravo-Nuclear-Test%20> [↑](#endnote-ref-2)
3. Attributed to Bob Hope**.** [↑](#endnote-ref-3)
4. Timeline of Major Nuclear Tests Conducted at the Marshall Islands<http://www.atomicheritage.org/location/marshall-islands>) [↑](#endnote-ref-4)
5. Timeline of Marshall Islands <https://www.bbc.com/news/world-asia-15598732>. [↑](#endnote-ref-5)
6. Dan Zak *A ground zero forgotten****. The Washington Post,*** November 27, 2015 <http://www.washingtonpost.com/sf/national/2015/11/27/a-ground-zero-forgotten/> [↑](#endnote-ref-6)
7. Alex Wellerstein, *Castle Bravo at 60* ***Nuclear Secrecy Blog*** February 28, 2014 <http://blog.nuclearsecrecy.com/2014/02/28/castle-bravo-at-60/> [↑](#endnote-ref-7)
8. Timothy J. Jorgensen *Bikini islanders still deal with fallout of US nuclear tests, more than 70 years later* ***The Conversation*** June 29, 2016 <https://theconversation.com/bikini-islanders-still-deal-with-fallout-of-us-nuclear-tests-more-than-70-years-later-58567> [↑](#endnote-ref-8)
9. (Glenn Alcalay, anthropology professor at New Jersey’s Montclair State University who took part in Greenpeace’s second evacuation of Rongelap in 1985). [↑](#endnote-ref-9)
10. Dan Zak *A ground zero forgotten* ***The Washing Post***  November 27, 2015 <http://www.washingtonpost.com/sf/national/2015/11/27/a-ground-zero-forgotten/> As [↑](#endnote-ref-10)
11. <https://www.ctbto.org/specials/testing-times/1-march-1954-castle-bravo/> [↑](#endnote-ref-11)
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14. *A nuclear waste dump in the Pacific ocean is leaking - and climate change is to blame* November 27 2017

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15. Alson Kelen, Marshall Islands climate change activist, as told to ***ABC Australia*** [↑](#endnote-ref-15)
16. Joe McCarthy *A Tiny Island Used as a Nuclear Dumpsite Is About to Be Submerged by Water*

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