

On A Firm Foundation of Mayonnaise: Human and Natural Threats to the Construction of a New U.S. Base at Henoko, Okinawa

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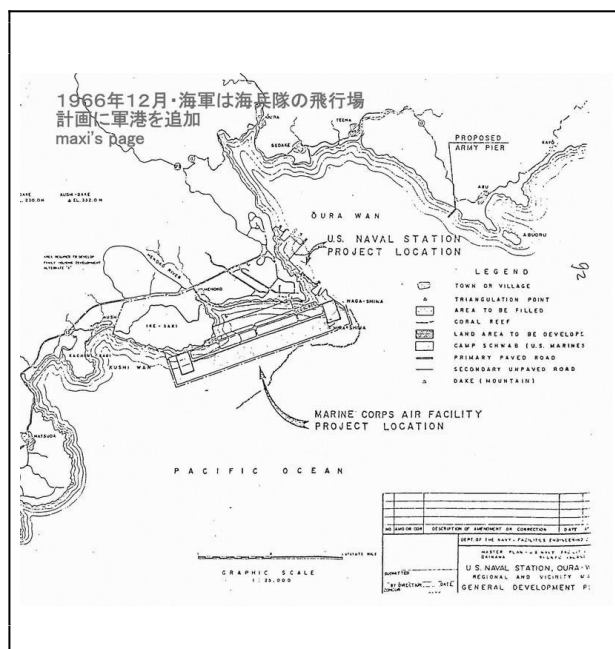
The reasons for abandoning construction of the new US Marine Corps Air Facility at Henoko in northern Okinawa are many. It tramples on the Okinawan people's anti-war sensibilities; it adds to the already unequal burden on Okinawa compared to mainland Japan and is therefore discriminatory; it will cause more accidents and crimes victimizing Okinawans; it will damage, perhaps fatally, Okinawa and Japan's finest coral garden in Oura Bay (much of which is to be filled) and destroy the habitat and feeding ground of the dugong, an endangered species considered sacred by Okinawans; as shown by a decade of resistance, it can only be done by overriding the people's will with massive riot police force. If that's not enough, another factor is being increasingly discussed at the protest site and in the newspapers.

The Henoko airbase project was proposed, as if a new idea, in 1996. Actually it dates back to this USMC proposal of 1966.

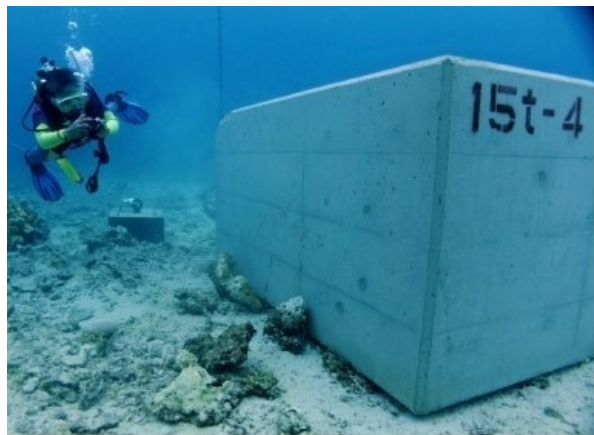
It may be that, from an engineering standpoint, it can't be done.

The reasons for entertaining this doubt are also many. First, the fact that testing of the soil beneath Oura Bay, begun in 2014, continues today, suggesting that the Defense Agency has been unable to determine that the sea bottom is firm enough to bear the weight of the airstrip-length block of concrete it plans to set down there. Several engineers not employed by the Defense Agency have suggested an explanation. Much of Okinawa's bedrock is limestone, which is notoriously soft. If the sea bottom is even partly limestone, that would make a poor foundation for an airport. To people who argue that surely the government's engineers know how to overcome such problems, these engineers point out that Kansai International Airport, completed in 1994 by reclaiming land in Japan's Inland Sea, is slowly sinking; every day trucks bring in rocks and dirt to shore it up, and the buildings are kept level with jacks. A further problem: Okinawa's bedrock is laced with limestone caves. If there are any such caves under the Henoko construction site that should disqualify it as a place to put an airport.

Recently one of the independent engineers obtained from the Defense Agency a soil test report, which the Agency understandably had not shared with the media. While much of the testing is done by bringing up samples with



boring equipment, this report describes the results of the Standard Penetration Test (SPT). This test is carried out using a rig somewhat like a small pile driver. An iron tube is lowered to the sea bottom, attached to a rigid pole long enough to extend above sea level. An iron slide hammer of fixed weight is dropped from a fixed distance on to the pole, and the number of blows required to drive the tube down six inches is recorded. This number is called the N-value, and an N-value of 50 or more is considered a firm foundation. According to the report, in several places under the airstrip site the tube didn't need the hammer: when it reached what looked like the sea bottom it just kept on going to the six-inch mark and beyond. The sea bottom there was given an N-value of "0". To give the protesters an image of what this "0" meant, the engineer suggested they imagine a sea bottom composed of tofu. Hearing this, an expert on sea bottoms from mainland Japan offered a correction: not tofu: mayonnaise. Since then, "mayonnaise" has become a buzzword at the protest site. We are told that in some places this "mayonnaise" (slime would be another name for it) extends as far down as 130 feet.



A concrete block lowered into Oura Bay at Henoko

On 25 April I and Tarak Kauff (at Henoko with

the visiting Veterans For Peace delegation) talked to one of the independent engineers. I told him I had heard two mayonnaise theories: one, that a mayonnaise sea bottom would make construction impossible; two, that construction is possible but would require new permits from the Governor. He told us the latter is true. When the sea bottom is unstable, it may still be possible to bring in a (real) pile driver, drive huge pylons into the stable hardpan (assuming there is such) beneath the guck, and then set a steel framework over those, like a table with many legs. But the construction permit under which they are working now, granted by the previous Governor, is for a different operation, so they would need to apply to the present Governor for a new permit, which he is unlikely to grant. This is one reason the Abe government is anxious to defeat Governor Onaga Takeshi in the election this fall. I also learned that an expert on sea bottoms recently testified at a meeting of the National Diet's US Military Base Problem Council that (assuming a permit is promptly granted) such an operation would delay construction for another 2 to 3 years.

There is more. Seismologists have found two active earthquake faults directly under the construction site. That might be a gamble worth taking were it a matter simply of providing aircraft a place to land and take off. But in the Marine Corps' Camp Schwab, which is where construction is taking place, there is a former nuclear weapons ammunition storage facility which, it is widely believed, is to be upgraded so as again to be used to store nuclear weapons for the new airbase. Try to imagine a project more insane than putting a nuclear weapons storage site on top of an active earthquake fault.



Demonstrators oppose the new U.S. base at Henoko.

In the Okinawa protest movement these critical issues are much discussed. It's not just a matter of engineering science. Okinawans tend to talk about their land as a sentient being. Many have the feeling that not only the people, but also the land itself is rejecting the construction of the new base. Many remember how the anti-US base movement in the Philippines was supported by the 1991 eruption of Mt Pinatubo, resulting in the demise of the US's Clark and Subic Bay bases. So with

apologies to Robert Frost,

*Some say Camp Schwab will surely
sink in slime.*

*Some say it will be shattered by a
fault.
From what we know of nature's
scale of time,*

*Its final grave will certainly be
slime.*

*But far beneath the slime, an
active fault*

*Could swiftly bring its business to
a halt.*

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Douglas Lummis was born in San Francisco and schooled at University of California Berkeley. He has taught at UC Santa Cruz, Fairhaven College (Washington State), Tsuda College (Tokyo), Okinawa International University, and is presently Visiting Professor in the Okinawa International University Graduate School. He is a contributing editor to the Asia-Pacific Journal, and the author of *Radical Democracy* ([Cornell](#)) and [in Japanese translation] [Iwanami](#).