TITLE

NOAA's Abandoned Vessel Program and Resources and Under Sea Threats project -
Partnerships and Progress for Abandoned Vessel Management[1]

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ABSTRACT

*Recent incidents within our National Marine Sanctuaries and throughout our country have directed the National Oceanic and Atmospheric Administration to begin to look proactively at catastrophic oil and other chemical releases from submerged and abandoned sources. Integrating data from several federal, state, and private sources, the Abandoned Vessel Program (AVP) and Resources and UnderSea Threats (RUST) database worked hand in hand to develop a joint inventory of submerged and abandoned vessels to determine through analysis the scope of this potential threat.*

DISCUSSION

I. Background - Rust and AVP

There are more that 150,000 vessels sunken in US waters and thousands more that are derelict, abandoned, grounded or wrecked in coastal estuaries and harbors. Some of these vessels are historically significant and combined they are a valuable cultural resource that needs to be managed and protected. While most of these vessels do not present any danger to the environment, public safety or commerce, there are still many wrecks and derelicts, based on their

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[1] Disclaimer: The views expressed herein are solely those of the author, and do not necessarily represent the position of NOAA, the Department of Commerce, or the United States.

cargo, bunkers, or proximity to sensitive natural resources, that pose a substantial threat to the marine environment.

There are diverse mechanisms through which vessels impact their surrounding environments. The physical impacts include crushing, smothering, reduction of the complexity of benthic topography, shading and increased wave energy which leads to increased erosion and scour of adjacent benthic organisms. There are also chemical threats to the environment represented mostly by the release of fuel and hazardous cargo. Impacts from the release of toxic compounds contained in anti-fouling hull paints and, in coral habitats, the release of iron from deteriorating hulls are also possible. Threats to human safety, public health and navigation are more intuitive but no less critical. Vessels can release harmful materials. They present opportunities for the public to board and become injured or trapped. They also, frequently, physically block navigation channels, become submerged hazards or interfere with water-borne or related uses of the marine environment.

The National Oceanic and Atmospheric Administration (NOAA) has a long and diverse interest in grounded and abandoned vessels including charting, pollution abatement and debris and entanglement removal. Recent spill events associated with sunken and derelict vessels, including the Pago Pago Longliners in Samoa, the Jacob Luckenbach in California, and the USS Mississenawa in Yap, have raised concerns about the pollution threats from these vessels. Until recently, however, there was no single source of information about them

NOAA has recently initiated two related programs to address management of sunken and derelict vessels:
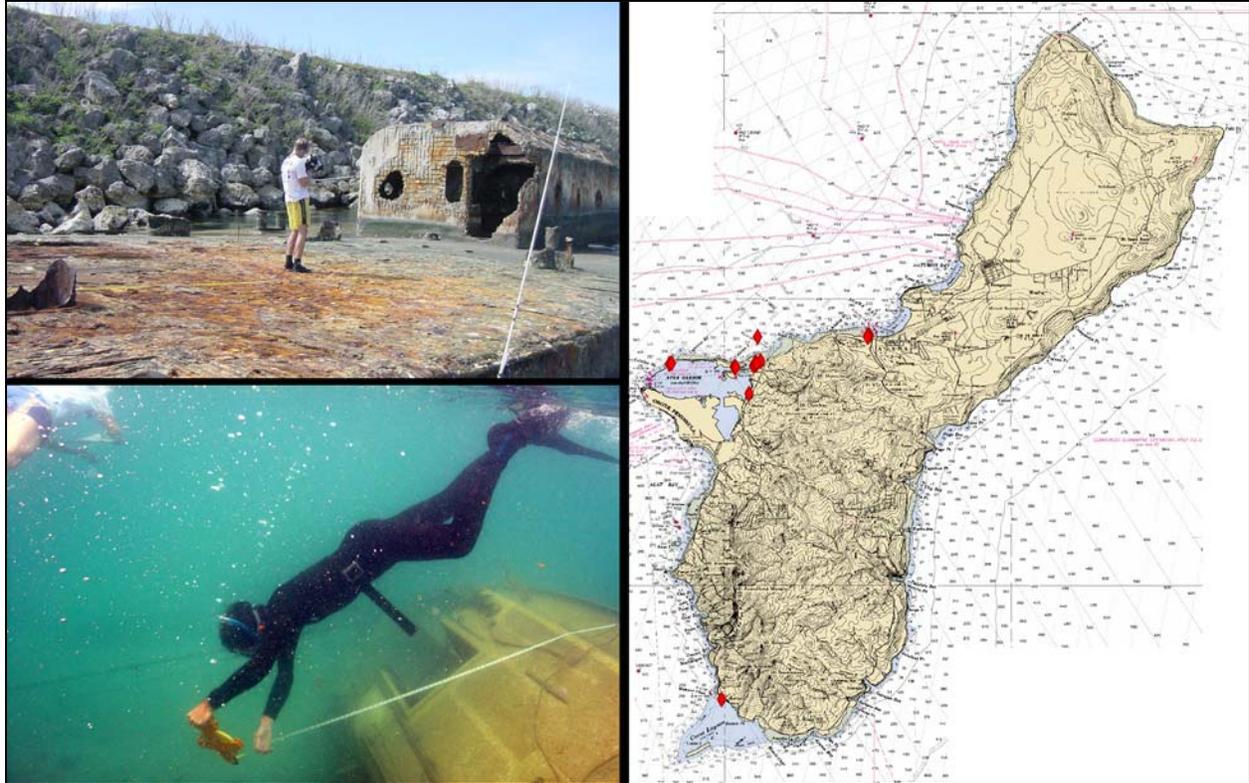
Figure 1. AVP surveying two vessel in Guam and map showing locations of 31 vessels surveyed on the island in June 2003.

1) The Abandoned Vessel Program (AVP) was developed to investigate the problems posed by abandoned and derelict vessels on U.S. coral reef habitats. This program was, in part, a response to the US Coral Reef Task Force's National Action Plan which identified vessels groundings as a significant factor in the loss of reef habitat. It has surveyed nearly 200 vessels in the field and focuses on assisting local governments. (see Figure 1)

2) The Resources and UnderSea Threats Program (RUST) was developed as a management tool for the NOAA National Marine Sanctuary Program. NOAA manages 13 marine sanctuaries from Samoa to the Florida Keys. The Sanctuaries have responsibility for protection of cultural and archaeological resources including shipwrecks, but also have a mandate to protect natural resources from spills and other threats. Several shipwreck-related pollution incidents in or near marine sanctuaries lead NOAA to develop a comprehensive database of shipwrecks and other

pollution threats (e.g., munitions dump sites, etc.) within sanctuary boundaries. RUST will also be a comprehensive compellation of submerged cultural and historic resources. This effort has recently been expanded to all marine waters in US coastal zone and EEZ .

In recognition of the shared interests and overlapping data, the two programs are currently working to combine the RUST and AVP databases into a single shared database. The full integration of these systems should be complete in early 2005.

This work will achieve improvements in data quality and efficiency in several ways. Both AVP and RUST will have instant access to changes and new information developed by each partner. The system will also eliminate repetition when gathering the most recent vessel data from other sources. A single effort will guarantee both programs are up to date, are using the same information and that we approach contributing agencies to the minimum degree necessary. Finally, RUST is assured high quality data from the AVP, much of which is based in on the ground field surveys. Through a close partnership, data collected during these surveys can also be tailored to meet RUST requirements that may be outside the general goals of the AVP.

There will also be advantages from data analysis and policy perspectives. By connecting into the larger RUST system, AVP can access a much broader range of data for improved analysis. The broader data set will also help to more appropriately guide the expansion of the abandoned vessel work outside coral reef habitat. Finally, this connection will assist NOAA to provide a more consistent message and message with respect to the issue of derelict, grounded and wrecked vessels.

II. The database

The RUST database is a Sequel Server relational database designed by NOAA's National Marine Sanctuary Program and Special Projects Office, and is housed in a secure server maintained by the Information Management Division at NOAA headquarters in Silver Spring, Maryland. It contains 150 fields for each record including: positioning, ship typology, date of loss, cargo, amount of oil or fuel remaining, contact information, bottom type, site proximity to sanctuaries, and the inherent risks associated with the record. Each record has the capacity to store images, PDF files for Hazardous Materials Data Sheets, and other record source information.

The underlying data is composed of federal, state, and private databases from around the United States. These databases are currently being identified, acquired, analyzed and incorporated into the RUST. The data is compared and combined with a resulting dataset that
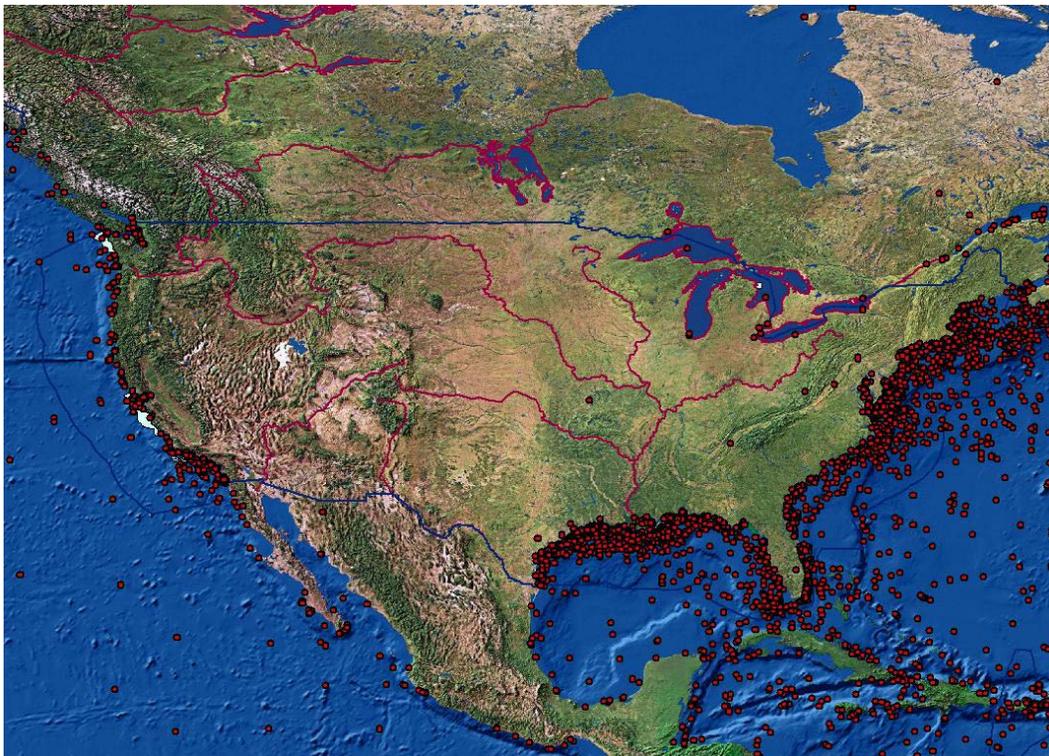


Figure 2.     Map showing 7000 of the 20,000 records currently in the RUST database.

contains no duplicates and is populated with selected fields from all original databases found to

be compatible with the mission of RUST. Initially records will only be 20% complete; archival

research combined with field investigation will result in an accurate and up-to-date

representation of each individual record. RUST contains over 20,000 records currently (see

Figure 2), though will exceed 40,000 records by 2005.

BIOGRAPHY

Ian Zelo is an environmental specialist with NOAA's Damage Assessment Center. He works on
NOAA's Abandoned Vessel Program and DAC's broader natural resource damage assessment
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