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"To dissuade and defeat threats as early and as far from U.S. borders as possible."

SITREP

THE NPS MARITIME DEFENSE AND SECURITY RESEARCH
PROGRAM NEWSLETTER

<http://www.nps.edu/research/mdsr/>



Volume 52
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Dear Readers,

PLEASE submit a short 200-300-word article introducing your organization's Maritime Security and Defense-related mission and activities or add an event to our calendar.

Contact Ms. Rita Painter at rpainte@nps.edu.

HIGHLIGHTED RESEARCH

MMOWGLI - Play the game, Change the game!

MMOWGLI is an online game designed to find and collectively grow breakthrough ideas to some of our most "wicked problems." Many 21st-century threats challenge us to try new forms of collaboration that can help create truly innovative ideas.

In spring 2011, MMOWGLI will launch by exploring a fast-paced interactive scenario of piracy off the coast of Somalia. Unexpected new forces are flooding the region, while cutting-edge tools are pushing fleet capabilities and pirate tactics. Meanwhile political-economic disruptions mean that land-based strategies are just as critical as responses at sea.

- What if you could remove any obstacle to turn the tide?
- What if you could collaborate with anyone?
- What if you had any resource you needed?
- What can we accomplish together?

Your ideas are needed. You'll join other innovators and creative thinkers from within and beyond the military.

Preregister now at <http://mmowgli.nps.edu>

Then, watch for a message this spring with your next instructions... and please forward this message to anyone else you think may want to play.

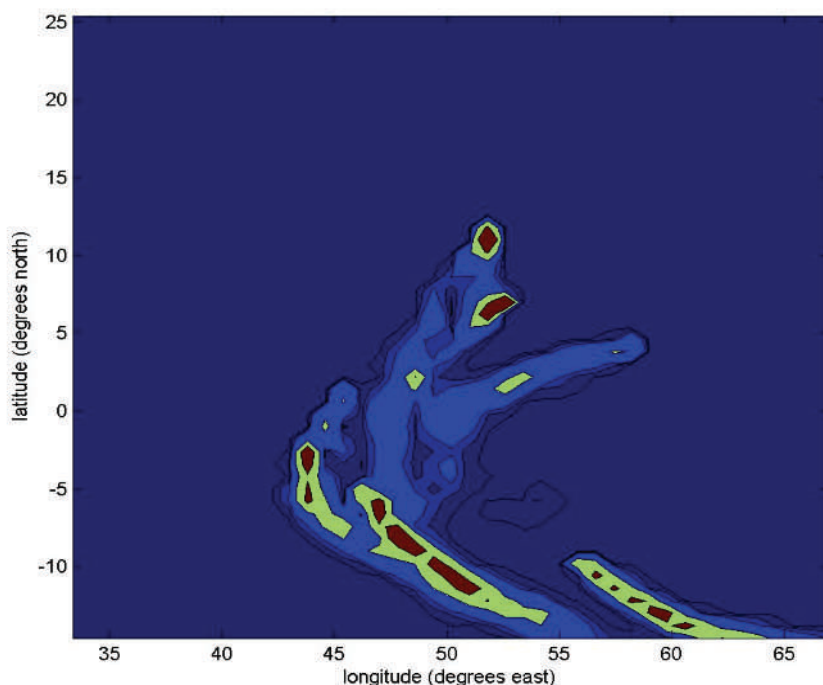
Contact Dr. Don Brutzman, brutzman@nps.edu with any questions.

Countering Piracy with the Next Generation Piracy Performance Surface model (PPSN)

The threat of piracy in the Somalia Basin Region (SBR) and the GOA (Gulf of Aden), Somalia, has not only threatened the safety of ocean-going vessels, but also the national security of the US.

In 2009, Rear Admiral David W. Titley, Oceanographer and Navigator of the Navy, tasked researchers at the Naval Oceanographic Office (NAVO) to assist in the fight against piracy by using their knowledge of the impact of environmental conditions on the success of pirate action groups' (PAG) concept of operations (CONOPS). This tasking led to the development of the Piracy Performance Surface (PPS) model that is briefed to US and allied forces combating piracy in the SBR and GOA.

The successes of PPS led researchers at Naval Meteorology and Oceanography Command (CNMOC) to pursue a more advanced anti-piracy model, the Next generation Piracy Performance Surface model (PPSN). Dr. James Hansen from the Naval Research Laboratory-Monterey (NRL-Monterey) developed the PPSN simulation.



PPSN is a Monte Carlo probabilistic forecasting tool that takes as input environmental conditions, pirate CONOPS and gathered INTEL to produce an estimate of relative probability of pirate presence as a function of latitude, longitude and time. Figure 1 shows output that is produced by the PPSN simulation.

The Naval Postgraduate School's Operations Research Department interviewed users and potential users of PPS/PPSN and provided recommenda-

tions to the developers on how to model pirate CONOPS. In addition, the researchers have experimented with the PPSN code, using state-of-the-art experimental designs to explore which factors have the greatest influence on the PPSN output. The results will inform the selection of PPSN parameter values to enhance the product's reliability, decrease computing memory requirements and run time. The results will also provide insight on which INTEL variables are most important to model and to estimate accurately, which will help developers target future enhancements to the model.

This research will be completed in March 2011 and will be distributed to CNMOC, NAVO, AFRI-COM, NRL-Monterey, CMF Bahrain, and other individuals and organizations interested in countering piracy.

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The LIBRARIAN'S CORNER— Greta Marlatt, gmarlatt@nps.edu

(CONTROL +click, to follow links)

NPS THESES

Islam, Rami H. Piracy and Its Impact on the Economy. Monterey, CA: Naval Postgraduate School, 2010. http://edocs.nps.edu/npspubs/scholarly/theses/2010/Dec/10Dec_Islam.pdf

Lawler, Paul P. Cost Implications of the Broad Area Maritime Surveillance Unmanned Aircraft System for the Navy Flying Hour Program and Operation and Maintenance budget. Monterey, CA: Naval Postgraduate School, 2010. http://edocs.nps.edu/npspubs/scholarly/theses/2010/Dec/10Dec_Lawler.pdf

Nellas, Ioannis. Capacity Building as an Answer to Piracy in the Horn of Africa. Monterey, CA: Naval Postgraduate School, 2010. http://edocs.nps.edu/npspubs/scholarly/theses/2010/Dec/10Dec_Nellas_NSA.pdf

ARTICLES

Carmel, Stephen M. "The Big Myth of Somali Pirates." US Naval Institute Proceedings, December 2010, v. 136, no. 12, p. 30-45

Nincic, Donna J. "The "Radicalization" of Maritime Piracy: Implications for Maritime Energy Security", Journal of Energy Security, December 2010 http://www.ensec.org/index.php?option=com_content&view=article&id=269:the-radicalization-of-maritime-piracy-implications-for-maritime-energy-security&catid=112:energysecuritycontent&Itemid=367

REPORTS/ORGANIZATIONS

Piracy Challenges Maritime Security Off Somalia <http://www.defense.gov/news/newsarticle.aspx?id=62589>

Maritime Information Sharing Task (MIST) <http://www.gmsa.gov/gmiss/mist.php>

Future Events:

Feb 22-24 AFCEA Homeland Security Conference- "Working Together Today for a More Secure Tomorrow" , Ronald Reagan International Trade Center Washington, D.C. <http://www.afcea.org/events/homeland/11/home.asp>

Mar 21-24 Future Unmanned Naval Systems Wargame Competition, Naval Postgraduate School

Mar 28-30 2nd Offshore Patrols Summit, Norfolk VA <http://www.opvsummit.com/Event.aspx?id=432494>

May 2-5 Maritime Security Conference, Kiel Germany <http://www.cjoscoemaritimeconference.org>

May 2-5 MORS Symposium on MDA, ASW Base in San Diego <http://www.mors.org>

May 4-5 9th Maritime & Transportation Security Expo, Baltimore Convention Center, MD <http://www.maritimesecurityexpo.com>

July 13-14 Singapore Maritime Security Conference , Singapore

Jun 20-23 79th MORS Symposium, at NPS <http://www.mors.org>

July 25-29 Classified Advanced Technology Update at NPS <http://www.nps.edu/catu/>