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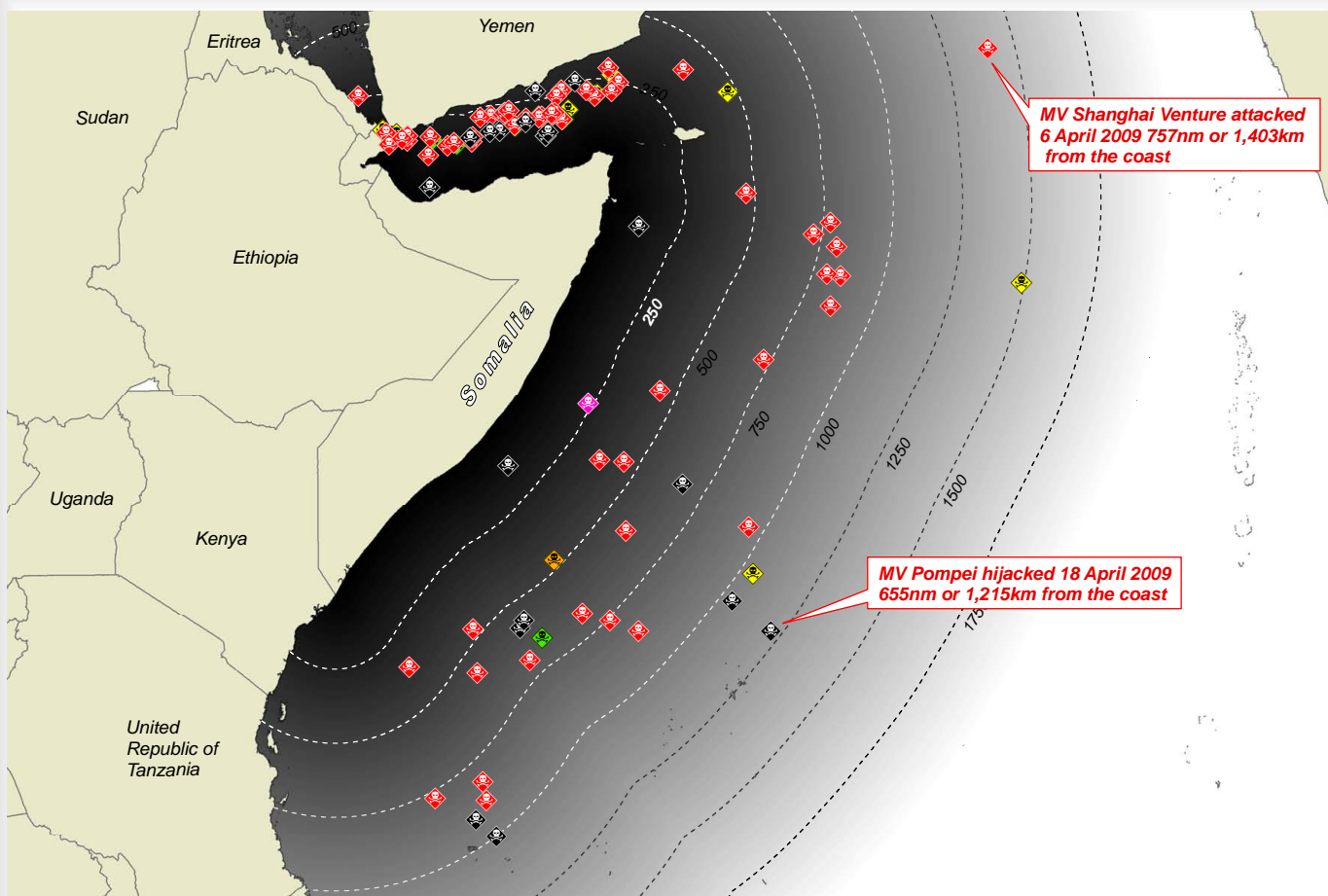
23 APRIL 2009 - VERSION 1

# ANALYSIS OF SOMALI PIRATE ACTIVITY IN 2009

## KEY FINDINGS:

- The overall pirate hijacking success rate for 2009 (vessel hijackings / total attacks) is currently at 23%. This is significantly lower than the average in 2008 of 40% and is likely due to the increased naval patrols and heightened security practices of the merchant vessels in the Gulf of Aden.
- Despite this relative decline in the pirate success rate, there is an alarming increase in the absolute number of pirate attacks and an unprecedented expansion of pirate activity in the Indian Ocean, constituting a new phase of Somali piracy.
- There have been a total of 19 successful hijackings and 81 reported pirate attacks in 2009, an increase of over 650% from the same period last year. If this attack rate is sustained, it will easily surpass the record number of attacks (115) in 2008 and could climb above 200 attacks in 2009.

## Pirate Attacks 2009



ANALYSIS : UNOSAT

REPORT DATE : 23 APRIL 2009

PIRATE INCIDENT REPORTS: ICG-IMB, ONI

IMO, NATO, GAROWE & MSC(HOA)

The depiction and use of boundaries, geographic names and related data shown here are not warranted to be error-free nor do they imply official endorsement or acceptance by the United Nations. UNOSAT is a program of the United Nations Institute for Training and Research (UNITAR), providing satellite imagery & related geographic information, research and analysis to UN humanitarian & development agencies & their implementing partners.

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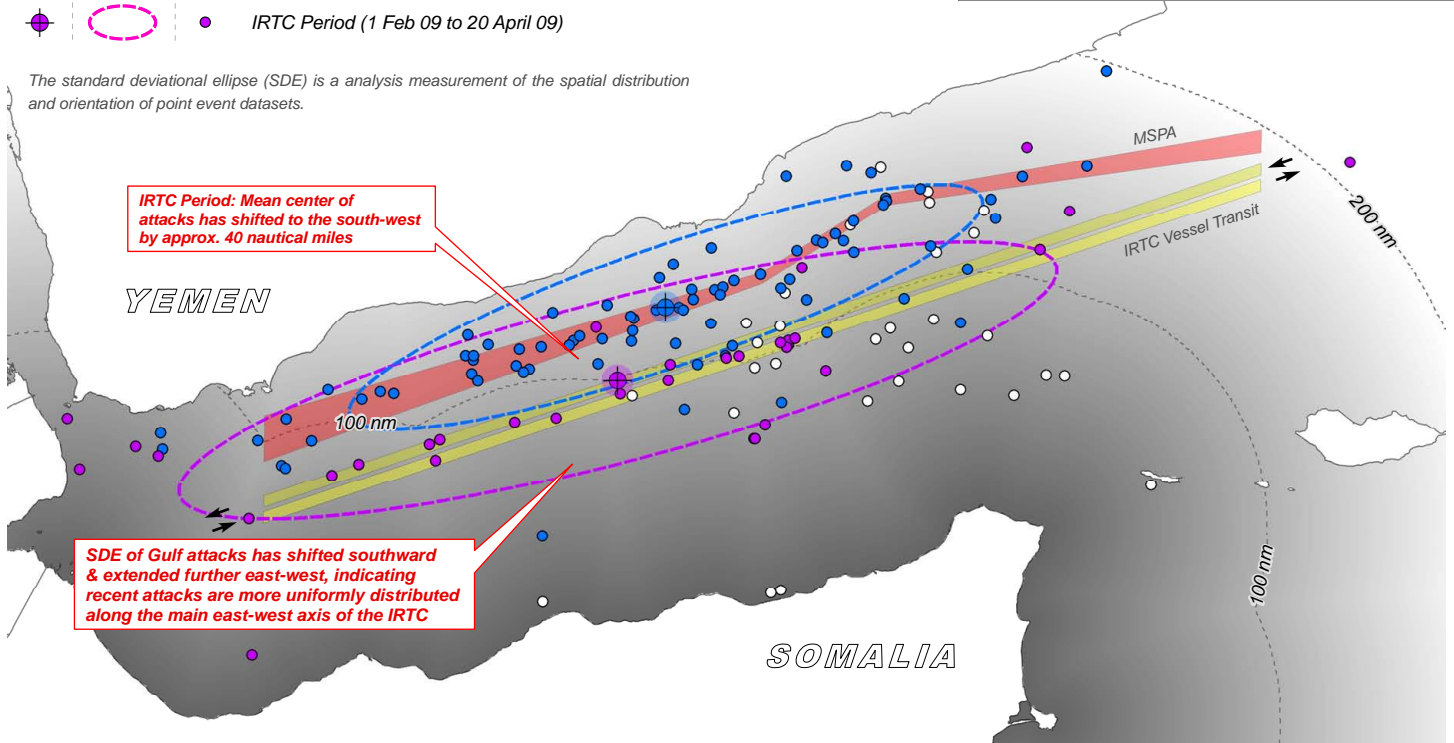
# DISTANCE ANALYSIS OF REPORTED PIRATE ATTACKS TO SOMALI COAST (JAN 2008 - 20 APRIL 2009)

Mean Center	Standard Deviation Ellipse (SDE)	Pirate Attack	
○		○	Gulf Attacks before MSPA Implementation (Jan-Aug08)
●	○	●	1st Cluster of Indian Ocean attacks May-June 2008
●	○	●	2nd Cluster of Indian Ocean attacks Sept-Dec 2008
●	○	●	3rd Cluster of Indian Ocean attacks Feb-20 April 2009
●	○	●	MSPA Period (26 Aug 08 to 1 February 09)
●	○	●	IRTC Period (1 Feb 09 to 20 April 09)

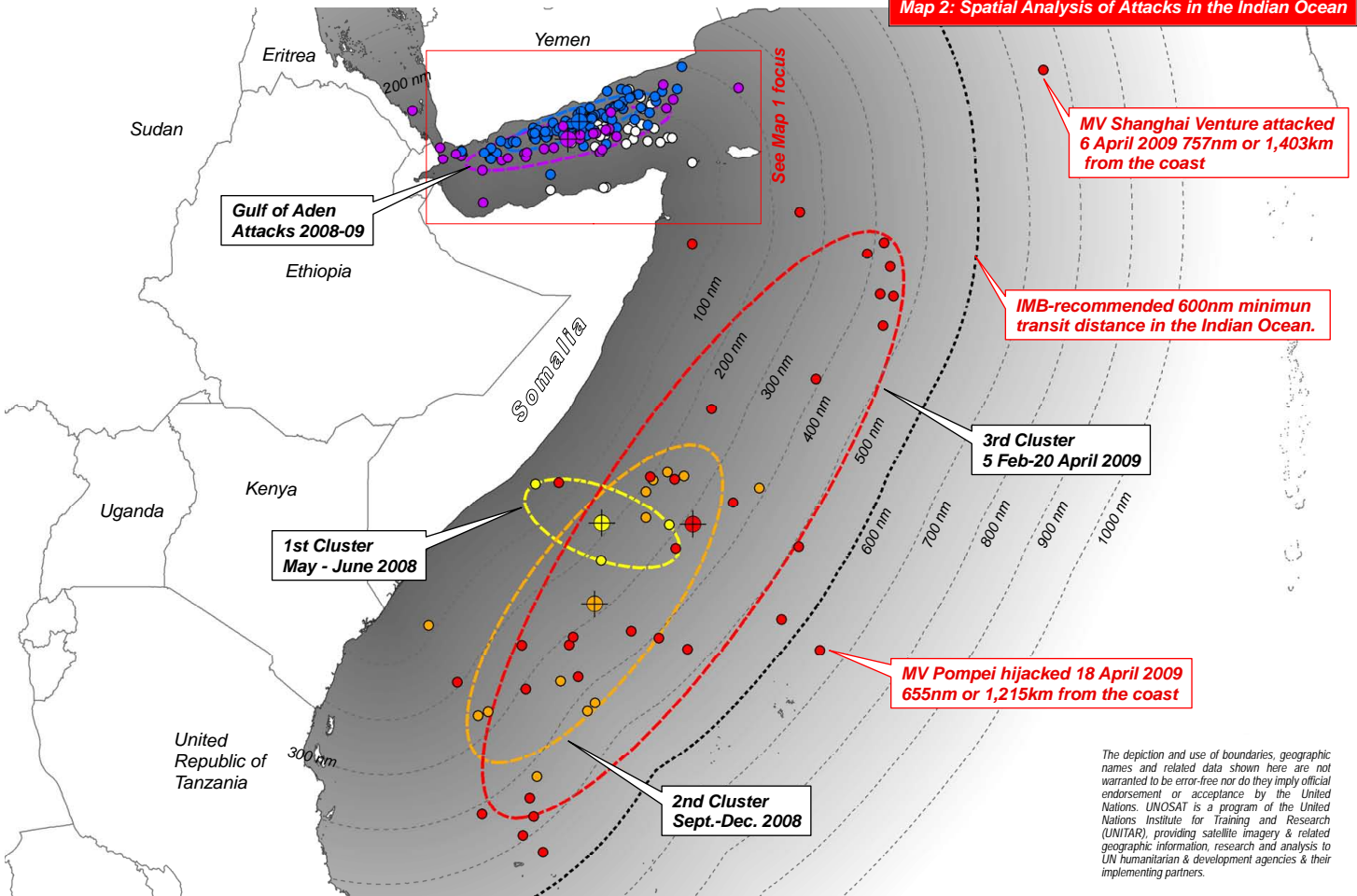
- MSPA (Closed 1 February 09)
- (IRTC) Westbound Vessel Transit
- (IRTC) Eastbound Vessel Transit

The standard deviational ellipse (SDE) is a analysis measurement of the spatial distribution and orientation of point event datasets.

**Map 1: Spatial Analysis of Attacks in the Gulf of Aden**



**Map 2: Spatial Analysis of Attacks in the Indian Ocean**



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# UNITAR - UNOSAT Analysis of Pirate Attacks in 2009

20 April 2009

## 2009 Attack Summary (1 Jan -20 April)

	Successful Hijackings	Attempted Hijackings	Naval Interventions	Pirate Arrests	Attacks (total)	Success Rate
<i>Gulf of Aden</i>	10	38	26	10	48	20.8%
<i>Indian Ocean</i>	9	24	5	4	33	27.3%
<b>Totals</b>	<b>19</b>	<b>62</b>	<b>31</b>	<b>14</b>	<b>81</b>	<b>23.5%</b>

### Increasing Naval Pressure in Gulf of Aden Pushes Pirates into Indian Ocean

There has been a decline in the pirate attack success rate in the Gulf of Aden (vessel hijackings / total attacks) since late 2008, from 27% in December 2008 to only 8% in March 2009. This decline was due largely to the growing naval patrols and heightened security practices of the merchant vessels. During this time there were also an increasing number of direct naval interventions to reported attacks, totaling 24 in the Gulf of Aden in 2009, along with at least 10 separate arrests/captures of pirates.

## Attack Summary by Month (Dec. 08 - 20 April 09)

(Code: (H) = Successful Hijacking; (A) = Attempted Hijacking)

	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09
<i>Gulf of Aden (H)</i>	4	2	1	1	6
<i>Gulf of Aden (A)</i>	11	11	7	12	8
<i>Indian Ocean (H)</i>	0	0	0	4	5
<i>Indian Ocean (A)</i>	1	0	2	14	8

It is apparent that this growing naval pressure has been a strong factor in the recent retargeting of pirate attacks to the Indian Ocean. To illustrate the significance of the Indian Ocean as a resumed area of pirate operations in 2009, consider that in 2008 there were a total of only 16 reported attacks and 7 successful hijackings. As of 20 April 2009, in the Indian Ocean there have already been 33 reported attacks and 9 successful hijackings. All of these attacks have occurred since 5 Feb. 2009. As a result, the attack success rate in 2009 is moderately higher in the Indian Ocean (27.3%) than in the Gulf of Aden (20.8%) at present.

Of special interest is that for the month of April 2009, the success rate has dramatically risen in *both* the Gulf (43% - 6 hijacked vessels out of a total of 14 attacks) and the Indian Ocean (38.5% - 5 hijacked vessels out of a total of 13 attacks) (See also the graph on page 5). The specific factors for this success rate increase in the Gulf of Aden during April is unclear, however if the pirate groups are able to sustain two active zones, it has the distinct potential to stretch naval forces thin, thus improving the hijack success rate still further and reducing the chances of arrest.

## Hijack Success Rate (Dec. 08 - 20 April 09)

(Hijack Success Rate = Successful hijackings / Total Attempts)

	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09
<i>Gulf of Aden</i>	27.0%	15.0%	12.5%	8.0%	43.0%
<i>Indian Ocean</i>	0.0%	0.0%	0.0%	22.0%	39.0%

### Changing Spatial Dimensions of Attacks in the Gulf of Aden

The implementation of the Maritime Security Patrol Area (MSPA) in August 2008 had a dramatic influence on pirate activity in the Gulf of Aden. As the map on page 2 illustrates, the spatial distribution of reported pirate attacks contracted spatially in pursuit of transit vessels travelling through MSPA. There are several measurements of this change. The mean distance between reported attacks fell from 30.5km for events before MSPA to 24.6km after (from 26 Aug. -21 Nov). The standard deviational ellipse of attacks (a measure of event distribution) before the MSPA narrowed considerably after the MSPA along the north-south axis. Further, the mean center of attacks shifted to the west by approximately 200km. The overall shift was thus a concentration of activity along the MSPA, towards the Yemeni coast and to the west.

The implementation of the Internationally Recommended Transit Corridor (IRTC) on 2 February 2009, a revision of the MSPA, has had an equally dramatic impact on pirate attack locations in the Gulf in 2009. As shown in Map 1 on page 4, the mean center of attacks after the IRTC has shifted to the south-west by approximately 40 nautical miles matching the southward location of the IRTC, closer to the northern Somali (Somaliland / Puntland) coast. The standard deviational ellipse of attacks has shifted southward and extended further east-west, indicating that recent attacks in the Gulf are more uniformly distributed along the main east-west axis of the IRTC than previously recorded during the MSPA period.

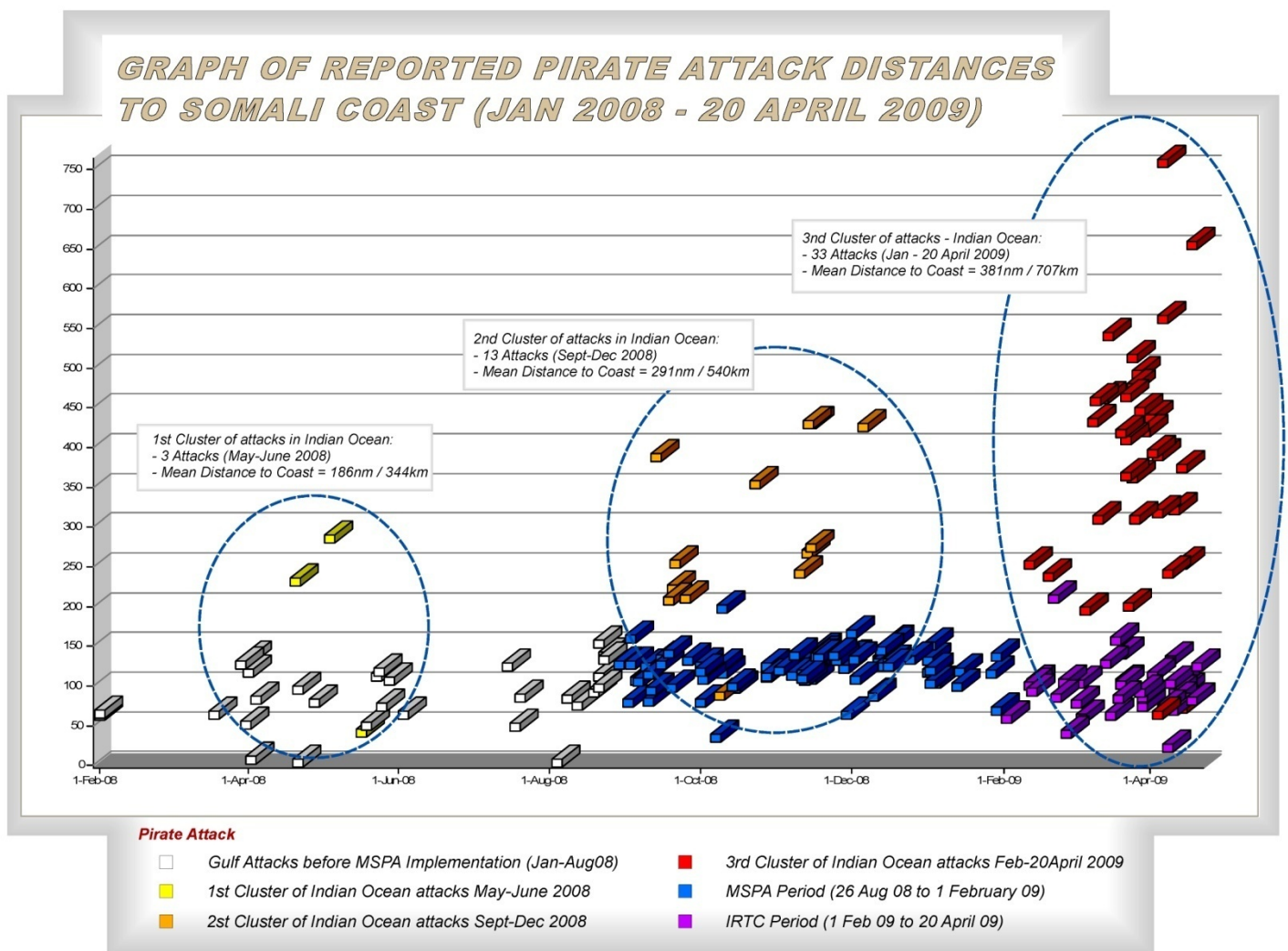
**Changing Spatial Dimensions of Indian Ocean Attacks**

As illustrated in the graph below, and in Map 2 on page 2, a time series analysis indicates there have been 3 temporal clusters of pirate attacks in the Indian Ocean since January 2008, with the most recent and dramatic period occurring between March – April 2009. Not only is the number of attacks increasing by cluster, but the mean distance between attacks locations and the Somali coast is steadily increasing as well.

The first cluster of attacks in Indian Ocean recorded 3 attacks between May-June 2008 with a mean distance to the Somali coast of 186nm (344km); the second cluster of 13 attacks occurred from September to December 2008, with a mean distance to the coast of 291nm (540km); The most recent cluster of 33 pirate attacks started in February 2009 and has continued to expand across the Indian Ocean with a current mean distance to the Somali coast of 381nm (707km).

Two of the most extreme attacks have occurred within the last two weeks. The hijacking of the Belgium vessel *MV Pompei* on 18 April 2009 occurred at a record distance of 655nm or 1,215km from the coast, while attempted hijacking of the vessel *MV Shanghai Venture* on 6 April 2009, occurred at a record distance of 757nm or 1,403km from the coast. Further, the maximum distance between reported attacks in the Indian Ocean in April 2009 currently stands at over 1,800 nautical miles.

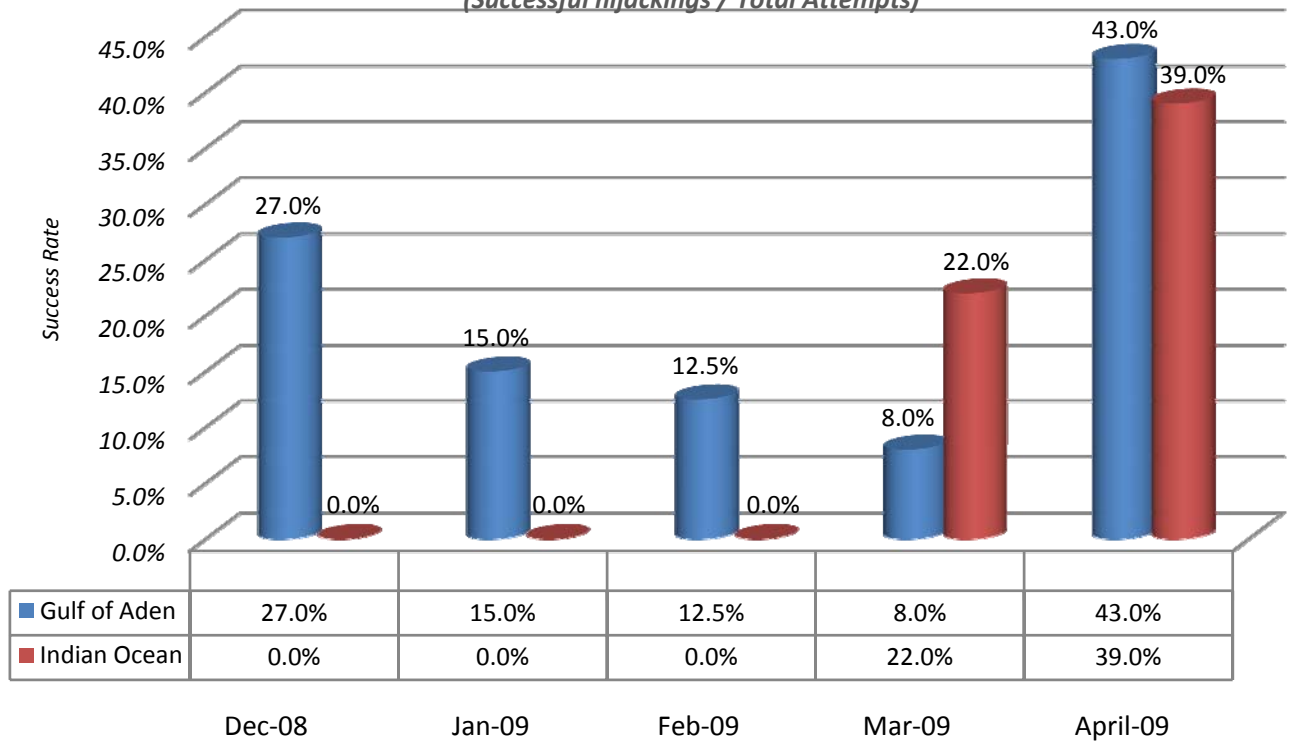
These numbers strongly suggest an operational capacity of pirate mother ships to strike beyond the distance of 600nm announced by the IMB only a week earlier as the recommended minimum transit distance in the Indian Ocean.





### Somali Pirate Attack Success Rate (December 2008 - 20 April 2009)

(Successful hijackings / Total Attempts)



Knowledge to lead

## UNITAR/UNOSAT satellite solutions

### The UNITAR advantage

Since its establishment in 1965, UNITAR has built a unique set of expertise, experience, knowledge and capacities to design and implement a variety of research and training activities. In keeping with its mandate to “enhance the effectiveness of the United Nations in achieving the major objectives of the Organization” the Institute contributes with concrete actions to developing the capacities of Member States in the fields of economic and social development, diplomacy, and peace and security

### Reaching out to beneficiaries

UNITAR programmes provide training to approximately 80,000 professionals every year in some 200 different types of training activities, applying both face-to-face and distance-learning methodologies. Technology and satellite applications are gaining an important place in these activities as a growing number of UN and national entities adopt satellite derived geographic information methodologies in which UNOSAT, the Operational Satellite Applications Programme of UNITAR, excels since 2001

### A challenging mission

UNITAR mission is to deliver innovative training and conduct research on knowledge systems to develop the capacity of beneficiaries. Building on our experience, we optimize expertise, information and knowledge-sharing to achieve this mission. The specific mission of UNOSAT is to develop applied solutions and use training to make the UN system and member states benefit from space technology in the areas of human security and humanitarian relief, disaster prevention and territorial planning, and all other relevant areas

### UNOSAT: setting a new paradigm in satellite applications

Since 2001, UNOSAT has delivered satellite solutions to relief and development organisations within and outside the UN system and member states to help make a difference in the life of communities exposed to poverty, hazards, and conflict or affected by humanitarian and other crises. Our skills are focused on satellite derived geographic information and data analysis. Our work record includes over 1000 analyses since 200, and 150 activations during humanitarian crises since 2003. UNOSAT is also a specialised training force with capacity to train national experts in situ or at headquarters in Geneva.

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