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Coastal Security: To Keep the Homeland out of Harm's Way

By

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Coastal Security is a harmonious extension of state policy whose purpose is protection against ingress of inimical man and material. Its progression is managed by unified control driven by global sharing of information, surveillance and a comprehensive interdiction system. The litmus test to ascertain credibility of the system lies firstly, in the extent to which we have a cohesive unified strategy in place and developed a joint surveillance and pre-emption capability; and secondly, whether we have made the local seas present an insuperable obstacle to every foe that seeks to penetrate. The Fortress of Murud Janjira did precisely so.

The Legend of Murud Janjeera

A little more than a nautical mile west of the coastal fishing village of Rajapuri in the Raigad district of Maharashtra stands the imposing Island fortress of Murud Janjeera. Built in 1490 by the local fishing community to ward off pirates, captured and enlarged by the Siddi mercenary Commander of the Ahmadnagar kings, the now brooding stone citadel was amongst the largest of that era. Repeatedly laid siege to by the Dutch, Portuguese, Marathas and the East India Company; its 19 bastions, 572 cannons and forty feet walls remained defiant and impregnable through history.¹ It was not till 1776, when the now independent Siddi's led by Siddi Sat were defeated by the Marathas led by Chimnaji the brother of Peshwa Baji Rao I in the Battle of Riwas, that the unassailable fortress lost its doughty distinction. As a part of the battle reparations the Siddis were confined to this citadel. The immediate up shot was that the strategic significance of the fortress was annulled and the balance of sea power in the region disrupted. The legend will not be complete without deducing a theoretical abstraction that "the Fort, its eminence abroad and the resolve within had made the local seas present an insuperable physical obstacle to every foe that sought to penetrate".

A Theory for Coastal Security

As with any endeavour before we start upon an enquiry into coastal security in India, we seek a road map which will indicate to us at a glance what exactly are the waters we have to cover and what are its leading characteristics which determine its nature and general form so as to arrive at practical conclusions. The maritime domain is of such complexity that beyond the territorial waters of a state,² only conventions exist to regulate, seize, search or even monitor the activities of vessels.³ Measures taken to sequester or impose control in international waters are normally unilateral and, predictably, run contrary to partisan interpretations of these conventions. Put pithily, what works on the high seas is that “might gives right”. Within the territorial seas what prevails are the laws of the State, to be put into operation by a plethora of disparate yet distinct agencies of government. But the predicament is that the medium that pervades does not tolerate distinction; both the high seas and the coast are washed by the same waters. So it scarcely needs saying that a segregated approach to providing comprehensive security across a fused medium is condemned to failure.

The second insidious feature that dominates the coastal arena is the effects of globalization and its hand-maidens the free flow of ideas, material and personnel. In addition to releasing entrepreneurial creativity and generating wealth it confers upon small groups’ disproportionate destructive and disruptive power. Access to this power and mobilizing it across the waters for illicit use involves exploiting the malgovernance of the High Seas and the fragmented nature of control within the Territorial Sea. A modus operandi which leaves frustratingly tiny footprints. The narrative of the assault on Mumbai on 26 November 2008 (26/11) and its chronology is well documented. What is not so well known is the evolution of the operational plan and the tell-tales that this process may have left for a discerning unified establishment to perceive and act upon.

Coastal security is firstly, about protection of the State from terrorists, non state actors and other dangerous people with violent intent (hereafter collectively referred to as terrorists) gaining access to the mainland using the sea route; and secondly, preventing the ingress of illicit hazardous material across territorial seas on to our shores. The fortifying process essentially begins with access to global information webs, establishment of wide area surveillance and intelligence networks and a three dimensional air-sea-land interdiction system. A pre requisite is for

Command and Control of the entire process and the forces involved coming under a unified head irrespective of the Ministry of origin or the administrative department to which assets belong. Pursuits of diplomacy are obliged at all times be in harmony with the process.

So we arrive at our theory that Coastal Security is a harmonious extension of state policy whose purpose is protection against ingress of inimical man and material and its progression is managed by unified control driven by global sharing of information, surveillance and a comprehensive interdiction system. The American PATRIOT Act of 2001 provides a prototypical expansion of the Theory.⁴

Sculpting the Approach: 26/11 as the Paradigm

Having now come upon a theory, it will be appropriate to fashion an exemplar and establish fundamental precepts that go into developing a counter to infiltration, penetration or assault plan in order to validate our theory. The events leading up to 26/11 provides a prime example of what could have gone into the planning and preparation of the assault founded on facts that are today available in the public domain. For it is out of such an analysis, that will emerge an approach to protect the State from the seaward ingress of inimical forces and illicit materials. It will also throw the spotlight on footprints and tell tales that our own intelligence and surveillance must stalk, and so also help define a strategy in order to defend and respond as we deter.

At the outset three assumptions are necessary. Firstly, for hostile ingress of any nature there are five essential steps that would have to be gone through by the perpetrators:

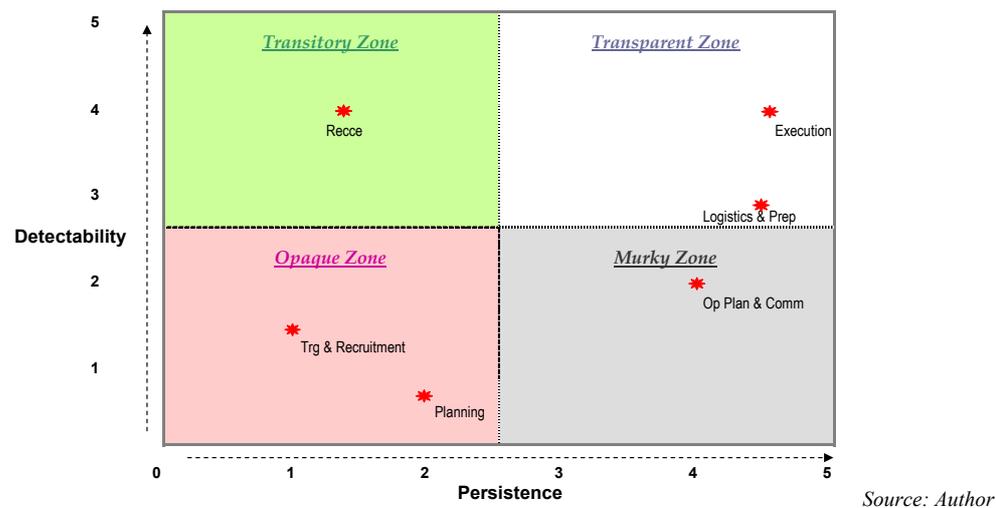
- Planning and Reconnaissance
- Generation of an Operational Plan and Communications
- Logistics and Preparation
- Recruitment and Training
- Execution

Based on the extent to which the run up to the event can be reconstructed, experience tells us that these five steps, which may be called the Hostile Ingress and Terrorist Strike Process (HITSP), could be spaced over anywhere up to 18 months

with Reconnaissance and the Provision of Logistics taking the bulk of time. Also, Planning is an individualistic activity restricted to a few and maybe conducted at a location distant from the target. The Second assumption is that between ‘hard’ and ‘soft’ targets, there are no surprise targets and the Third assumption is that ‘wild cat’ unplanned assaults do not give the desired destructive benefit to the assailants.

A Footprint Matrix has been constructed below (Figure 1) with the 5-step HITSP as augments marked by red stars (Planning and Reconnaissance have been separated). On the X-axis the ‘Persistence’ of a footprint is graded on a scale of 1 to 5, while on the Y-axis, ‘Detectability’ is also graded on the same scale. The notional size of the footprint is determined in terms of these two factors, both of which are more cognitive than absolute. The smallest footprint is the least detectable and of least persistence, graded at (1, 1) and the most prominent at (5, 5).

Fig 1: The Detectability & Persistence Footprint Matrix⁵



The matrix tells us the areas we need to concentrate on in order to achieve the elusive goal of deterring, defending and responding to terrorist acts. As will be noted, four zones have been established, these are the Opaque Zone, the Transitory Zone, the Transparent Zone and the Murky Zone. The Process has been assessed for Persistence and Detectability levels and plotted within the four zones, which to the planner provide areas of focus. Obviously, when we deal with the Transitory Zone and the Murky Zone, the returns for effort are extremely small yet they provide early warning. Often due to long gestation periods and a high false alarm probability, the difficulties

associated with maintaining prolonged states of vigil may cause the guard to drop, and vital footprints to be lost in a mass of information. These, therefore, are Zones well suited for electronic surveillance and computer aided collation, analysis and dissemination.

The Transitory Zone provides opportunities that are not present in the other quadrants, primarily because the period of reconnaissance, while sporadic, has not only to be comprehensive but at some stage must involve the leading protagonists, some of whom maybe quite alien to the area of operation (Abu Ismail, of 26/11 notoriety, hailed from Dera Ismail Khan in the North West Frontier province is a case in point). The Reconnaissance stage is an activity conducted very early in the plan and as in any operational plan, the scope for errors are the maximum at this stage and therefore surveillance that is kept by way of civil measures would in all probabilities record footprints. The fact that David Headley (alias Daood Gilani, a Lashkar-e-Tayyiba (LeT) operative) had been a regular visitor to Mumbai since early 2008 is symptomatic of such tell-tales.

When confronted with the Murky Zone one sees a picture and a pattern that in hindsight is 6/6 and yet Persistence in the Murky Zone of the operational plan is most significant and therefore, had the fact that the Master of *Kuber*, Sri Amar Singh Solanki been profiled after his incarceration in Pakistan, so also the movements of *Kuber* kept track of, 26/11 could well have been nipped during the execution phase. Intelligence, however sketchy, provided on 18th November 2008, indicated the What, Where and When components (nautical parlance) that is, the position of the mother vessel and time; both parameters provided the basis for mounting scouting operations, yet this was not done on grounds that intelligence was not “actionable”. Consequently in the absence of deployed forces either at the point of divergence or convergence *Kuber* had a free run. Also, the most vulnerable period of movement from sea to shore observed by local fishermen at Colaba and reported to the police ought to have been given the due import that it deserved.

The Opaque Zone if exploited, gives us the maximum benefit for it not only deters attack but action in this zone is pre-emptive in nature; it demands comprehensive knowledge of, and information on man and material that potentially could be used for a strike. This must be backed by all-embracing intelligence networks, field operatives and most importantly, the will to take anticipatory action before a potential incident. Here we must also understand that such pre-emptive

actions may have ramifications of an international nature and the State must be disposed to take that risk. Investments in the Opaque Zone will have to be based on steps initiated on a multilateral basis and through ruthless elimination of potential personnel who could pose a hazard. The complexities of operating in the Opaque Zone is there for a planner to see, it poses great challenges, it will demand heavy investments of both man and finances and will yield the best rewards.

Moving into the Transparent Zone, while both Persistence and Detectability are high, they necessitate an internal scheme that is not only comprehensive but transcends the travails of Centre-State relations, ill-defined demarcation between agencies and most significantly, the resolve to cut across boundaries that have been drawn for administrative rather than operational purposes. The movement of logistics, creation of safe havens, handling munitions and that too with great discretion is no simple task. It is perhaps for this reason that the sea-route with back-up operating in international waters, can by the very nature of the medium, avoid check-posts and regulatory mechanisms that one finds on land. Of course the disadvantages are equally irksome since the environment is hostile, probability of failure due to a variety of reasons is ever present and movement from sea to shore is relatively slow and a vulnerable period. The Transparent Zone provides for not only early warning but exposes the militant operation over both space and time. Logistics and Preparation is neither momentary nor is it undetectable since it involves creation of safe havens, movement of munitions, hazardous material and hit personnel close to the target area. And yet their exposure is subject to the weakest link and least attended virtue of the defensive shield; that of municipal regulation, citizenry awareness and unrelenting deployment of patrols and scouts. The vulnerability of the execution phase lies in the fact that it conforms to a rigid plan; while in most terrorist strikes there is an element of flexibility, exercising the flexibility option would normally result in failure of the strike or marginal success. And therefore the very rigidity of the execution phase provides opportunity to detect and respond.

In the absence of a general theory of terrorism on account of its many roots, motivations, manifestations and intent it is *a priori* impossible. However, at the heart of terrorist activity lie two critical characteristics; firstly a total disregard to legality of method and secondly it is inspired by a sustained programme of large scale planned and premeditated violence. Intelligence gathering and analysis targeting events related to these two characteristics consequently plays a pivotal role in putting in place

counters. It is this relationship in the intelligence scheme that will discern actionable intelligence from a mass of information.

The Precarious Present

Over the last five years, the Indian State has initiated several measures at the highest level to come to grips with the problem of illicit sea borne ingress. Salient amongst these is the passing of the anti-terror legislation ‘The Unlawful Activities Prevention Act’ which empowers security forces to hold suspects for a period of six months without a charge; the establishment of the National Investigative Agency responsible for centrally investigating acts of terrorism and for processing intelligence and the creation of the Multi Agency Coordination Committee. Organisationally, Coastal Commands have been set up under existing Naval Commanders-in-Chief who provide the necessary teeth to the legislation in as much as the maritime domain is concerned. From the material angle two hundred in shore and off shore interdiction vessels are in the process of being acquired. Coastal surveillance systems to cover the entire coastal were slotted to be in place by 2013; yet gaps in the system are apparent particularly when one attempts to explain the increasing frequency of ships drifting and running aground on our shores undetected.

Marine police units are in their infancy, and their ability to sprout ‘sea legs’ is tardy if not all together unworkable; while the coastline patrol force, the land element of the three dimensional interdiction plan, remains weedy in as much as its integration with the larger security scheme is concerned. In addition tortuous command and control structures, poor coordination and dissemination of intelligence along with rudimentary standard operating procedures make for disjointed efforts. But the flaw lies in the fragmented demarcation of responsibilities between disparate forces controlled by State and Centre; in the absence of a coalescing doctrine the entire design appears to be, to say the least, fragile.

The Nuclear Nightmare

The case of MV Musan in August 2009 is symptomatic of sound security intentions not being backed by security savvy.⁶ If the MV Musan was in fact carrying fissile material then it is reasonable to assume that this material, a little bigger than a

clenched fist between 5 kg and 20 kg in weight, could have been stored in a lead chest and welded into the bilges that would escape detection by the most thorough of our Atomic Energy Inspectors (AEI). What was absent during rummaging of the ship was an integrated team comprising of Naval Architects (who understand and live by ships' architectural drawings, its deck plans and its as-fitted-drawings) and the AEI together to note whether any cabinets (say, 2'x 2'x 2') had been embedded in the structure. After all it is nuclear material that poses the biggest hazard when dealing with a North Korean violator and no amount of orthodox rummaging is going to reveal a lead lined box secured in a fuel tank or even in (say) the sewage treatment plant.

The problem of illicit trafficking in fissile material is potentially far more dangerous (in relative terms) than the black market sale of nuclear technologies. Terrorist access to weapon grade materials would cut years from the complex process of independently producing Plutonium or Highly Enriched Uranium (HEU) not to mention the visibility of such large technology sites. Add to this is the ready availability of dual use tools and jigs such as vacuum ovens, high-end precision milling machines, titanium, maraging steel etc. that make the process of putting together a nuclear weapon (once fissile material is in hand) easy as never before.

So that the scale of the problem is clear, between 1991 and 2005 the IAEA recorded a total of 1,440 cases of illicit trafficking.⁷ Indeed, 90% of these cases did not pose a significant threat from the perspective of nuclear weapons proliferation, terrorism or the clandestine movement of weapon grade fissile material. However there were 25 credible cases of incidents involving HEU and Plutonium and in one case in 1998 there was an attempt to divert 18.5 kgs of HEU from Chelyabinsk in the Russian Federation.⁸ While there is a paucity of hard evidence of the origin of demands, it is clear that a few kilograms of fissile material are all it takes to satisfy the terrorist.

The AQ Khan affair brought into sharp focus the ease with which independent operators backed by interested States could by-pass and make a mockery of nuclear regulatory regimes. We must suffer from no illusion that, with the unravelling of the AQ Khan nuclear bazaar, India is much safer from the threat of a terrorist nuclear attack; on the contrary the surge in movement of illicit nuclear material in the last decade would suggest otherwise. Conventional wisdom governing a deterrent relationship does not work when dealing with terrorist groups; what does work is the assurance of failure through a wide spectrum of monitoring, regulatory and force

measures such as, intelligence networking, zero tolerance fissile material scrutiny, stringent and intrusive export controls, which go well beyond the terms of the toothless UNSCR 1540⁹ and most importantly the creation of integrated joint forces special impact groups that are manned and trained to take pre-emptive action. What steps we have put in place to come to grips with this challenge are not at all clear.

Security: Function of Execution and Resolve

At present no Indian port is Container Security Initiative (CSI) compliant. A CSI compliant port requires special electronic and X-ray machines to quickly scan hundreds of containers being offloaded from ships onto trucks before they move into the hinterland. The CSI targets the ingress of hazardous material such as a Radio active Dispersal Device (dirty nuclear bombs) being smuggled into cities by terrorists.

What would be apparent is that retooling existing wiring diagrams and injecting additional hardware cannot in any way replace primary imperatives; these essentials would be firstly, the need for structural changes to empower Commanders-in-Chief with unfragmented military power (26/11 witnessed one C-in-C with neither command nor control over the army or air forces in area). Secondly, the setting up of special cadres for intelligence gathering, collation, bonding with the other intelligence agencies of both State and Centre and seamless dissemination. Lastly and, most critically, the drawing up of a unified strategy that will provide the 'soul' to the coastal security scheme. In the meantime, the maritime domain remains murky, it's more vicious denizens less regulated and water-tight security at sea, chimerical.

While it may be premature to pass such a harsh judgement, it is unfathomable that after the passage of five years post 26/11 no concrete measures are in place at sea, in our harbours and along the coastline that have either enhanced surveillance or brought hard intelligence to the man at sea or indeed, inspired confidence in those that stand watch. Initiatives that have been put in place are more tactical and those which have been enabled are through creativity and imagination in the field. Whilst planning and development may remain strategic we must not fall into the trap of preparing for a future even as we are rooted in an extremely precarious present. For after all security is, in the execution, a field function.

Conclusion

Our review of the current state of the coastal defence scheme and the security it provides would appear to project a disjointed image of a contrivance that depends more on a massed approach to security through the induction of numbers (in terms of human resources as well as surveillance means). While it is true that there is logic in numbers, yet the adversary is one who has perfected the art of visualising the cracks in the system. Obviously with more disparate elements involved, more cracks are there to slip in between. On 26/11, ten men with small arms came in two inflatable boats and held our financial capital to ransom for sixty hours. The mayhem in terms of loss of lives apart, the Bombay Stock Exchange closed down for the same period resulting in trading disruption of close to USD 9 billion per day. And this is the essence of the disproportionality that has been conferred. ‘Mass’ pitted against ‘Knowledge’ invariably results in victory to the latter.

The covenant between religion and the terrorist is a volatile one. It is neither appeased by bargains nor is it broken by modernity. Indeed it has fused the ideology that drives them with the source of their being (this may explain the suicide bomber). Under these conditions the only route that can succeed is the promise of failure for which, the answer lies in adopting a unified strategy both in form and content. The Footprint Matrix provides an instrument to channelize national effort. We concentrate on any one Zone at the peril of missing out on the others. Persistence is the key and adoption of large scale electronic means for profiling, surveilling, collating and analyses is a necessity.

The nuclear dimension is potentially, the most destructive present danger. While a nuclear strike may present a very complex planning task, our adversaries have shown themselves to be up to the most challenging, the most improbable and yes, the most diabolic. The establishments’ facility to deter, defend and respond will test its will to the extreme.

There appears to be an absence of a guiding national strategy and a coalescing doctrine which seeks to marshal all disparate resources controlled by State and Centre under integrated Command. If our primary strategic goal is to protect against dangerous people and the ingress of illicit hazardous material then this goal must serve to transform the existing organizational and material structures. The litmus test to ascertain credibility lies firstly, in the extent to which we have a cohesive unified

strategy in place and developed a joint surveillance and pre-emption capability. And secondly, as the Fortress of Murud Janjira did, have we made the local seas present an insuperable obstacle to every foe that seeks to penetrate? Clearly the answers on both counts must remain in the negative.



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End Notes

¹ Hoiberg, Dale & Ramchandani, *Students' Britannica India*. Publishers Popular Prakashan 2000, p

¹ Hoiberg, Dale & Ramchandani, *Students' Britannica India*. Publishers Popular Prakashan 2000, p 403. <http://www.maharashtratourism.gov.in/MTDC/HTML/MaharashtraTourism/Forts>

² Territorial Seas were first defined in the 18th century as 3 nautical miles, the maximum range of a cannon shot. A workable formula was found by Cornelius Bynkershoek in his *De dominio maris* (1702), restricting maritime dominion to the actual distance within which cannon range could effectively protect it. This became universally adopted and developed into the three-mile limit.

³ See United Nations Convention on the Laws of the Sea (UNCLOS) 1982. The Convention on the High Seas is an international treaty created to codify the rules of international law relating to the high seas, otherwise known as international waters. The treaty was one of four treaties created at the United Nations Conference on the Law of the Sea (UNCLOS I). The treaty was signed 29 April 1958 and entered into force 30 September 1962. As of 2013, the treaty had been ratified by 63 states. Oceans, seas, and waters outside of national jurisdiction are also referred to as the high seas or, in Latin, *mare liberum* (meaning *free seas*).

⁴ A public law in the USA enacted in October 2001, Providing Appropriate Tools Required to Intercept and Obstruct Terrorism (PATRIOT Act) to deter and punish terrorist acts in the United States and around the world, to enhance law enforcement investigatory tools, and for other purposes.

⁵ The matrix was first presented by the Author at “The Seminar on Coastal Security” hosted by the National Maritime Foundation, New Delhi, in November 2009.

⁶ The MV Musan was a North Korean Freighter whose movements were deemed suspicious and was first seized and detained at Port Blair and then taken to the port of Kakinada for rummaging in August 2009.

⁷ “Nuclear Black Markets: A Net Assessment” *The International Institute for Strategic Studies*. 2007.

⁸ *Ibid.*

⁹ UNSCR 1540 passed in 2004 requires all nations to implement strict export control legislation to prevent proliferation of weapons of mass destruction.