DISSERTATION

# An Evaluation of Security Management in the Exclusive Economic Zone of Puntland, State of Somalia

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Submitted March 2003

20,000 words

Student Number 3537

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ABSTRACT

Research Objectives This study sought to establish the validity of an original security management model as a tool of analysis and instrument of authority in facilitating a structured approach to Exclusive Economic Zone security design. It did this by applying the model to an ambitious fisheries management initiative undertaken in the Puntland, State of Somalia Exclusive Economic Zone during the period November 1999 - February 2001. Research set out to establish what had been going on in this region during the life cycle of the Fisheries Management Programme. It aimed to validate the proposed model and to identify cogent lessons to be taken forward in support of emerging political and commercial initiatives along the coast of East Africa.

Research Methods Research incorporated a triangulation of methodologies by combining literature review, questionnaires/interviews, and a detailed case study of security management in the Puntland, State of Somalia Exclusive Economic Zone. This generated a rich matrix of primarily qualitative data that was comprehensively coded in accordance with criterion adapted from Manunta's Security System. This adapted system was taken forward as the primary tool of data analysis, using axial codes based on the United Nations Conference on the Law of the Sea to generate limited quantitative results.

Results Analysis strongly validated the proposed security management model by clearly identifying asymmetry in the planning and implementation of the Puntland Fisheries Management Programme. This asymmetry suggested that weaknesses in intelligence and communications were the

prime failings in management design that eventually led to the Programme's withdrawal. Research also identified an over-focus on operational capability in terms of deterrence.

Conclusions The study concludes that security management in the Exclusive Economic Zone of Puntland, State of Somalia was carried through diligently and effectively, but that the Fisheries Management Programme stalled as a result of poor intelligence, limited communications and the inability to generate sufficient income from licensing fees. It is strongly suggested that the effectiveness and authority of security management in Exclusive Economic Zones can be significantly enhanced through application of the proposed model (or a derivative from it) during design and implementation.

# CHAPTER ONE

## Introduction[1]

## Area of interest and problem to be studied

The right of individual countries to establish Exclusive Economic Zones (EEZs)[2] extending up to 200 nautical miles offshore is enshrined in Part V of the United Nations Convention on the Law of the Sea (UNCLOS)[3], which was published on 10 December 1982 and finally ratified during November 1994.

Physical enforcement of this right is a well-established principle robustly implemented by most countries that border the sea. However, the effectiveness of implementation methods may be seen as asymmetric in that the poorest nations appear to suffer the highest levels of illegal fishing, piracy and other forms of criminal activity within their EEZs. These activities can have serious implications for innocent parties transiting offshore, and places such as the Malacca Straits and the Horn of Africa have developed unenviable reputations as 'pirate-infested waters' (Mueller and Adler, 1985: 20).

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[1] Information used throughout the Introduction was obtained primarily during precursor research interviews with relevant staff from Hart (Nimrod) Bermuda Limited, the Puntland International Development Company and MHCRS Limited. The CEO of Hart Nimrod, Lord Westbury Richard Bethell MBE) gave explicit permission for all staff to facilitate this research. A copy of relevant e-mail correspondence is included at Appendix One.

[2] The Exclusive Economic Zone [hereafter referred to as the EEZ] provides a geographical area within which the coastal State has sole rights to 'exploit, develop, manage and conserve all resources - fish or oil, gas or gravel, nodules or sulphur - to be found in the waters, on the ocean floor and in the subsoil of an area extending 200 miles from its shore' (United Nations, 1998: www).

[3] The United Nations Convention on the Law of the Sea [hereafter referred to as UNCLOS] is 'an attempt by the international community to regulate all aspects of the resources of the sea and uses of the ocean, and thus bring a stable order to mankind's very source of life' (*ibid*).

It is easy to assume that this asymmetry is symptomatic of available financial resources. Richer nations can afford to deploy comprehensive (and expensive) EEZ enforcement assets. They have navies, air forces, coastguards and customs agencies. They are technically accomplished and 'plugged-in' to international intelligence agencies that facilitate interdiction of maritime criminal activity. They patrol the seas and control shipping in a comprehensive manner, and have the financial resources to pursue wrongdoers through the international courts where required.

To a degree this is true. It is certainly the case that much comment and discussion about illegal fishing and piracy in the Third World focuses upon the question of establishing an 'international navy' or 'task force' to combat these problems (ibid: Dedication). Such comment seems to perpetuate the idea that if we throw money at the issue it will eventually go away.

But is this realistic? Is it likely that we will ever see the establishment of an international maritime capability along these lines, even with the recent emergence of transnational terrorism onto the international political agenda? Lack of political consensus for such a force would suggest not. It is difficult to see the major powers shouldering such a significant financial commitment in areas where they have little strategic interest, whilst bodies such as they United Nations (constrained as they are by both cash-flow and the requirement for broad political consensus prior to action) are simply not in a position to provide this kind of capability.

So is there another way? Is there an alternative model or methodology that may be effectively applied in the security management of Third World EEZs, one that is cost effective, has a realistic chance of being embraced by the nations concerned, and is likely to be supported by the international community?

This was a question given careful consideration by a private security company during the late 1990s in the context of an emerging commercial

opportunity in northern Somalia. The company in question, Hart Nimrod (Bermuda) Limited[4], identified a management model based on fisheries protection that enabled the deployment of an ambitious development programme to the Puntland State of Somalia during the period November 1999 to February 2001. This programme, which included the deployment of a British-flagged Fisheries Patrol Vessel to the Indian Ocean, enjoyed considerable operational success in this difficult region before its eventual suspension. Had it continued, the benefits to Puntland could have been highly significant in allowing one of the world's poorest regions to re-emerge into the international economy after many years of isolation.

Given the operational success of the Fisheries Management Programme and its positive effect on maritime security around the Horn of Africa, this dissertation will address the question of why the Programme eventually failed; extract relevant lessons for the construction of a robust security management model that may be used for future programmes of a similar design; and make recommendations for further research to facilitate emerging initiatives along the coast of East Africa and elsewhere.

## The Puntland State of Somalia

Following the withdrawal of the United Nations mission to Somalia (UNOSOM)[5] in (1994/1995), the country quickly degenerated into a state of civil war. This condition lasted until 1997, by which time some 20% of the population had been either killed or wounded. At the end of the civil war, the country splintered into five quasi-autonomous regions based generally on ancient tribal borders. The northeastern region incorporating the Horn of Africa reverted to its previous name of Puntland, and in 1998 its peoples

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[4] Hart Nimrod (Bermuda) Limited [hereafter referred to as Hart Nimrod] is a Private Security Company formed specifically to conduct maritime operations in support of the Puntland, State of Somalia Fisheries Management Programme and other regional initiatives in the western Indian Ocean, Gulf of Aden and Red Sea.

[5] The deployment of UNSOM followed the US-led mission *Restore Hope*, launched in response to an emerging humanitarian crisis in Somalia during 1991. Its withdrawal was precipitated by the evacuation of US Forces in 1994 and the apparent unwillingness of local leaders to re-establish a central government following the fall of the Bare regime in 1993.

democratically elected Col Abdullahi Yusuf Ahmed[6] as President (PIDC, 1999: 2).

Ahmed, a 68 year-old intellectual who had spent many years in Ethiopian and Somali prisons as a supporter of democratic principles, formed a government that began to sound-out opportunities for the commercial development of Puntland's natural resources: minerals (including oil), livestock, frankincense, salt and fish (ibid: 1-3).

At this time, Farah Said (the grandson of Somalia's last king) formed a business delegation that visited Puntland at the President's invitation. This delegation included as its CEO a British expatriate who had lived and worked in Oman for more than 30 years. This character was, and is, an accomplished businessman who assisted Oman to emerge successfully from its own civil war during the 1970's, and who enjoys an intimate understanding of regional politics as they affect business interests.

This delegation identified the requirement to secure income from the exploitation of Puntland's natural resources as a precursor to the development of physical infrastructure such as roads, government facilities and public amenities. It was felt that, given the intrinsically unstable nature of the local economy and the poor regional security situation, the only way this could be effectively achieved would be to establish an international development company that could implement emerging business strategy on behalf of the government.

With the agreement of the President, the Puntland International Development Company (PIDC)[7] was formed in mid-1999 to attract international investment and facilitate the implementation of a

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[6] At the time of writing, Ahmed retains tenuous political control of Puntland as it faces renewed aggression from rival entities from the south, and from the territorial ambitions of Somaliland to the west.

[7] The Puntland International Development Company [hereafter referred to as PIDC] comprised a small management team of entrepreneurial businessmen who had an intimate knowledge of Somali culture, and who were personally acquainted with relevant characters in Puntland.

comprehensive Fisheries Management Programme for Puntland's oceanic and coastal waters. Headed-up by its CEO, and with Farah Said as a figurehead, PIDC identified fisheries management as being the best start point for regenerating the Puntland economy. As existing fish stocks were already being exploited by the international fishing community, it was assessed that securing licensing fees would prove easier, and possibly less risky, than attempting to establish business infrastructure onshore during the early stages of economic development.

PIDC was accordingly tasked by the Puntland Government to commission the design of a Fisheries Management Programme and oversee its implementation at the earliest possible date. To this end, Hart Nimrod was introduced to the project during the summer of 1999, and on 29 September that year was mandated to implement a full Fisheries Management Programme.

Initial analysis by the company identified the key issues as being 'political risk, the legality of a State within a country implementing its own EEZ, achieving a programme capable of being implemented in an environment deemed one of the most hostile in the world, and financing the operation' (Hart Nimrod, 2000: 5). Each of these issues would, in turn, come to challenge the subsequent management of the project.

The Fisheries Management Programme

Hart Nimrod embarked on an ambitious and dynamic programme for the establishment of a comprehensive management plan. It was agreed with both PIDC and the Puntland Government from the outset that the Programme should draw its legitimacy from international law, that it should conform to guidelines set out by the Food and Agriculture Organisation (FAO)[8] of the United Nations, and that it should move forward during its initial phases on a self-financing basis.

[8] The Food and Agriculture Organisation of the United Nations [hereafter referred to as the FAO] has been assisting administrations in developing countries for several years to address the issues they confront in managing their fisheries (Flewwelling, 1995: 1)

On taking legal advice from a team of top international maritime lawyers in the UK[9], it quickly became apparent that there was a strong legal basis for the establishment of a Puntland EEZ. A declaration was therefore published by the President during September 1999 claiming jurisdiction over 'the fishery contained within that part of the Somali 200 mile Exclusive Economic Zone as adjoins the Puntland State of Somalia', and further declaring 'a closure to all fishing vessels of whatever nationality or type for a period of one month' from 1 January 2000 (H.E. Abdullahi Yusuf Ahmed, 1999)[10]. The declaration also claimed entitlement to financial remuneration for the issue of fishing licenses issued subsequent to 1 February 2000. This declaration was lodged with appropriate authorities within the United Nations, and disseminated widely to the international fishing community, the fishing media, and to relevant governments.

It was clear from the outset that jurisdiction over the declared EEZ could only be enforced through a process of monitoring and control. Given that the total area of the offshore EEZ was calculated as approximately 160,000 square kilometres (PIDC, 1999: 6), this would be a considerable undertaking. Working through its legal advisors, Hart Nimrod drafted comprehensive Rules of Procedure for the conduct of a Monitoring, Control and Surveillance (MCS)[11] system that would allow it to enforce Fisheries Regulations being published by the Puntland Government. These Rules of Procedure, which were drafted strictly in accordance with FAO guidelines, covered such issues as the operation of a Fisheries Patrol Vessel and boarding parties, inspection procedures, arrest procedures and the processing of detained vessels.

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[9] Hill Dickinson of Pearl Assurance, Liverpool, UK (Scudder, 2000: 50)

[10] A copy of the President's Declaration is included at Appendix Two.

[11] The basic needs for fisheries Monitoring, Control and Surveillance [hereafter referred to as MCS] operations normally include vessels that can remain at sea with the fishing fleets... and an adequate coastal support infrastructure (Flewwelling, 1995: 5).

In close consultation with the Puntland Government, it was decided that foreign nationals would be permitted to advise, train and assist in establishing a credible patrol capability throughout the EEZ. Working to a deadline of 1 February 2000, a small team of security consultants deployed to Bosaso in northern Puntland during November 1999. This team was hosted by the Puntland Government and afforded the physical protection of the Puntland Marine Force. The initial task of the team was to select and train a group of 70-80 personnel from the Marine Force who could be deployed offshore in support of a Fisheries Patrol Vessel. A selection and training regime lasting approximately six weeks was devised, and run to a successful conclusion by mid-January 2000.

Prior to the deployment of the Hart Nimrod training team, there had been little if any Western presence in Bosaso or Puntland generally since the breakdown of central government in Somalia during 1993. Diplomatic representation in the former State of Somalia had been virtually non-existent since the subsequent withdrawal of the United Nations mission. Following initial scepticism from a number of locals, the Hart Nimrod presence at Bosaso became a focus for political and business development on a number of fronts.

During early February 2000, a British flagged ship was purchased by Hart Nimrod in the UK and deployed through the Suez Canal to Bosaso. Half of the Marine Force was embarked and, with a small team of security personnel from Hart Nimrod acting as Fisheries Protection Officers, she commenced operations as a Fisheries Patrol Vessel off the east coat of Puntland.

The MV Celtic Horizon was an 1800 ton ex-North Sea stern trawler previously owned by J Marr Limited[12] that, since the early 1980's, had

[12] J Marr Limited is an old and well-respected maritime company based in Hull, UK. Marr was at one time the owner of the UK's leading deep-sea fishing fleet. Following the 'Cod Wars' of the early 1970s, the company survived by a process of diversification. Today it is engaged in activities such as fisheries protection, geodesic survey and offshore resupply

been acting primarily as a geodesic survey platform. With the physical profile of a fishing boat and fitted out with extensive accommodation below, she was well suited to the role of Fisheries Protection. Her crew was primarily British, mostly ex-fishermen themselves, and they brought with them an extensive knowledge of the fishing industry that proved invaluable in establishing an effective patrol capability.

The Celtic Horizon was well equipped with ARPS surveillance radar, satellite communications and three high-powered Rigid Inflatable Boats that could be utilised for interdiction operations. Her principle limitations were her age, high fuel consumption and relatively slow speed, all factors that were to have a significant effect on the sustainability of the MCS operation.

Initial expectations that the Fisheries Patrol Vessel would quickly encounter sizeable fishing fleets operating to the east of Puntland proved unfounded, and the early weeks of patrol activity saw her steaming around the EEZ in a fruitless search for boats fishing illegally.

An initial assessment was made that most craft from the international fleets had left the area in response to the President's declaration and moratorium on fishing, and that the arrival of the Fisheries Patrol Vessel would in all probability act as a deterrent for a period of time to those intent on continuing their illegal activities. It was also felt, however, that the fleets at this point had only two choices if they were to return to the Puntland EEZ: purchase a license or run the risk of detention and subsequent prosecution. Given the assumed abundance of fish stocks in the area, a general abandonment of the fishing grounds by the international fleets was considered to be inconceivable.

During the early days of the Fisheries Patrol Vessel deployment, several trawlers of approximately 500 tons displacement were seen

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to the oil exploration industry. Marr provided guidance and advice to Hart Nimrod during the early stages of the Puntland project.

operating some 20 miles offshore to the south of the Horn of Africa. Attempts to approach these vessels proved unsuccessful due to the Patrol Vessel's relatively slow speed. This cat-and-mouse game continued until the end of March 2000 before an approach close enough to launch two intercept craft manned by Fisheries Protection Officers and members of the Marine Force was achieved.

On closing the trawlers, which this time were heading north along the continental shelf towards the Horn of Africa, the intercept craft came under automatic small-arms weapons fire at a range of about one nautical mile. This represents the extreme effective range of such weapons, and the 'beaten zone' around the Rigid Inflatable Boats was spread over some hundreds of metres.

One burst of fire straddled the intercept craft accurately, and a member of the Marine Force was struck in the upper thigh by a 7.62mm high velocity round, probably fired from an AK 47. The round passed clean through the victim's leg, missing both bone and major blood vessels. At this point the Marine Force gave up the chase and limped back to the Fisheries Patrol Vessel, which was by now some miles away. The two trawlers continued north past the Horn of Africa, shaping a course for the port of Aden in Yemen.

Subsequent intelligence revealed that the boat which opened fire was 24 Oktober III, owned and operated out of Aden by a Somali businessman known as Hassan Munya. Munya was reported to have taken control of five trawlers from the port of Mogadishu in Somalia after the collapse of the Siyad Bare regime in 1991 (Scudder: 2000: 51). He was said to be based in Aden, but spending much of his time in London where his children were attending school.

Mr Munya was approached in London by senior executives of Hart Nimrod and representatives of the Puntland Government a short time after

this incident. Initial consternation quickly gave way to recognition of the Fisheries Programme's legality, and an acceptance that business dynamics suggested he should purchase fishing licenses for each of his five vessels. This he agreed to do, and in a short period of time the Munya fleet was providing valuable additional intelligence to the MCS operation. This intelligence suggested that the Munya fleet had been acting as a primary catalyst in causing piracy incidents around the Horn of Africa.

Piracy

The emergence of modern-day piracy is a well-documented phenomenon that has grasped the interest of the news media and caused anxious moments for many skippers and crew around the world. Whilst it is true that the expression pirates 'often conjures up the vision of colourful 17th century swashbucklers battling oppressive naval establishments and inhuman conditions at sea' (Gray, Monday & Stubblefield, 1999: 9), modern piracy is indeed anything but romantic. The United Nations Convention on the Law of the Sea defines piracy as consisting of any of the following acts:

> *(a) any illegal acts of violence or detention, or any act of depredation, committed for private ends by the crew or the passengers of a private ship or a private aircraft, and directed:*
>
> > *(i) on the high seas, against another ship or aircraft, or against persons or property on board such ship or aircraft;*
> >
> > *(ii) against a ship, aircraft, persons or property in a place outside the jurisdiction of any State;*
>
> *(b) any act of voluntary participation in the operation of a ship or of an aircraft with knowledge of facts making it a pirate ship or aircraft;*
>
> *(c) any act of inciting or of intentionally facilitating an act described in subparagraph (a) or (b).*
>
> *(UNCLOS, 1982: Article 101)*

Intelligence received by Hart Nimrod personnel from Munya himself, local personalities, and from artisanal fishers along the coast of Puntland suggested that the prime reason for so-called acts of piracy were directly linked to ‘protection’-type operations undertaken by Munya and other characters engaged in fishing these waters.

In Munya’s case, operating his fleet of trawlers close inshore inevitably resulted in occasional contact with local fishermen. The catches enjoyed by these artisanal fishers were purchased at ‘bottom dollar’ rates by Munya to supplement the fishing potential of his own vessels. Wherever he encountered dissention, he would threaten and occasionally punish using physical force to achieve his aim of securing cheap lobster and other catches for sale on lucrative European markets. Where locals offered resistance, his craft would move close inshore and ‘shoot-up’ remote villages such as Hafun and Eyl with ZSU 23/4’s and other heavy weapons. This would create great frustration and anger within local communities, who in turn would attack passing ships either in the mistaken belief they were part of the international fishing community, or to generate much-needed income for themselves.

It also became apparent that ‘fishing fleets would allow a level of complicity in Munya’s activities, either from fear or from their preparedness to accept extortion as the cheapest form of licensing’ (Hart Nimrod, 2001: 2). In short, Munya and a number of others had been engaged for many years in a variety of fisheries licensing scams whose sole basis was in the threat or implementation of illegal force.

A typical example was the detention of MV Sea Emperor at Bosaso for five years, an Italian-registered ship that had been seized by local fishermen off the Horn of Africa. The Master of the Sea Emperor had been sold a fishing license in Dubai by a former member of the Said Bare political regime who claimed that the discredited and deposed Mogadishu government still controlled the entire natural resources of Somalia.

Although all of the Sea Emperor's crew were eventually released, it is reported that the ship herself remains alongside in Bosaso gradually decaying whilst locals argue over her ownership.

During 1999 there were 11 reported piracy incidents off the Horn of Africa (Coffen-Smout, 2002: www). A number of these resulted in death or injury for the victims. Following implementation of the Puntland Fisheries Management Programme, the incidence of piracy fell away to just one during 2000 (Hart Nimrod, 2001: 6). How this incident was dealt with is instructive.

Whilst conducting emergency engine repairs at anchor off the Puntland coast on 8 July 2000, the French-owned cargo ship MV Med Express was boarded by armed gunmen. Seven of her crew were forced ashore and held in the village of Bargaal some 60 kilometres south of the Horn of Africa. Her Master and a further two crew members were held at gunpoint on the ship. A number of shots were fired during the boarding, but no-one was hit.

Hart Nimrod's Country Manager in Bosaso was apprised of the situation by the local Police Commissioner on 10 July. A small liaison team was dispatched to the President's Office, and the Fisheries Patrol Vessel diverted from her duties to close with the detained ship. The President directed the Marine Force on board to render all possible assistance in resolving the situation.

On the morning of 11 July, the Fisheries Patrol Vessel arrived in the area and positioned herself between the detained ship and the shore. Radio communications were established with the Master who, although clearly under duress, managed to confirm that seven of his crew were being held ashore and that he was very concerned for their safety. Working in close liaison with the Marine Force command staff in Bosaso and the President's Office, negotiations were opened with the local authorities in

Bargaal. This resulted in the seven crewmembers being secured into police protective custody.

The gunmen on the Med Express fled during the hours of darkness that night, taking with them a number of items from the ship. They were arrested by the Bargaal police the following day. A small team of Hart Nimrod Fisheries Protection Officers, accompanied by members of the Marine Force, landed ashore on 13 July. After a period of intense but ultimately successful negotiations with the local authorities and tribal elders, they recovered all seven crewmembers to the Med Express. One crewmember was treated for badly broken arms and hands sustained during a fall early in the incident, and the Med Express left the area safely the following morning bound for Djibouti.

Following the legitimising of Munya's business through his purchase of Puntland fishing licenses, Hart Nimrod personnel deployed at great personal risk across the coastal mountain range south of the Horn of Africa to take tea with a young lady known locally as the Queen of Eyl. The aim of this visit was to explain the Fisheries Management Programme and provide reassurance that the Fisheries Patrol Vessel would establish legal order throughout the region.

On arrival in Eyl, it emerged that the locals were aware of Munya and very angry towards him. By way of reparation, Munya undertook to provide provisions and supplies to a number of isolated coastal villages at his own expense. Delivery of these items (which included many tons of pasta, Munya's craft being regularly resupplied from Italy) was facilitated by the Fisheries Patrol Vessel and the Marine Force. This helped in re-establishing Munya's credibility as a legitimate businessman and restoring regional stability along a dangerous coastline.

Infrastructure put in place as part of the Fisheries Management Programme clearly played a large part in resolving the Med Express

situation in a timely and peaceful manner. It also facilitated key risk communication initiatives with isolated coastal communities. Whilst not mandated to conduct anti-piracy operations, Fisheries Management personnel and the Fisheries Patrol Vessel provided a de facto policing presence that has specific relevance to the analysis presented in this paper.

Development of the Fisheries Management Programme

The lack of major fishing vessels in the area continued to puzzle senior managers of the Fisheries Management Programme. At this point the Fisheries Patrol Vessel was sighting large shoals of tuna heading steadily north towards the Horn of Africa, but no vessels of any significant size were reported within the Puntland EEZ. This situation continued through until mid-April 2000, when a large craft was observed on radar apparently searching for potential catches in the southeast region of the EEZ. This vessel was eventually caught inside the EEZ with her nets deployed.

The Albacora Cuatro was a large purse seiner[13] operating from the Seychelles along the East African coast. This vessel had more than 600 tons of tuna frozen-down in her holds, and a mixed nationality crew led by a core team of Spanish fishermen. She was detained for 48 hours, during which her Spanish owners made legal representations to Hart Nimrod in London. A fine was paid, set at the cost of an annual license fee, and the vessel released. She and several of her sister ships subsequently returned to fish on a licensed basis.

Throughout the remainder of 2000, levels of fishing within the Puntland EEZ steadily increased as confidence began to build within the international fishing community that the Puntland Fisheries Management Programme was being run responsibly and on a firm legal basis. However, overall sales of licenses remained disappointingly low, and financial returns

[13] Purse seiners are the Rolls Royces of the international fishing industry. Capable of high speeds, they are reported to be very difficult to catch and capable of securing catches worth millions of US dollars a week.

being generated were barely enough to sustain the operation in its infant form. This in turn meant that projected development of local infrastructure in Bosaso to support the Fisheries Management operation and facilitate investment initiatives had to be put on hold.

By the end of 2000, the entire project was suffering significant cash-flow restrictions that, in time, would cause insurmountable problems. However, in the context of this research it is highly important to note that, starting with the Munya issue, the operation was having the unexpected regional effect of curtailing the incidence of piracy around the Horn of Africa. The presence of the Fisheries Patrol Vessel was also having the desired effect of peventing illegal fishing.

Conclusion of the Fisheries Management Programme

By early 2001, the Hart Nimrod/PIDC initiative was running out of steam due to lack of funds. The international fishing community had failed to turn up off the Horn of Africa in numbers sufficient to sustain the operation at its inception level. Those that were fishing the area were paying a reduced licensing fee, and some were electing not to return for a second year. Meanwhile, the price of world oil was increasing, making the Fisheries Patrol Vessel increasingly expensive to operate.

To the west of Bosaso, the neighbouring Republic of Somaliland (a breakaway State of the former Somalia) was making threatening noises over Puntland's territorial integrity. Reluctantly, Hart Nimrod and PIDC announced a temporary halt to the Fisheries Management Programme. MV Celtic Horizon withdrew to Malta during February 2001, where she remains berthed awaiting her next commission.

There are a number of obvious reasons why the Fisheries Management Programme failed at this stage. Lack of capital finance is the leading cause, and there can be little doubt that lack of money forced the commercial entity Hart Nimrod to call a hiatus in the project.

But are there more subtle lessons to be taken from the Puntland experience that can be applied either within the former State of Somalia or more widely elsewhere? Is there a way of taking the Hart Nimrod/PIDC model, strengthening it and then offering it as a solution to the internecine and insidious problems of illegal fishing, piracy and offshore criminality in the most difficult areas of the world?

These are questions worth asking, for as yet the world at large has demonstrated little interest in helping to any significant degree these poorest of nations, who remain exposed to the illegal commercial exploitation of their natural resources.

Key Areas for Research and Analysis

To examine this question, research was conducted in the following key areas:

- The structure of the Puntland Fisheries Management Programme and how processes of security management were embedded within it
- The reasons why the Programme stalled

This dissertation sets out primarily qualitative data drawn from research findings to refine and validate the following:

- A proposed model for the future security management of EEZs along the coast of East Africa

- Recommendations for further research and analysis

# CHAPTER TWO

## Research Methodology

### Research Instruments

According to Macdonald (2001: 208), the achievement of research validity requires a triangulation of research strategies. Research for this dissertation therefore incorporated the principles of methodological triangulation as detailed by Denzin (1970). Cross-method triangulation was achieved through the utilisation of unstructured interviews and coded questionnaires with a relevant sample of personnel; the undertaking of a comprehensive case study of Puntland's Fisheries Management Programme and the structure of security management in its EEZ; and through a limited review of existing literature. As the research primarily aimed to identify *what* has been going on, it may also be seen as *descriptive* in nature (MSc Module 3, Unit 5.2: 5-5).

### Unstructured interviews

The aim of an unstructured interview is 'to elicit rich, detailed materials that can be used in qualitative analysis' (Lofland, 1971: 76 quoted in Fielding, 1993: 137). Unstructured interviews were conducted on a face-to-face basis with those personalities listed in Table 1, during the period October 2002 - February 2003. These interviews examined a broad range of subjects, including reported crime levels, security management strategies, training for both security managers and subordinate staff, and the infrastructure of Puntland's EEZ security management.

Interviews with a retired deep sea fisherman/maritime consultant who provided much of the original data upon which the Fisheries Management Programme was based and a retired inshore fisherman who chaired the Southeast England Fishermens' Federation touched upon the same

subjects, but also examined issues such as the practicalities of fisheries monitoring and control from a professional fisherman's perspective.

Although interviews were conducted on an unstructured basis, the interviewer was careful to ensure that questioning remained tightly bounded by the rational choice perspective, and that discussion paid due heed to the requirements for subsequent data coding (MSc Module 3, Units 6, 7 and 8). The interviews were carried out at locations of the interviewee's choice, and were digitally recorded with the interviewee's permission.

Questionnaires

A questionnaire[14] of hybrid design was forwarded to the characters listed in Table One, with the exception of Mr Laurie Gilson who had no involvement in the Puntland Fisheries Management Programme. A 100% return rate was achieved. The questionnaire was designed to allow the following:

- Identification of imbalance and inconsistencies in security management of the Puntland EEZ

- Establishment of 'attitude continuums' (MSc Module 3: 6.6.2) towards security management in the context of the Puntland Fisheries Management Programme

- Causality for the failure of the Fisheries Management Programme

- Expression of individual opinions across a range of issues linked to a chosen systems methodology in the context of security management

[14] The research questionnaire incorporated the principles of informed consent and anonymity where required. A number of questionnaires were returned with a stated requirement for the respondent's anonymity. This has been respected. A copy of the questionnaire may be found at Appendix Three.

Questions were carefully targeted to ensure that they were relevant to the experience of the population sample. Recommendations for the formulation and structure of questionnaires as set out in MSC Module 3 Unit 6 were carefully followed, and the questionnaire was piloted towards two additional members of Hart Nimrod's staff before being forwarded to the personalities at Table One. This process of piloting proved useful in refining questions and eliminating ambiguity. The questionnaires were completed and returned during February 2003.

Literature Review

It was recognised that any literature study was likely to be limited in its scope, and that as a consequence the research ran the risk of generating commensurately limited levels of 'external validity' (MSc Module 3, Unit 1: 1-20). Care was therefore taken in designing analysis on a qualitative basis, and results coded accordingly.

Of principle interest to the scope of this research were the following publications:

- Official publications and technical papers

  The United Nations Convention on the Law of the Sea (United Nations, 1982: ratified into international law 1994)

  An Introduction to Monitoring, Control and Surveillance Systems for Capture Fisheries (Food and Agriculture Organization of the United Nations, 1995)

- General reading

  Outlaws of the Oceans (Mueller & Adler, 1985)
  Issues in Maritime Crime (Gill Ed, 1995)
  Maritime Terror (Gray, Monday & Stubblefield, 1999)
  Dangerous Waters (Burnett, 2002)

These publications formed the backbone for the literature review, together with the majority of papers and publications detailed in the study's bibliography. Additionally, a large number of papers, manuals and

operating procedures produced by Hart Nimrod were comprehensively reviewed to form background information for this study.

## Analytical Framework

The research problem set out to be descriptive in design, aiming to generate a high degree of internal validity. It achieved this primarily by conducting a detailed case study of the Puntland Fisheries Management Programme in the analytical context of *rational choice theory*. Research methodology was structured using rational choice assumptions about human behaviour, ie that 'we make rational calculations based on the costs of each alternative' (Turner, 1991). The framework for questions used in primary research embraced concepts such as those identified by Lynch, where 'exposure, guardianship, target attractiveness and proximity to offenders may increase the potential for crime' (Lynch, quoted in Fisher, Jenkins & Williams, 1998:65).

A second analytical perspective applied to the research was that of *risk communication*. It was hypothesised that a lack of communication between central authorities in underdeveloped nations, local populations (particularly where they are geographically isolated) and the various actors at work within an EEZ would impact negatively upon perceptions and understanding of risk in terms of crime. Research sought to establish levels of dialogue existing between actors, analysing this in the context of a security management policy.

A final analytical perspective used was that of *impact evaluation*. This sought to establish the effectiveness of different EEZ management actions in meeting needs or solving problems inherent in combating crime.

## Sample Population

Time and financial constraints dictated that the sample population for the purposes of research be deliberately kept small. In accordance with the

requirement to generate a high level of internal validity, research was designed to be operationally concentric, ie targeted primarily towards those responsible for formulating, managing and implementing the Puntland Fisheries Management Programme.

Additional efforts were made to co-opt relevant personalities and bodies outside the Programme, but these proved largely fruitless. Personnel who were initially identified as potential gatekeepers (those who could 'provide an "in" into areas that might not be accessible to the researcher' (MSC Module 3, Unit 4: 4-11)) were either unavailable or disinclined to render assistance. The reasons for lack of co-operation are uncertain, and due regard must be given to this specific limitation when reviewing the findings of this study.

Due to the lack of success in gaining access to personalities from outside the Programme, significant efforts were made to ensure that material examined in the literature review and at interview was comprehensively coded in the context of qualitative assessment. It is felt that this process has assisted to some degree in generating acceptable levels of external validity to the project's findings. Because of this, the literature itself should properly be seen as an actor in the sample population. Table 1 sets out principle characters in the sample population:

Table 1: Sample Population

| Company/ Organisation | Position | Name | Age | Q* | I** | Remarks |
|---|---|---|---|---|---|---|
| Puntland International Development Company | CEO | Withheld | | Yes | No | Original point of contact for Puntland. Based in Oman |
| Hart Nimrod (Bermuda) Ltd | CEO | Lord Westbury (Richard Bethell MBE) | 51 | Yes | Yes | Architect of the Programme |
| | Director of Operations | George Simm DCM | 49 | Yes | Yes | Executive manager of the Programme |
| | Operations Manager | Withheld | | Yes | Yes | Administrative manager |
| | Country Manager | Withheld | 49 | Yes | Yes | Based in Bosaso |
| | Senior Fisheries Protection Officer | Withheld | 45 | Yes | Yes | Based on board the Fisheries Patrol Vessel |
| | Fisheries | Withheld | 43 | Yes | Yes | Based onboard the |

| | | | | | | |
|---|---|---|---|---|---|---|
| | Protection Officer | | | | | Fisheries Patrol Vessel |
| MHCRS Limited | MD | James Hind | 58 | Yes | No | Maritime Consultant and retired UK deep-sea fisherman |
| Southeast England Fishermens' Federation | Chairman | Laurie Gilson | 69 | No | Yes | Retired UK inshore fisherman |

* Questionnaire competed?
** Interview conducted?

Manunta's Security System

The detailed analytical framework, including that employed during subsequent evaluation, was based on the over-arching concept of a systems approach to security management. For the purposes of this dissertation, the system of choice was Manunta's Security System (MSc Module 1, Unit 1: 18). This allows for *controls* to be exerted across a number of inter-linked criteria including *structures, systems, procedures, intelligence* and *people.* Use of Manunta's System facilitated a cohesive and bounded approach to both research and analysis. Results have been comprehensively coded on this basis.

Taking Manunta's system as the basis for structuring research and analysis, it is important that specific definitions are set out:

- Control The power to direct (Collins English Dictionary, 2000: 170).

- Structures The pattern of interrelationships within an organisation, society, etc; an organised method of working, thinking or behaving (*ibid*: 828). Can include physical entities such as countries and marine environments, or conceptual/political entities such as the United Nations, governments or states.

- Systems A method or set of methods for doing or organising something; the manner in which the parts of something fit or function together (*ibid*: 848). Can include agreements such as the United Nations Charter on the Law of the Sea.

- Procedures  A way of doing something, especially an established method (*ibid:* 652).

- Intelligence  The collection of information; news or information [itself] (*ibid:* 418); can be hidden or secret information.

- People  Persons collectively or in general (*ibid:* 604); either in the context of individual actors, or components of a *structure,* eg country, government, commercial company etc.

Coding

Open coding, ie 'the unrestricted coding of the data' (Strauss, 1987: 28) was not felt to be wholly appropriate to research being conducted in the context of a pre-selected management system, although the raw data presented by interview transcripts could certainly be coded in this manner as part of further research. Axial coding was therefore used to 'stimulate thinking about linkages between [the] concepts or themes' (Neuman, 1997: 424) presented by Manunta's System, the aim being to use this form of coding to generate both qualitative and quantitative data and in doing so identify imbalance or asymmetry between data blocks. Selective coding was used in the final stages of analysis to cluster results and lend weight to research findings.

Applying the concept of axial coding to the highest level of analysis during early stages of the literature review, it was possible to identify specific criteria that could then be used as a structural basis for pre-coding the full literature review, the interviews, and the questionnaires. Taking UNCLOS as the highest legal basis for the conduct of Fisheries Management Programmes and the security that necessarily goes with them, axial coding was applied to the Convention's preamble[15]. The preamble sets out the over-riding criteria by which the signatory States

[15] A coded copy of the UNCLOS preamble may be found at Appendix Four.

Parties agree to implement the Convention's Articles. This process allowed the establishment of the coding criteria set out in Table 2:

Table 2: Axial Codes[16]

| Manunta Cluster[17] | Element[18] | Description | Axial Code[19] | Remarks |
|---|---|---|---|---|
| 1. Controls | United Nations Convention on the Law of the Sea (UNCLOS) | The legal base from which national authorities draw legitimacy for conducting security operations within their Exclusive Economic Zones (EEZs) | 1.1 | |
| | International Law | The rules and principles that govern matters relating to EEZs not regulated by UNCLOS | 1.2 | |
| | National jurisdiction | Area of legal jurisdiction extending up to 12 nautical miles offshore | 1.3 | Over which individual nations/ states have inalienable control |
| | International jurisdiction | Area of legal jurisdiction in accordance with International Law extending across the High Seas and not regulated by UNCLOS | 1.4 | |
| | Extended jurisdiction | Area of national legal jurisdiction extended by UNCLOS | 1.5 | Limited by the requirements of International Law |
| | Legal order | The adherence to legal controls as set out by the United Nations and national legislation | 1.6 | |
| 2. Structures | States | Geographic areas controlled by a central authority. May or may not be formally recognised by the United Nations | 2.1 | - May be referred to as *States Parties* in the context of UNCLOS |
| | Nations | Geographic areas with central governments. Recognised by the United Nations as being homogenous and sovereign | 2.2 | |
| | Territorial sea | Area of sea extending up to 12 nautical miles offshore in accordance with UNCLOS Articles 3-5 | 2.3 | Over which individual nations/ states have inalienable control |

[16] Axial codes are based on the United Nations Convention on the Law of the Sea (UNCLOS) preamble.

[17] Manunta's Security System comprises six distinct features, known here as *clusters.* For the purposes on analysis, clusters are numbered 1-6.

[18] Each cluster comprises as number of *elements.* For the purposes of analysis, each element is allocated an axial code related to its cluster, eg 1.6.

[19] *Axial codes* were allocated to relevant question used during research, and were used as a tool of analysis during the literature review.

| | | | | |
|---|---|---|---|---|
| | Exclusive Economic Zone | Area of sea extending up to 200 nautical miles offshore in accordance with UNCLOS Article 57 | 2.4 | |
| | Coast | Littoral area from the low water mark of the sea extending inshore an indeterminate distance | 2.5 | |
| | Airspace | Air extending over geographical areas falling under national control | 2.6 | Includes airspace over the territorial sea and that over the EEZ in question |
| | Marine environment | Area extending from the coastal high water mark offshore across the fullest extent of the oceans | 2.7 | May be subject to descriptive limitation, eg 'the Puntland EEZ marine environment' |
| | Entity | Company, corporation, government body or professional community | 2.8 | |
| 3. Systems | Utilisation of resources | Use of available resources in conducting the Fisheries Management Programme | 3.1 | |
| | Protection of the marine environment | Facilitating the physical security of the marine environment | 3.2 | |
| | Study of the marine environment | Collection of scientific data on the marine environment | 3.3 | |
| | Preservation of the marine environment | Minimising ecological damage to the marine environment | 3.4 | |
| | Conservation [of fish stocks] | Minimising over-fishing within the Exclusive Economic Zone | 3.5 | |
| 4. Procedures | Codification | Systematic compilation of rules and procedures | 4.1 | |
| | Development | Refining and further codification in the light of experience | 4.2 | |
| | Declarations and Resolutions | Instructions passed out nationally and internationally, based on domestic or international law | 4.3 | Especially of the United Nations |
| | Justice | Procedural instruments by which declarations, resolutions and statutes are reinforced | 4.4 | Both national and international |
| 5. Intelligence | National/internal communication | Passage of cogent information between interested parties within a state, nation or entity | 5.1 | |
| | International/external communication | Passage of cogent information between states, nations or entities | 5.2 | |
| | Open source information | Gained from publicly available sources | 5.3 | |
| | Closed source information | Gained from secret or obscured sources | 5.4 | |
| 6. People | Staff | Of companies, corporations, | 6.1 | |

| | | | | |
|---|---|---|---|---|
| | | government bodies or professional communities | | |
| | Illegal exploitation and/or criminality | Those engaged in conducting illegal exploitation of resources and/or criminality | 6.2 | Such as piracy, extortion, pollution etc |
| | Legitimate exploitation | Those engaged in conducting legitimate exploitation of resources | 6.3 | Such as licensed fishing etc |
| | Progress | Those proactively engaged in political dialogue and activities that enhances progress within the context of UNCLOS | 6.4 | A negative (-) indicates the opposite |
| | Peace | Those proactively engaged in political dialogue and activities that enhance the prospects of peace within the context on the United Nations Charter | 6.5 | A negative (-) indicates the opposite |

The axial codes linked to the model's elements thus identified were used in drafting the comprehensive questionnaire forwarded to the survey sample listed in Table 1. Given that the questionnaire set out to establish facts, solicit comment and generate a mix of quantitative and qualitative data to be measured using 'ordinal Likert scaling' (MSc Module 3: 5.10), it was possible to ensure that each code was covered at least once by a relevant question.

Coding clusters were deliberately employed in structuring the questionnaire to incorporate rational choice theory, risk communication and impact evaluation into the analytical framework. These clusters are summarised in Table 3. The codes were also used to comprehensively analyse interview transcripts.

Table 3: Axial Coding Clusters (numbers of questions)

| Axial code | Questions identifying fact | Questions soliciting comment | Questions requiring Likert scaling |
|---|---|---|---|
| 1.1 | 2 | 5 | 3 |
| 1.2 | 2 | 3 | 1 |
| 1.3 | 3 | 6 | 3 |
| 1.4 | 1 | 4 | 3 |
| 1.5 | 1 | 3 | 2 |
| 1.6 | 2 | 2 | 1 |
| 2.1 | 2 | 3 | 1 |
| 2.2 | 1 | 1 | 1 |

| | | | |
|---|---|---|---|
| 2.3 | 1 | 1 | 1 |
| 2.4 | 1 | 4 | 3 |
| 2.5 | 1 | 1 | 1 |
| 2.6 | 1 | 1 | 1 |
| 2.7 | 1 | 5 | 5 |
| 2.8 | 7 | 11 | 8 |
| 3.1 | 4 | 7 | 6 |
| 3.2 | 3 | 5 | 3 |
| 3.3 | 1 | 3 | 2 |
| 3.4 | 2 | 4 | 2 |
| 3.5 | 1 | 3 | 2 |
| 4.1 | 3 | 4 | 2 |
| 4.2 | 3 | 3 | 2 |
| 4.3 | 1 | 1 | 1 |
| 4.4 | 2 | 1 | 1 |
| 5.1 | 4 | 9 | 5 |
| 5.2 | 2 | 5 | 5 |
| 5.3 | 2 | 1 | 1 |
| 5.4 | 2 | 1 | 1 |
| 6.1 | 1 | 6 | 6 |
| 6.2 | 3 | 4 | 2 |
| 6.3 | 1 | 4 | 3 |
| 6.4 | 3 | 6 | 3 |
| 6.5 | 2 | 4 | 4 |

Likert Scaling

Likert scaling was averaged between the questionnaire returns and projected as tables and charts[20]. Results were clustered to establish findings in the context of a recognisable security system and conclusions drawn on a primarily qualitative basis. Use of this system allowed the identification of attitude continuums in the context of Manunta's Security System. This in turn facilitated an assessment of security management within the EEZ in relation to criteria identified in the UNCLOS preamble as previously described.

Implementation

The research for this dissertation was implemented over a four-month period between October 2002 and February 2003, but with a six-week hiatus during December and January due to unavoidable professional commitments overseas. It was conducted partly by post and e-mail, partly by face-to-face interview and partly by independent study of available literature. Findings were analysed during late February/early March 2003,

[20] See Chapter Three

and the dissertation written up during mid-March 2003. The completed dissertation was submitted to the University of Leicester on 29 March 2003.

# CHAPTER THREE

## Results

| Manunta Cluster | Axial Code | Element | Averaged Score | Averaged Cluster Score |
|---|---|---|---|---|
| 1. Controls | 1.1 | United Nations Convention on the Law of the Sea (UNCLOS) | 5.69 | 7.85 |
| | 1.2 | International Law | 8.25 | |
| | 1.3 | National jurisdiction | 8.31 | |
| | 1.4 | International jurisdiction | 8.31 | |
| | 1.5 | Extended jurisdiction | 8.31 | |
| | 1.6 | Legal order | 8.25 | |
| 2. Structures | 2.1 | States | 8.62 | 7.11 |
| | 2.2 | Nations | ~~1.00~~ | Discounted |
| | 2.3 | Territorial sea | 6.62 | |
| | 2.4 | Exclusive Economic Zone | 8.29 | |
| | 2.5 | Coast | 7.25 | |
| | 2.6 | Airspace | ~~1.00~~ | Discounted |
| | 2.7 | Marine environment | 6.22 | |
| | 2.8 | Entity | 5.65 | |
| 3. Systems | 3.1 | Utilisation of resources | 6.27 | 6.66 |
| | 3.2 | Protection of the marine environment | 7.42 | |
| | 3.3 | Study of the marine environment | 5.12 | |
| | 3.4 | Preservation of the marine environment | 7.00 | |
| | 3.5 | Conservation [of fish stocks] | 7.50 | |
| 4. Procedures | 4.1 | Codification | 7.69 | 7.90 |
| | 4.2 | Development | 5.93 | |
| | 4.3 | Declarations and Resolutions | 9.50 | |
| | 4.4 | Justice | 8.50 | |
| 5. Intelligence | 5.1 | National/internal communication | 7.98 | 6.49 |
| | 5.2 | International/external communication | 5.00 | |
| | 5.3 | Open source information | 6.50 | |
| | 5.4 | Closed source information | 6.50 | |
| 6. People | 6.1 | Staff | 6.94 | 6.60 |
| | 6.2 | Illegal exploitation and/or criminality | 7.75 | |
| | 6.3 | Legitimate exploitation | 6.40 | |
| | 6.4 | Progress | 3.64 | |
| | 6.5 | Peace | 8.25 | |

| Overall Averaged Score | 7.10 |
|---|---|

# CHAPTER FOUR

## Discussion

### Overview

There can be no doubt that Monitoring, Control and Surveillance (MCS) is an essential part of any EEZ management strategy. The United Nations FAO has identified MCS as 'important to the implementation of any oceans-related policy, in particular for fisheries management' (Flewwelling, P, 1994: 1), setting out the following useful definitions in the context of fishing:

> (i) Monitoring - the continuous requirement for the measurement of fishing effort characteristics and resource yields.
> (ii) Control - the regulatory conditions under which the exploitation of the resource may be conducted.
> (iii) The degree and types of observations required to maintain compliance with the regulatory controls imposed on fishing activities.
> (FAO, 1981: quoted *ibid:* 7)

The Puntland Fisheries Management Programme set out detailed Rules of Procedure that were based largely on guidelines published by the FAO. These procedures were diligently enforced, but the Programme suffered from an inability to generate sufficient funds from licensing fees to sustain it for much more than a year. This key limitation, which was not foreseen, proved to be fatal to what was, by any measure, an ambitious commercial initiative undertaken in one of the world's most difficult and unstable regions.

The primary research conducted in support of this study sought to establish what had been going on in the Puntland EEZ; deploy an existing management system as a tool of analysis; solicit qualitative comment from the primary actors involved in managing security within the Puntland EEZ; identify levels of success and failure measured against a structured axial

coding system that drew its authority from UNCLOS; establish areas of strength, weakness and asymmetry across the existing security management system; suggest an adaptive management model that could be deployed more effectively during the future development of the Puntland Fishery; and make recommendations for further research.

Questionnaire scores were balanced to reflect a positive effect on the Fisheries Management Programme (higher scores) or a negative effect (lower scores). It was thus possible to aggregate all scores allocated to axial codes and establish an overall score for the Programme in the context of Manunta's Security System. This mean score, otherwise known as the *central tendency* (MSc Module 3: 8-6), emerged as 7.10 across an ordinal Likert scale of 10(+) - 1(-)[21].

The established central tendency of the Puntland Fisheries Management Programme suggests that, given a projected statistical forecast of 5.5 as the Likert scale mean (*ibid: 8-7)*, the Programme achieved overall results that were reasonably successful. This simplistic summary is a useful indicator that the Programme was generally on the right tracks, but deeper analysis reveals significant asymmetry across the various axial codes that comprise the management model. These are dealt with in detail following the literature review.

## Literature Review

The reasons for conducting a literature review have been identified as 'an aid to the area of research; to designing and doing the research; to analysis; and to findings and conclusions [of the research]' (MSc, Module 3: 3-8).

Although there has been much written about fisheries management, EEZs and MCS operations, there appears to be little formal literature

[21] See Figure 1, Chapter Three.

available on the specific geographical area of interest to this study. With this in mind, and with the prime aim of facilitating the identification of a cogent methodology that could be used to analyse the subject area as a whole, a limited literature review was conducted during the period September 2002 - February 2003.

Given the paucity of meaningful engagement between foreign governments, aid agencies and international business with the former State of Somalia since the withdrawal of the United Nations mission in 1994/5, it is unsurprising that there appears to have be little academic literature on the region published over the last ten years. This was a specific problem encountered by Hart Nimrod and PIDC in formulating the Fisheries Management Programme. It is also the case that the fishing industry itself is notoriously circumspect in sharing information beyond the immediate environs of its own commercial activity.

With this in mind, the literature review was conducted in accordance with strict criteria set out in advance, and with very narrow aims. Principle amongst these was an attempt to establish sufficient baseline data required for the construction of a robust security management model that may be utilised in EEZs such as that of Puntland, State of Somalia.

Official Publications

UNCLOS was signed by the government of Somalia when it was first published in December 1982, but could not be enacted into national law in 1994 in common with the rest of the States Parties due to the collapse of central government It is a comprehensive document that sets out numerous definitions, descriptions, provisions and principles that govern the oceanic waters of the world. These are enacted as Articles to the Convention. The Articles provide a legal framework for various activities that may be undertaken in national territorial waters, EEZs and on the high seas.

A large part of the Convention is concerned with conservation and management of the ocean's resources. However, a significant proportion is also dedicated to securing the safety of ships and personnel as they undertake legitimate activities at sea or in coastal regions. Security plays a large part in this, and the Convention details specific responsibilities delegated to the authorities of nation States and coastal regions.

UNCLOS also sets out in considerable detail the rights of littoral entities to establish EEZs. These rights formed the basis of the Puntland Fisheries Management Programme as implemented by Hart Nimrod in conjunction with PIDC and the Puntland, State of Somalia Marine Force, for in the EEZ the coastal state has:

> (a) sovereign rights for the purpose of exploring and exploiting, conserving and managing the natural resources, whether living or non-living, of the waters superjacent to the seabed and of the seabed and its subsoil, and with regard to other activities for the economic exploitation and exploration of the zone, such as the production of energy from the water, currents and winds;
>
> (b) jurisdiction as provided for in the relevant provisions of this Convention with regard to:
>
> > (i) the establishment and use of artificial islands, installations and structures;
> > (ii) marine scientific research;
> > (iii) the protection and preservation of the marine environment;
>
> (c) other rights and duties provided for in this Convention
> (UNCLOS, Article 56)

The principle significance of UNCLOS as a whole is that it provides a legal framework for the conduct of MCS operations within the EEZ.

Although procedural methodology necessarily varies from one State to another (being largely based on available resources), the Convention's Articles describe in some detail the rights and limitations imposed upon governments as they extend their national jurisdictions beyond the confines of their territorial waters. These rights and limitations were essential in allowing Hart to draft Rules of Procedure that could be substantiated when challenged at law:

> There could be no question of us deploying to Puntland to conduct interdiction operations against fishing boats without proper rules governed by international law. This was always a prime consideration in putting the whole project together. The executives at Hart did a great job... and when the Marine Force arrested the Albacora Cuatro[22] her owners were quick to roll-over and pay the fine. They also bought a license, so we saw her back in the EEZ again later on.
> (Senior Fisheries Protection Officer, 2002: Interview)

An Introduction to MCS Systems for Capture Fisheries (UN FAO: 1995) formed the backbone for the Rules of Procedure used in conducting the operational aspects of the Fisheries Management Programme. Comprehensive axial coding of the text in the context of Manunta's Security System demonstrated clearly that any fisheries management system must be balanced across the full spectrum of its activity. Any imbalance is likely to skew the system's effectiveness by reducing efficiency and compounding the criticality of those areas it fails to accommodate.

Quantitatively, the book was very strong on conservation measures and procedural techniques, which is hardly surprising as it emanates from the United Nations FAO and is intended as a management guide to MCS operations. However, qualitative analysis highlights a strong editorial

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[22] The *Albacora Cuatro* was a 1700 ton Spanish-owned purse seiner operating out of the Seychelles. She had a mixed crew headed by Spanish fishermen. At the time of her arrest, she had some 600 tons of tuna on board

strand that emphasises the importance of avoiding the creation of unenforceable legislation:

> Unenforceable legislation, or that which is not understood nor acceptable to the fishers, rapidly destroys the credibility and support for a government in its efforts to conserve it fisheries resources. Such legislation usually results in active subversion of its intended benefits by the fishers and the fishing industry.
> (Flewwelling, P. 1995: 6)

This view is strongly reinforced by the view of personalities such as Laurie Gilson, a retired inshore fisherman and Chairman of the Southeast England Fishermens' Federation:

> When you work a by-catch system for herrings in a directed fishery for herrings, you're not allowed more than a 10% by-catch for cod. So if you're after herring but have 100 stone of cod and you've only got 50 stone of herring, you've got to chuck almost all of the cod away. You can't keep it. Now, that's got to be wrong.
> (Gilson, 2002: Interview)[23]

As Gilson further observed, in such circumstances the fisherman will find a way to ensure he can land and sell the by-catch regardless of the rules, unless there is a system in place that prevents him from doing so. This observation is central to the Hart experience off Puntland in that 'without the deployment of the Fisheries Patrol Vessel, nothing would have been achieved' (Operations Manager, 2002: Questionnaire, Q34).

The lesson from this is that fisheries management programmes must be thought through at all levels during the conceptualisation phase, and that MCS design must reflect a systems approach to management rather than being operationally concentric.

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[23] A copy of the Gilson interview transcript has been included at Appendix Five for the purposes of illustrating axial coding methodology.

The FAO publication assisted Hart in structuring the Puntland Fisheries Management Programme, but research data suggests that its prime use was in facilitating operational procedures rather than contributing significantly to the broader design considerations required for a balanced MCS management model.

Technical Papers

Concepts, Definitions and Methodology (FAO, 2003: 1.1.1, www)[24] sets out useful definitions and descriptions for the component elements of MCS operations. It is interesting to note that these definitions lend themselves well to axial coding, and have been utilised in analysing the effectiveness of the Puntland Fisheries Management Programme. The paper also suggests four major effects and activities that should act as the cornerstones for operational management policy:

- Enforcement To compel observance of the laws
- Compliance To act in accordance with the [fisheries] regulations
- Detection Act of discovering a fisheries violation
- Deterrence To discourage, or hinder [through the application of] penalties (eg fines or confiscation of fishing gear) and peer pressure from within the fishing community

(ibid)

The paper further sets out a structured analysis of how the costs of MCS models may be allocated to facilitate realistic capital projections during the design phase of the project. Although costs clearly played a significant role in the Puntland Fisheries Management Programme, the necessarily limited scope of this study has precluded analysis of the project's financial profile.

[24] *Concepts, Definitions and Methodology* has been included at Appendix Six to facilitate further research should it be undertaken.

Pirates, Warlords and Rogue Fishing Vessels in Somalia's Unruly Seas (Coffen-Smout, 1999: www)[25] provides the only readily-available official account of the recent situation along the Somali coast. Although written primarily in a journalistic style, the author's observations are based on his participation in a 'six-week United Nations inter-agency assessment mission to Somalia in February-March 1998' (ibid) and a reasonably comprehensive review of literature available at the time.

Coffen-Smout's account is useful in setting out the overall political background and the situation off Puntland's coast immediately before implementation of the Fisheries Management Programme. Of specific relevance are the detailed accounts of numerous piracy incidents conducted by fishermen and militia from the geographically isolated Puntland town of Eyl to the south of the Horn of Africa, and from Bosaso on Puntland's northern coastline during the period January 1998 - March 1999.

Given Hart's claim that the incidence of reported piracy during the deployment period of the Fisheries Patrol Vessel (February 2000 - February 2001) dropped to just one, and that this incident was dealt with effectively by the Programme's Marine Force (Hart, 2002: 4), this strongly supports a principle finding from the research undertaken during this study: that fisheries MCS operations have the overall effect of establishing and reinforcing a broad-based legal order throughout their areas of extended national jurisdiction.

The paper is also clearly states that fishing vessels from numerous nations had been operating off the Somali coast. These fleets included vessels from Japan, Spain, France, Korea, Kenya, Pakistan, Taiwan, Saudi Arabia, Sri Lanka and Yemen, usually operating 'flags of convenience'[26].

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[25] Coffen-Smout's paper is included at Appendix Seven for reference.

[26] Flags of convenience are used by shipowners when they feel the need to avoid certain laws and regulations imposed by their own governments. Fishing boat owners will often

Interestingly, specific reference is made to Hassan Munya's fleet of trawlers based out of Aden. These had formerly been part of the Somali national fleet. One of Munya's boats is pictured in the paper fishing illegally 1.5 miles off Bosaso during February 1998, strongly illustrating the reinforcement characteristics of deploying a Patrol Vessel in support of a Fisheries Management Programme:

> If the Fisheries Patrol Vessel had not been in position to challenge Munya's fleet, he would not have embraced [legitimacy] by signing-up for fisheries licenses. It's as simple as that.
> (Lord Westbury, 2002: Interview).

Coffen-Smout's paper concludes that 'a regional approach to marine governance may act as a catalyst for wider peace in Somalia' (Coffen-Smout, 2000: www). This is a theme to which this study returns in setting out recommendations for further research.

EEZ Management Solutions (Thales Tracs, 2003: www)[27] is a short technical paper drawn from the myriad of papers that cover technical issues impacting upon EEZ management. Thales Tracs is a sub-division of a multi-discipline, multinational company (Thales) that researches and produces electronic systems and components for both government and commercial entities. Thales Tracs specialises in Geographic Information Systems, and consults routinely with various governments, the United Nations and the fishing industry in the context of MCS management programmes.

Thales Tracs products include vessel monitoring systems (VMS) based on satellite, GSM, VHF and UHF communications technologies. These can be deployed aboard licensed fishing boats to provide detailed geo-

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opt for flag states that have yet to fully ratify UNCLOS into national law, thus avoiding (in certain areas of the world) obligations that would impact upon them commercially.

[27] The Thales Tracs paper has been included at Appendix Eight as a useful start point for further research.

locational and tracking information. According to Thales Tracs, some 5000 of these units are deployed across the British and European Union fishing fleets, and the European Union's Fisheries Commissioner has described VMS as the most cost-effective fisheries management tool available (Thales Tracs, 2003: www). Used in conjunction with a carefully constructed fisheries management model, VMS can contribute greatly to the effective management of the EEZ..

The deployment of VMS systems in support of the Puntland Fisheries Programme was seen from an early stage as an essential requirement for the Programme's sustainability. Hart's Operations Director makes a fundamental linkage between technical tracking and the long-term development of the Programme:

> We knew from the outset that we couldn't afford to deploy these systems as an up-front capital investment. The [Puntland] Government was therefore advised to include this as a requirement of licensing. But we always knew it would have to come later... The most important thing was to secure license fees and cash-flow that would sustain the operation in the short term. Technical systems would allow the [Fisheries Patrol Vessel] a better picture of what was going on. (Simm, 2003: Interview)

The Thales Tracs paper, which is more an advertising document than a technical publication, describes in brief but clear detail the various types of system that may usefully be deployed in support of an MCS.

General Reading

General reading conducted in researching this project focussed primarily on books that have examined criminality in the maritime environment. Very little of this coverage looks specifically at the region in question, though Outlaws of the Oceans (Mueller & Adler, 1985) and

Dangerous Waters (Burnett, 2002) have useful passages relating to piracy in the Red Sea and off the coast of Somalia generally.

The extent of maritime crime evidenced in these publications, and particularly in the series of essays published in Maritime Terror (Gray, Monday, & Stubblefield, 1999) and Issues in Maritime Crime (Gill Ed, 1995), suggest strongly that any MCS capability should have a multi-role dimension:

> There is little agreement of what constituted maritime crime... it can include any criminal offence committed on or near water, or against maritime equipment and maritime trade anywhere in the world. In practice, it includes everything from petty vandalism... through theft of boats (which often takes on an international dimension), to fraud and piracy on the high seas.
> (Gill, Ed, 1995: 1)

In other words, there is a multiplicity of maritime crimes that need to be combated, and MCS operations have the potential to contribute across a wide spectrum of areas. Indeed, this review of literature notes that the general reading list is concerned more with targeted acts of criminality than with the rather more obscure crimes of evasion as represented by illegal fishing.

Summary

The review of available literature, though necessarily limited in its scope, was useful in helping both define and refine criteria to be applied in conducting primary research. In applying the resultant analysis model to the literature as a process of retrospective review, the utility of the model was shown to be valid as a tool of analysis. This suggests, in turn, a reasonably high level of confidence in operationalisation for the analysis model.

Questionnaires and Interviews

Discussion on the results generated by questionnaires and interviews with the research sample is best undertaken within the overall context of the primary analysis tool, Manunta's Security System. The axial codes generated to provide each Manunta cluster with a framework for deeper analysis will be discussed in turn, thus allowing contrast and comparison in terms of graded effectiveness for each element of the management system.

To recap, Manunta's Security System is broken down into six distinct areas (referred to here as clusters). These are controls, structures, systems, procedures, intelligence and people. Applying these to the United Nations Convention on the Law of the Sea preamble, it has been possible to identify distinct subheadings within each cluster. These are termed elements, and have been coded by simple convention. They are listed with tabulated mean results at Table 4, and are also graphically illustrated in Figures 1-7[28].

The overall mean score[29] of 7.10 from a Likert range of 10 (good for the Programme) to 1 (bad for the Programme) suggests that the project enjoyed general success[30]. The truth of this is reflected in the fact that the Fisheries Management Programme, and specifically the deployment of its most expensive asset, the Fisheries Patrol Vessel, was sustained for more than a year with only limited funds being generated through licensing fees and fines:

> The mandate was starting from virtual zero in every sense of that word. That it actually put into operation a creditable programme deserves much credit.

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[28] See Chapter Three.

[29] The overall mean score for the management model was arrived at by averaging the model's six individual cluster scores. It is therefore a simple representation of how well the Programme performed generally.

[30] See Figure 1, Chapter Three.

(Hind, 2003: Questionnaire Q5)

However, a simplistic grading for the Programme as a whole can provide no more than a snapshot of reality. For all its laudable aspirations, the Fisheries Management Programme eventually stalled and the Patrol Vessel was withdrawn. To identify the reasons for this in the context of the security management system, it is necessary to examine each cluster by turn and draw out lessons from each element contributing to the management model.

## 1. Controls (7.85[31])

The power to direct the Fisheries Management Programme was drawn from a number of interlinked elements that had to be woven into a legally sustainable matrix of laws, codes, procedures and operational capabilities. This should be seen as a process of education, training and finally operational deployment to establish and maintain legal order throughout the EEZ.

Controls scored the second highest for any cluster[32], at 7.85 coming in well above the overall simple average of 7.03. This would indicate that both education/training and operational deployment in the context of legal order (the sixth element within the cluster matrix) were very successful, and well above the Likert scale mean[33] of 5.5.

Taking the cluster's elements in turn, analysis of research results reveals the following:

### 1.1 United Nations Convention on the Law of the Sea (5.69[1])

It was recognised at an early stage in the Programme's development that those responsible for implementing it should be educated on their

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[31] Figures in parenthesis for whole clusters indicate the mean score of that cluster's sub-set elements.
[32] See Figure 2, Chapter Three.
[33] The arithmetic mid-point between 10 and 1.

specific obligations under UNCLOS. It was further recognised that the provisions of relevant Articles from UNCLOS would have to be written into the Programme, for:

> The coastal State may, in the exercise of its sovereign rights to explore, exploit, conserve and manage the living resources in the exclusive economic zone, take such measures, including boarding, inspection, arrest and judicial proceedings, as may be necessary to ensure compliance with the laws and regulations adopted by it in conformity with this Convention.
> (UNCLOS: Article 73)

Hart Nimrod staff were therefore careful to make strong efforts in educating Marine Force personnel and Fisheries Protection Officers on the Convention's requirements, for '[the company] was well aware that this was a most important consideration' (Hind, 2003: Questionnaire Q24). The high mean score for questionnaire returns on this issue (8.25) was, however, balanced by relatively low levels of interest (3.125) from the international fishing community in facilitating the responsible development of the Puntland Fishery within the context of modalities set out by UNCLOS.

It is very likely that there will always be a degree of tension between the somewhat utopian ideals set out by the United Nations and the rather more pragmatic attitudes prevalent within the international (and indeed national) fishing communities, who:

> Whilst sometimes libellously assumed by the ill-informed to be crooks, are perhaps best described as being as honest as the next man, but hard, individualistic businessmen running very competitive and often highly capitalised operations... Such independent minds do not always take kindly to bureaucratic controls.
> (Derham, 1987: 71-81)

### 1.2 International Law (8.25)

Although UNCLOS itself represents a codification of international law that has specifically been accepted by the signatoree States Parties for enactment into national law, there are additional rules, principles and laws that govern matters relating to EEZs not regulated by UNCLOS. These laws encompass diverse enactments such as Human Rights legislation and international law applicable to armed conflicts at sea. The latter of these, ably summarised in the San Remo Manual, sets out specific responsibilities in the context of EEZs (International Institute of Humanitarian Law, 1995).

The high mean score for this element (8.25) is an indication of the robust efforts made by Hart staff to ensure that Marine Force personnel fully understood their obligations in acting within a legal framework:

> [Marine Force personnel] were always potentially a maverick element. We lectured them; we disciplined them; we ran them time and again through situation awareness training to ensure we didn't experience any Somali insanity. By and large they responded well, the better educated amongst them taking it in turns to lecture the others on what we were saying to make sure the penny had dropped. And when we deployed, they did have good discipline.
> (Senior Fisheries Protection Officer, 2002: Interview)

As national fisheries regulations take their primary source of authority directly from UNCLOS, there was no counter-dynamic pulling this strongly positive data set back towards the arithmetic mean. It can therefore be concluded that both understanding and the enactment of international law in the context of the Puntland Fisheries Management Programme was successful.

### 1.3 National Jurisdiction (8.31)

The area of national legal jurisdiction, extending in the case of Puntland 12 nautical miles offshore, was well understood by both the Puntland authorities and by artisanal fishers operating along the Puntland coast. This was reinforced by Hart staff in 'making every effort' to further educate Marine Force personnel (Operations Manager, 2002: Questionnaire, Q24).

The importance of the Territorial Sea, as this area is formally known, lies in the inalienable controls that states may impose by invoking national laws in support of domestic policies. Although UNCLOS does impose some elements of international control within the Territorial Sea, these are more in the way of codes of conduct than statutory regulations[34]. It was important that Fisheries Protection personnel should understand implicitly that their rights beyond the Territorial Sea were limited by the provisions of UNCLOS:

> We had to impress upon these people [Marine Force personnel] that powers of detention and arrest were limited outside the 12-mile limit... and there could be no question of them acting in the way the Puntland authorities had done previously like when they detained passing ships and fishing boats for weeks and months on end. It was a tough getting the message across, but we persevered and in the end they understood. (Country Manager, 2002: Interview)

The high mean score for this element indicates that the Programme was successful in educating relevant personnel in the implications of national jurisdiction. This, combined with the regulatory framework set out in the Fisheries Regulations published by the Government, established clear delineation between national and international jurisdictions.

### 1.4 International Jurisdiction (8.31)

[34] For example, *A Code of Conduct for Responsible Fisheries* (FAO, 1994).

Education for the Marine Force and relevant personnel on the implications of international jurisdiction went hand-in-glove with that for national jurisdiction. George Simm, Hart's Operations Director, describes this process as being 'difficult in the extreme, but ultimately successful' (Simm, 2003: Interview). This is borne out by the high score of 8.31, but pragmatically it was the Hart Fisheries Protection Officers that best understood the nuances of a legal jurisdiction that extends across the seas and is not regulated by UNCLOS:

> I found it tough to get my mind around that, so I'd say the Marine Force boys found it pretty much impossible. But we were operating on the basis of giving them awareness training, ie walk through, talk through... keeping it simple, because although they weren't stupid, they were unpredictable.
> (Senior Fisheries Protection Officer, 2002: Interview)

1.5 Extended Jurisdiction (8.31)

The high score for extended jurisdiction runs in parallel with elements 1.3 and 1.4 as training was conducted on these issues at the same time. It is clear from interview comments that explaining how national legal jurisdiction is extended across the EEZ by the provisions set out within UNCLOS was the easiest element of these somewhat complex issues to get across:

> They [the Marine Force] loved the idea of having legal rights extending hundreds of miles offshore... They were grinning as we set out on that first patrol, it was like someone had opened the kid's sweetie store. My concern was never that they'd not be able to do what we asked, it was that we'd have trouble holding them back now they knew they had legal rights.
> (Senior Fisheries Protection Officer, 2002: Interview)

The complexities of jurisdictional differentiation and the niceties of law as it affected the Fisheries Management Programme were at the forefront of planning by Hart Nimrod and PIDC during the build-up to launching the project. This was always going to be a key consideration as the Programme would have to avoid the stigma attached to previous licensing scams in the area such as one that used ex-Somali government letterheads to generate bogus licenses signed by a Mogadishu "warlord" who claimed to represent the previous Bare regime (Coffen-Smout, 2000: www).

This illegal licensing scheme was run by a London-based corporation, and licenses were issued in Dubai. It was clearly important for Hart and PIDC to avoid accusations of similar impropriety, and it was for this reason that the entire Programme was based on the provisions of UNCLOS and relevant international law:

> It was so important. We had everything vetted by an internationally recognised marine law firm in the UK prior to publishing the Fisheries Regulations and the President's declaration of a moratorium on fishing. It was... an essential precursor to operational deployment of the Patrol Vessel and the Marine Force. We didn't want to end up in a court only to find we couldn't sustain our position.
> (Lord Westbury, 2002: Interview)

1.6 Legal Order (8.25)

It is the blending of the various control elements into a cohesive policy and the success of its implementation within an area of operations that establishes levels of legal order throughout an EEZ. In this, the Puntland Fisheries Management Programme can be deemed successful as illegal fishing was mostly stopped, international fishing boats operating illegally were boarded and fined, and those that chose to operate within the fishery did so in full compliance with the legal controls as set out by UNCLOS and national legislation (Simm, 2003: Interview).

The mean score of 8.25 is therefore an accurate reflection of the degree to which legal order was established across the Puntland EEZ whilst the Fisheries Patrol Vessel was deployed:

> Legal order was indeed established throughout the EEZ. We had good compliance, in the end from more than 70 international ships fishing along the Somali coast. In these terms, the project was extremely successful.
> (Lord Westbury, 2002: Interview)

2. Structures (7.11)

The various relationships, entities and areas that comprised the physical and institutional environment of the Fisheries Management Programme had to be interwoven to create a homogeneous matrix that would have both legitimacy and the best possible chance of operational success. Research aimed to establish levels of understanding and attitude continuums across a range of structures identified in the context of UNCLOS.

The cluster's averaged score of 7.11 ranked it third highest[35]. However, within the cluster polar scores of 8.62 and 5.65 indicate a considerable disparity between the various elements. Those that scored 1.0 (nations and airspace) were discarded for the purposes of statistical analysis as their use would have significantly skewed the averaged results, and because it has been judged that the questions allocated in research covering these subjects were inappropriately linked to a Likert scale response.

2.1 States (8.62)

For the purposes of this research, States were defined as geographic areas controlled by a central authority that may or may not be recognised

[35] See Figure 3, Chapter Three.

by the United Nations. Questionnaire returns made it clear that Puntland, State of Somalia, along with the bordering Somaliland to the west, was not formally recognised by the United Nations at the time of the Fisheries Management Programme.

It is interesting to note, however, that the Puntland government under President Abdullahi did not hold out for full independence. The incumbent administration was intent on the re-emergence of the Somali State, but on strictly federalist lines. A degree of regional autonomy should be retained, thus allowing the entrenchment of tribal values and ancient internal borders to remain (to a degree) in place (PIDC, 2002: 4).

Research questionnaires and interviews attempted to establish the extent to which the territorial and political autonomy of Puntland was controlled by a central authority. Likert scaling associated with the questionnaire confirmed a strong score of 8.62, thus supporting PIDC's assertion that 'Puntland is an autonomous, self-governing State' that enjoys [at the time of the Fisheries Management Programme] 'peace, being untroubled by the hostilities in the south of the country [Somalia]' (ibid).

It is this central control by a recognisable government that allowed the Fisheries Management Programme to be developed and Hart staff to deploy to the country to train relevant personnel and manage the operational aspects of the project. It must be recognised that UNCLOS talks of States mainly in the context of formal United Nations recognition: Puntland's lack of recognition therefore (at least presentationally) may have weakened the validity of the Fisheries Regulations and, by association, the Fisheries Management Programme.

However, with the Secretary General of the United Nations exhorting the indigenous peoples of littoral states to 'demonstrate to the world their intent to secure the security of their territorial seas' and urging 'African

governments to unite to protect their marine and coastal environments' (Annan, 1998: quoted in Coffen-Smout, 2000), Hart's stated aim to 'create a secure coastline, demonstrate internationally a desire for law and order and engender nationally positive feelings of hope, commitment and belief that things can improve' (Hart, 2000: 1) may have the effect of reinforcing Puntland's claim to conditional independence awaiting the reconstitution of the Somali State. This premise remains untested at this stage and is identified as an area for further research.

### 2.2 Nations (1.0)

Apart from ascertaining that Puntland had no recognition as an independent nation (though it has already been established that its government had no aspirations to such recognition), this element remains untested for the purposes of this research. Its null score of 1.0, which relates directly to the question of formal United Nations recognition, has therefore been discarded from the research data set.

### 2.3 Territorial Sea (6.62)

The importance of Puntland's Territorial Sea was well understood by relevant personnel, as evidenced by the high mean score allocated to element 1.3 (national jurisdiction). Research findings indicate that the Fisheries Patrol Vessel conducted a significant amount of policing activity within the Territorial Sea that was additional to her mandated role. Such policing was focused on anti-piracy:

> [Which] emerged as a side-effect: and developed through direct liaison with Hassan Munya, a Somali businessman operating fishing boats from Aden... We resolved actual piracy situations peacefully, and deterred that sort of stuff.
> (Country Manager, 2003: Questionnaire, Q55-58)

This emergent responsibility within the territorial sea and the EEZ attracted the attention of regional media correspondent Brian Scudder:

> The Puntland Government has taken matters into its own hands. It has contracted a Somali company, the Puntland International Development Corporation [sic], to deal with the problem of piracy and illegal fishing. PIDC has in turn contracted... Hart, which is currently working from Bosaso.
> (Scudder, 2000: in Gulf Business, 51)[36]

Scudder's article is interesting in that it provides a useful overview of the Hassan Munya piracy issue, though its findings appear to be taken mainly from an interview with Hart's Operations Director, George Simm.

Given the high levels of maritime criminality in Puntland waters identified during the literature review, the fact that only one such incident occurred during the deployment of the Fisheries Patrol Vessel is a clear indicator that security management within the EEZ had the specific and quantifiable effect of all but eradicating piracy. It had the further effect of reducing illegal fishing to near-zero (certainly amongst the international fleets) and reinforcing confidence amongst artisanal fishing communities:

> Tea with the Queen of Eyl was a strange experience, but these people were very glad to see us. They knew of Munya... hated him actually, but were willing to accept his pasta. We put that ashore from the Celtic Horizon though - even though he'd bought licenses his people still weren't welcome ashore.
> (Fisheries Protection Officer, 2002: Interview)

## 2.4 Exclusive Economic Zone (8.29)

The fundamental importance of the EEZ, managed in accordance with UNCLOS principles, has been well documented in this study. As much of the Fisheries Management Programme was conducted operationally within and through this area, its importance as a structure cannot be over-stated.

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[36] A copy of Scudder's article may be found at Appendix Nine.

Research findings, together with qualitative analysis and coding of official publications in the literature review, reveal that the greatest emphasis in MCS (and particularly in fisheries management) is the conservation of fish stocks. Establishment and control of the EEZ plays a key role in this, for it extends a nation's jurisdiction across a quantifiable and demarcated area of the high seas. It effectively sets the stage upon which actors can engage (with the legitimacy of international law supporting them) in managing resources and establishing an operational security matrix. The effect of the EEZ is therefore twofold: it sets the geographic stage; and it provides a conceptual framework for extended jurisdiction.

This cluster's high averaged score of 8.29 reflects this importance, and indicates that the rights defined and implied by the establishment of the Puntland EEZ were well understood (9.125), as was the importance of controlling over-fishing by the international fleets (9.125). This latter understanding appears to be common throughout the fishing community:

> When I first saw... monofilament nets on French boats, I said if that's allowed, that will be the end of fishing in the North Sea. And that's proved to be the case. Monofilament fishing - being able to cover several miles of ground from a small boat - is detrimental to the fishing industry. It's no good. So if it's banned, you're half way there.
> (Gilson, 2002: Interview)

Less emphasis was given to controlling other criminal activities within the EEZ such as smuggling and wilful pollution. The score of 6.625 is a direct reflection of the anti-piracy tasks the Fisheries Patrol Vessel and Marine Force undertook, and of the unexpected reigning-in of Hassan Munya's aggressive activities. However, these were not directed or mandated tasks.

## 2.5 Coast (7.25)

The coast of Puntland had two very important roles as a structure within the Fisheries Management Programme. Firstly, it provided the inshore boundary to the territorial sea which, as there are no significant river outlets from the interior along its length, was of value in constraining inshore activity. Secondly, it harboured isolated coastal fishing communities that had to be educated about the Programme:

> Extensive efforts were made [to]... educate these people. We put a team of Hart personnel and Marines across the mountains to Eyl and Bargaal, very small and isolated villages on the east coast. They were challenged many times on the way in, but no-one was hurt. It helped a lot, and when the Med Express was hijacked we used those relationships to help resolve the situation.
> (Country Manager, 2002: Interview)

The effectiveness of security management along the Puntland coast can be linked directly to the vastly reduced incidence of piracy and violent attacks on passing shipping during the Programme's operational deployment. This could have been further enhanced had the Programme developed further:

> We intended putting out OPs [observation positions] at intervals along the coast manned by Marines. This would have enhanced the patrol capability of the FPV [Fisheries Patrol Vessel]... it would have given us extended ears and eyes, and cheaply.
> (Simm, 2003: Interview)

In terms of situational crime prevention and rational choice theory as set out by Clarke (1997: 11), this measure would have established a series of capable guardians overlooking (with the Fisheries Patrol Vessel in position) a defensible space.

## 2.6 Airspace (1.0)

No use was made of airspace in support of the Fisheries Management Programme due to lack of funds. It therefore remains untested as a structure, and its null score of 1.0 discarded from the research data set.

## 2.7 Marine Environment (6.22)

The Puntland EEZ marine environment was, immediately prior to the deployment of the Fisheries Patrol Vessel, thought to be of highly significant interest to the international fishing community:

> [It was believed to be] very commercial in respect of seasonal tuna fishing activity by the Spanish and French tuna fleets, and equally for bottom fishing by Far East countries.
> (Hind, 2003: Questionnaire, Q48)

Given that maritime crime in this region tended to be 'perpetrated in the main against boats that are fishing, or against other vessels transiting the area' (Senior Fisheries Protection Officer, 2002: Interview), this projected fishing potential is highly significant. However, experience demonstrated that either this assumption was inaccurate, or that the arrival of the Fisheries Patrol Vessel had scared the fishing fleets away:

> So the ship [the Fisheries Patrol Vessel] arrived, took on board the Marine Force and we headed off around the Horn of Africa expecting to find dozens, even hundreds of fishing boats. But there wasn't any. The cupboard was bare. And that's how it stayed for months.
> (Senior Fisheries Protection Officer, 2002: Interview)

This clearly demonstrates that the commercial potential of the marine environment plays a crucial part in generating criminal activity. If there were indeed no fish at that time of year, there was unlikely to be any fishing boat activity and therefore no targets for criminals or pirates to attack. Clarke and Homel (1987) identify 'target removal' as being a method of

reducing anticipated rewards for the criminal. Lack of fish, however, is hardly a process of situational crime prevention: in the context of the Puntland Fishery it is more appropriately a function of flawed intelligence gathering.

Research data identifies that projections of the Puntland fishery's commercial potential were generally felt to be inaccurate, scoring just 3.125. This was one of the lowest data scores taken from the questionnaire returns, and has significance to the findings of this study.

The marine environment provides an unbounded arena upon which, under which, through which and over which criminal activities may take place. Its characteristics will define the types of criminal activity most likely to occur, and it is subject to geographical bounding only by physical coastlines or the arbitrary limits set by artificial concepts such as Territorial Seas or EEZs. Security management is therefore likely to effect its characteristics by limiting or enabling exploitation of its natural resources, and by providing 'capable guardians' such as Fishery Patrol Vessels to control its accessibility as already evidenced by Clarke (1997: 11).

Security management facilitates the marine environment's physical security. Research findings show that the physical security of the marine environment was accorded an exceptionally high priority when putting the Fisheries Management Programme together (9.75). Less importance was attached to minimising damage within the environment (8.124), and less importance yet was associated with the collection of scientific data (4.375).

2.8 Entity (5.65)

For the purposes of this analysis, entities comprise companies, corporations, government bodies and professional communities such as the international fishing fleets. Entities are staffed by employees and appointees who are generally trained or socialised to engage in attitudinal norms extant within their various communities. As such, it is unsurprising

that research returns reflected a wide range of attitudes spread across the various entities engaging as actors within the EEZ.

Low scores were allocated to the international fishing community (2.375 and 3.125) in terms of its willingness to engage in responsible development of the Puntland fishery. This would indicate a willingness to accept the risk of detection and detention rather than pay for a fishing license, an attitude that may be seen as endemic amongst the fishing community ‘as they never wish to pay and won’t pay if it can be avoided’. (Hind, 2003: Questionnaire, Q50).

A very low score of 1.5 was allocated to the effectiveness of the Puntland authorities in controlling criminality in its territorial sea prior to implementation of the Fisheries Management Programme, but this increases significantly to 7.5 when conducting fisheries protection duties with the Fisheries Patrol Vessel. Understanding of the EEZ and the potential benefits the Programme could bring scored a high 9.125 once appropriate training had been conducted by Hart. This suggests that education, training and appropriate resourcing were key components in structuring security management to support the Programme.

However, there were significant reservations over the economic effectiveness of the Marine Force. This is indicative of poor budgeting and/or planning rather than a reflection on the utility of the Marine Force itself, as generally high scores shows their effectiveness cannot seriously be in doubt.

It is clear from both axial coding scores and detailed comments secured during research that the various entities associated with the Programme were generally influenced through a combination of education and the demonstration of an effective security capability.

3. Systems (6.66)

Systems are primarily concerned with the operational implementation of policy. They are usually operationally concentric, focusing very much on the practicalities of conducting actions capable of achieving directed aims.

The systems cluster scored an average of 6.66. This was somewhat below the mean[37], but research data suggests that this was primarily due to an operational imperative that necessarily limited the Programme's early activities to simple patrolling. This limitation was due almost exclusively to budgetary constraints:

> The most important thing... was to establish a presence offshore and put the fishing fleets on notice that they could no longer get away with doing it [illegal fishing]. The rest could all come later, data collection, landing returns etc. We needed cash-flow to sustain the operation first, then we'd be in a position to develop things in a more sophisticated way.
> (Simm, 2003: Interview)

Analysis of the cluster's individual elements reveals interesting asymmetry:

### 3.1 Utilisation of Resources (6.27)

The principle resource or asset available to the Fisheries Management Programme was the Fisheries Patrol Vessel. By Hart's own admission, the MV Celtic Horizon was essential to the success of the operation. Without her, or another craft capable of sustained operations in an ocean environment, there would have been no incentive for the international fishing fleets to purchase a license, and no way of policing the EEZ.

The ship's deployment was seen to be very effective in terms of achieving these primary aims, scoring an exceptionally high 9.125. The

[37] See Figure 4, Chapter Three.

arrest of the Spanish purse seiner Albacora Cuatro in April 2000 was a clear demonstration of her operational potential, and 'the absence of illegal fishing vessels' (Hind, 2003: Questionnaire, Q35) throughout 2000 and into 2001 achieved one of the central aims of the Programme.

However, there were serious reservations about the Fishery Patrol Vessel's overall utility. Whilst the effectiveness of her presence in the context of the Fisheries Regulations was undeniable, she was slow, difficult to maintain and highly uneconomical. A low score of 2.125 coded against her economic characteristics was a reflection of high fuel consumption and an inability to cover ground quickly:

> She was desperately expensive. Hundreds of thousands of dollars a go to refuel, and that had to be done in Aden. We could see money disappearing faster than we could generate it. She was too big, too old, too slow and too heavy... With hindsight, we should have settled for something smaller and faster, we were poorly advised on that. (Simm, 2003: Interview)

It was also the case that the MV Celtic Horizon, an ageing ex-North Sea stern trawler, was mechanically difficult to maintain. She suffered 'regular difficulties with her air conditioning', making her 'almost impossible to live on during the summer months' in tropical latitudes (Senior Fisheries Protection Officer, 2002: Interview), and her crew struggled to maintain her in an operational state of repair. Inevitably, 'the difficulties in operating her in a region almost barren of the most basic support services occasioned higher cost levels than could possibly be anticipated' (Hind, 2003: Questionnaire, Q36).

The MV Celtic Horizon was the most important and effective physical security resource that the Programme owned. It is ironic that she became a fatally expensive liability to the Programme's sustainability.

The principle entity that could be deployed as a resource was the Marine Force. It has already been established that the Marine Force was effective in carrying out its mandate in support of the Fisheries Management Programme. However, it was seen to be uneconomical. This appears to have been principally due to its size, as there were 'just too many of them' (Operations Manager, 2003: Questionnaire, Q39). Given that they were being paid 'greatly in excess of Puntland's GDP', earning wages 'more applicable to senior white collar workers' (Simm, 2003: Interview), they proved to be more expensive than the finely balanced finances of the project could stand.

With hindsight, the Marine Force could have operated effectively at half its strength. However, it must be borne in mind that their security duties would, had the Programme developed in accordance with the original business plan, have been broadened to incorporate port security, coastal observation and the protection of government infrastructure. The Marine Force enabled the Fisheries Protection Programme by providing internal security; it was also a 'severe financial liability in itself' (Simm, 2003: Interview).

### 3.2 Protection of the Marine Environment (7.42)

The protection of the marine environment was always seen as the Programme's prime responsibility, being allocated the second highest averaged score (9.5) across the entire data set. It has already been seen how controls and structures combined to provide the physical and legal framework for policing action, and how the efficient (and not so efficient) utilisation of resources supported this security function. It is therefore interesting to note that the effectiveness of procedural measures put in place to achieve this over-riding aim was scored at a relatively low rate of 5.875. This suggests that the ability of the Programme as a whole in providing wide-ranging protection for the marine environment was to some degree limited.

Research has established that the Fisheries Patrol Vessel conducted some policing activities within both the territorial sea and the EEZ that were additional to her Fisheries Management Programme responsibilities. These activities appeared to have been limited to counter-piracy:

> We were there to control fishing. As a spin-off we found ourselves confronting pirates... I suppose we could have tried to stop smuggling of weapons and other contraband too, and illegal immigrants, but [for] that we'd have needed a faster boat, and probably [over]-flights to be effective. And our crew suggested an anti-pollution role too.
> (Senior Fisheries Protection Officer, 2002: Interview)

It is the absence of these expanded roles that limits protection of the marine environment as a whole. The Marine Force, however, were allocated a medium level score 6.625 in conducting counter-piracy operations, an implied task that had the effect of restoring a degree of regional security.

### 3.3 Study of the Marine Environment (5.12)

Although scientific study of the marine environment was acknowledged in the Fisheries Regulations as being highly important to the sustainability of the Puntland fishery, 'the main objective of the Programme was to establish a Monitoring, Control and Surveillance system to counter the widespread illegal fishing by international fleets' (Hind, 2003: Questionnaire, Q7).

Given the limited capital funding available to the project, such study could only be viewed at the outset as an esoteric aim for the future. Research findings support this view, with questionnaire respondents allocating it an averaged score of 4.375. This is balanced a little by the score of 5.875 allocated to the effectiveness of procedures that protected the marine environment as a whole, but the overall result is indicative of the relatively low importance accorded to this subject.

3.4 Preservation of the Marine Environment (7.00)

Research shows that minimising ecological damage to the marine environment was well understood as being of fundamental importance to the Puntland fishery's sustainability. This is evidenced by a high score of 8.125 being allocated to the question of how seriously such considerations were viewed when structuring the Programme. That less confidence was displayed in the Programme's ability to deliver on overall capability in this context (5.875) is likely to be a reflection of limited resources and the defining of higher immediate priorities more than anything else.

3.5 Conservation of Fish Stocks (7.50)

It was well understood from the start that an over-riding aim of the Programme's mandate should be the conservation of fish stocks. There can be no doubt that Puntland waters and the Indian Ocean generally have been subject to extensive over-fishing during the last decade[38].

Serious consideration was given to this question in structuring the Fisheries Regulations, as evidenced by the very high score of 9.125. However, doubts that the Programme could contribute meaningfully to conservation in the controlled and monitored sense of the word were borne out by experience, with an averaged score of 5.875 being allocated to this question. It is quite clear, however, that the effectiveness of the moratorium on fishing within the EEZ and the demonstrated efficiency of the Patrol Vessel in preventing illegal exploitation probably had a positive effect on local fish stocks. Quite simply, there was very little fishing activity conducted off the Somali coast for more than a year.

4. Procedures (7.90)

Procedures represent the methodology employed in implementing the Fisheries Management Programme, ie, the way it was done. The essential premise of the Programme was simple: establish modalities of control

[38] This is evidenced in almost all of the publications studied during the literature review.

based on UNCLOS and international law; define the structures within which and upon which controls would be imposed; develop systems that account for the various strands of policy required by the political executive; and implement procedures to support these policies.

The procedures cluster achieved the highest mean score[39], coming in at 7.90. This is clearly indicative of the operational success that the Programme achieved in clearing the Puntland EEZ of vessels fishing illegally. However, as with other clusters there was some disparity between its various elements.

4.1 Codification (7.69)

Codification is the systematic compilation of rules and procedures. It is clear that the Rules of Procedure for the Fisheries Management Programme (and particularly for the Fisheries Patrol Vessel) were carefully drafted using UNCLOS and FAO guidelines as a base as '...we had to make sure we were legal' (Lord Westbury, 2002: Interview). They were vetted for content by a blue-chip marine law company in the UK:

> The legality of the operation has been cleared by maritime insurers Hill Dickinson of Pearl Assurance House, in Liverpool.
> (Scudder, 2000: Gulf Business, 51)

Research reveals that they were exceptionally successful in their implementation, scoring 9.5. This was one of the highest scores allocated to any element in the security management model, and is a reflection of the tactical success enjoyed during the project:

> They worked. Bottom line. Could they have been better? I expect so, but given that we were new to this, they really did work well.
> (Senior Fisheries Protection Officer, 2002: Interview)

[39] See Figure 5, Chapter Three.

This satisfaction is, however, tempered by the overall context within which the question has to be analysed. Did the Rules of Procedure produce the overall desired effect in forcing fishing boats to buy a license? The limited success of the Programme as a whole in generating this essential strand of policy is reflected in a below-mean score of 5.875. This suggests that the adopted procedure of aggressive patrolling may have been too successful: it had the effect of scaring away the international fishing fleets almost completely.

### 4.2 Development (5.93)

Development in this context relates to the refining and further codification in the light of experience. Research indicates that this was indeed carried out, and that it was exceptionally successful. The averaged score of 9.66 was the highest achieved by any element, but is probably an indication of the operationally-concentric nature of the Programme. Rules of Procedure were, according to respondents, very effective in the first instance.

Given that the Fisheries Patrol Vessel and her deployable intercept craft came under potentially lethal fire early during her deployment, it is hardly surprising that procedures were adapted and refined to allow a more appropriate posture when conducting interdiction operations. The subsequent successful arrest of the Albacora Cuatro sent reverberations around the international fishing community and consolidated the perceived effectiveness of Rules of Procedure.

Further refinement was allowed when the Fisheries Patrol Vessel dealt with the piracy incident onboard the MV Med Express (see Chapter One). However, it would appear from research data that further development may be a moot point as the likelihood of the Puntland Fisheries Management Programme being re-launched is considered to be small (2.25).

### 4.3 Declarations and Resolutions (9.50)

Unless one is aspiring to complete secrecy and a covert operation, the procedures that support government security policy must be announced to the various actors as declarations and resolutions.

The President's declaration of a moratorium on fishing within a Puntland EEZ and his publication of Fisheries Regulations during September 1999 set the stage for the Fisheries Management Programme, putting on notice the world's governments and the international fishing industry that illegal activities along the Puntland coast and within its extended area of national jurisdiction would be policed from the beginning of 2000.

Research shows that this declaration, along with the Fisheries Regulations, were forwarded to the United Nations FAO, international fishing companies, Puntland fishing companies, the international fishing media and relevant national governments. The breadth of this dissemination is reflected by the very high mean score of 9.5.

Although it may be reasonable to assume that the international fishing community chose to ignore this declaration in not coming forward to purchase licenses, a more accurate conclusion would probably be that they paid due heed and left the Puntland fishery post haste. This view was certainly borne out by subsequent operational experience, and is a clear example of how the Fisheries Patrol Vessel had the effect of deterring crime.

### 4.4 Justice (8.50)

Where procedures directed by the State's Executive are based on law, it is essential that the Judiciary is clearly seen to be the instrument of regulation and arbitration where an offence is alleged to have occurred. Although the Puntland Government had a Legislative, Executive and independent Judiciary (PIDC: 2002), it was decided early in the Programme's development that foreign vessels caught illegally fishing

would be called to account (where necessary) through the courts of the United Kingdom. The Puntland Government therefore legally mandated Hart Group Limited, a London associate of Hart Nimrod, to facilitate such action. Local vessels would be held to account through the national courts in Bosaso:

> Given relative uncertainty and instability in the region, this was felt to be the most practical way of doing things. It was important that the [international] fleets should have recourse to justice that would be easily accessible to them, such as the British courts.
> (Lord Westbury, 2003: Interview)

When the Albacora Cuatro was detained, her Spanish owners took legal advice in London and quickly paid a fine. However, it may be worth noting that 'the tuna vessel arrested [Albacora Cuatro] adamantly refused to accept that the arrest was justified and legal' (Hind, 2003: Questionnaire Q61). Her owners evidently did, and it is this success that attracted a respectable mean score of 8.5 for this cluster element.

5. Intelligence (6.49)

In the context of this study, intelligence may be seen as the collection and/or communication of information, either from open (public) or closed (secret/confidential) sources. The cluster's overall score of 6.49, the lowest recorded during survey[40], was perhaps unsurprising given the closed nature of the region and traditional secrecies surrounding the fishing industry.

Accurate intelligence is a fundamental prerequisite of policy formation and systems development. Its absence unbalances design and leads to inappropriate tasking. In the context of the Puntland Fisheries Management Programme, the considerable polarity reflected in findings from elements within this cluster indicate that the entire project may have deployed on a

[40] See Figure 6, Chapter Three.

false premise, namely that the Puntland fishery would, during the months January to April, be of irresistible commercial value to the international fishing fleets.

### 5.1 National/Internal Communications (7.98)

Given the high levels of political access in Puntland enjoyed by Hart and PIDC executives, it is no surprise that research revealed good communications at a national level. Communications within the various Puntland entities and within the commercial entities engaged with the Fisheries Management Programme were also good, and the Fisheries Patrol Vessel was well equipped with Inmarsat allowing global satellite communications.

Research further shows that internal dialogue (7.75), education of relevant staff (8.25), attempts to educate isolated fishing communities (7.25) and the general awareness of local authorities of the Programme's requirements (9.125) all combined to ensure a good matrix of internal communications.

### 5.2 International/External Communications (5.00)

Externally and internationally, the Programme did not score so well. The averaged score of 5.00 was the third lowest of any element within the security model, and is a reflection of the difficulties in accessing both the notoriously insular international fishing community and the political agendas of disinterested nations/institutions:

> To all intents and purposes Somalia has been seen as a basket case for years. There's virtually no diplomatic representation there, the UN doesn't really want to know, and the people themselves shoot themselves in the foot by being greedy and irrational... When you see the levels of poverty, and when you know what the place could be, it's diabolical, really.
> (Simm, 2003: Interview)

In formulating the Programme, data on fishing patterns proved to be almost non-existent (3.0). Such as existed was very difficult to obtain (2.125) and, in the light of operational experience, even this proved to be highly inaccurate (2.5). The perception of the Puntland fishery as being of irresistible commercial interest was therefore based mostly on confidential data from private sources, but research has revealed that the validity of this was questionable.

The only authoritative source of fishing patterns in the region appears to be a United Nations FAO publication based on field research conducted during the early 1990's. Living Marine Resources of Somalia is primarily a fish recognition guide, but it does contain some interesting observations on the ocean's characteristics around the Horn of Africa:

> During the early part of the year there is an upwelling of cold, nutrient-rich waters that emerge from deep in the Indian Ocean and set inshore to break north and south in the area of Xafuun some 60 miles south of the Horn of Africa. It has long been thought that these nutrient-rich waters attracted migratory species such as albacore tuna into coastal waters during this period, so it is difficult to understand the relatively low numbers of sightings recorded during our studies. However, one theory is that while these waters are nutrient-rich, they may be oxygen depleted. This would go some way to explaining why biodiversity levels are low and quantities of fish below expectations.
> (Poutiers, Schneider and Sommer, 1996: 78-79)

In short, the early part of the year is not a good time for fishing off the Puntland coast. This was borne out by the Patrol Vessel's experience as Hart Nimrod now observes that 'December/January/February are not considered to be good months for fishing in Somali/Puntland waters' (Hart Nimrod, 2000: 4). The Programme was launched at the wrong time of year, a fundamental failing of the intelligence cluster.

5.3 Open Source Information (6.50)

It may be surmised from the previous element that open source information was not utilised effectively when developing the Fisheries Management Programme. This may not have been evident to respondents, who scored the use of such information at 6.50. However, it was possible to glean local information on (for example) Hassan Munya and his fleet, which was used effectively in countering the threat posed by his illegal activities and encouraging him to operate within the legal framework of the Fisheries Regulations.

5.4 Closed Source Information (6.5)

The utility of closed source or secret/confidential information scored a surprising 6.5 primarily due to the Munya issue. Hart Nimrod's approach to this character in London as described in Chapter One allowed it to obtain a clear picture of how he had been operating in the area, and initiated the beginnings of a unique regional intelligence network:

> It is possible to gain considerable information about [criminal and pirate] operations. By cutting off or reducing their opportunities, they have to take more risks. This exposes their operations and their operational bases. A strategy can then be determined how to deal with the pirates either by diplomacy, international law, or use of the country's military resources. The key to success is detailed information and an active intelligence-gathering programme.
> (Hart, 2002: 1)

Whilst any security model must discover and incorporate wherever possible relevant information from closed sources, the converse is also true: management design must also include measures that protect confidential information from leaking.

6. People (6.60)

It is people that populate entities, implement procedures, operate systems and glean or disseminate intelligence. They are the human actors that breathe life into the management model, allowing it to achieve policy aims. This final cluster scored relatively low at 6.60 primarily because it is also people who have the volition to inhibit progress if they so desire[41].

### 6.1 Staff (6.94)

This element scored a respectable average of 6.94 because the Fisheries Management Programme was successful in generating the right attitude amongst the various staff engaged with the project (8.375) and achieving high levels of education during its implementation (8.25). General levels of understanding of the Programme's requirements and the effectiveness of the Marine Force both came in at 7.5, but this was balanced to a degree by the Marine Force's economic inefficiencies (3.25).

All these elements have been previously discussed at length, and do not require expanding on here. There is, however, one missing element that was not examined during the research phase of this study. This was the question of Hart Nimrod's Fisheries Protection Officers.

It can be surmised that Hart Nimrod's staff were essential to the success of the management model. It is clear from CVs provided by the company that these were exceptionally accomplished individuals, mostly from a military background. Several of them were highly decorated, and all had extensive experience of working amongst the people of underdeveloped nations both as soldiers and in the commercial sector. Given the broad scope of their responsibilities on this project, the high levels of operational success achieved will have been strongly facilitated by these individuals as managers, trainers and, in many respects, as leaders.

### 6.2 Illegal Exploitation and/or Criminality (7.75)

[41] See Figure 7, Chapter Three.

Those engaged in conducting illegal exploitation of resources and/or criminality within the EEZ were subject to the processes and procedures of the security management model within the context of the Fisheries Management Programme. It has been established that the Programme allowed for a limited degree of security activity in relation to counter-piracy. This became a feature of the Programme's international profile, allowing Hart Nimrod to pass information to the International Maritime Bureau's Piracy Reporting Centre (Simm, 2003: Interview) and articles to be published in the news media (Operations Manager, Hart, 2002: Interview).

This element's relatively high averaged score of 7.75 is an indication that illegal fishing activities were stopped in their tracks (8.375), that the fishing industry understood the requirements of the Fisheries Regulations perfectly well (9.125) and that the activities of Munya and other pirates operating along the Puntland coast were significantly curtailed.

### 6.3 Legitimate Exploitation (6.40)

Conversely, legitimate exploitation of the fishery's resources was felt to be low, with a mean score of 6.40. Analysis of research findings reveals that artisanal fishers continued their activities within the framework of the Fisheries Regulations to a high level of compliance (8.375), but that the international fishing community did not (5.75). However, the latter figure represents more the absence of the international fleets rather than non-compliance. This suggests near-perfect understanding by international fishing boat crews and owners, as evidenced by a score of 9.125 in response to questions exploring levels of understanding in relation to the Puntland Fisheries Regulations.

### 6.4 Progress (3.64)

It is a sad reflection of endemic attitudes within the fishing industry generally that respondents allocated an averaged score of just 3.64 when answering questions related to levels of proactive engagement by actors in the responsible development of the Puntland Fishery. Although some

respondents suggested that European fishing fleets are generally aware of the importance attached to conservation within the framework of UNCLOS, it is a sobering fact that those owners who bought licenses did not wilfully volunteer to do so.

There were, however, encouraging signs revealed by research. Scores of 6.25 and 6.375, whilst not remarkable, suggest that there was less resistance to the Fisheries Management Programme initiative from local officials and artisanal fishers than may have been expected. The Programme's aim of 'benefiting the local fishermen, [providing] employment for local personnel and enhancing coastal security' (Hart, 2002: 7) generated renewed confidence amongst the local population and a 'great deal of support for what we were trying to achieve' (Simm, 2003: Interview).

Whilst the aim of security may be limited to maintaining the status quo, its utility in the context of the Puntland Fisheries Management Programme has to be seen as progressive. The aim was to turn a near-lawless area into one where the rule of law prevailed. In this context, security progressed significantly whilst the overall plan stalled.

### 6.5 Peace (8.25)

The internecine politics of Somalia have made peace an elusive goal ever since Europeans first set foot there, as observed by the famous British explorer Sir Richard Burton during the nineteenth century:

> Like the Berber, he [the Somali] is quick to ire, with the temperament of the small child that knows it will be punished for its transgression, yet cannot help but pull its sister's hair. This is dangerous, for though he may be your best of friends and loyal unto death, he can turn and spear you through in a moment.
> (Burton, 2002: 64)

It was the collective view of respondents that the Fisheries Management Programme, incorporating as it did effective security procedures, helped to some degree in stabilising the regional situation, ‘not least because the Marine Force represented the authority of the President’ (Operations Manager, 2003: Questionnaire, Q22). With a mean score of 8.25, the general view was that it helped in facilitating peace by proactively engaging influential people in political dialogue and mutually beneficial commercial activities within the framework of UNCLOS.

The withdrawal of the Programme may well have left something of a vacuum: certainly the region is less stable now than it has been for some years. However, this is primarily due to the territorial ambitions of neighbouring Somaliland, and is fundamentally tied to the question of onshore oil exploration. The Puntland Fisheries Management Programme came close to providing the cash-flow needed for the further development of a security and civil infrastructure in this difficult region.

In this sense, linked as it was to a security management model that was based strongly on the requirements of the United Nations Charter, it may be concluded that the model is (to a degree) capable of promoting regional peace.

## The Management Model

So do research findings support the central premise that this security management model is appropriate for deployment in conjunction with fisheries management programmes, and more generally within EEZs?

It is hard to imagine more difficult circumstances than those found in northern Somalia. The security management model adopted by Hart Nimrod, PIDC and the Puntland Government was drafted in accordance with recommendations set out by the United Nation’s FAO. As such, it reflected in many respects the UN’s highest aspirations. Analysed within

the context of the detailed model presented here, it was highly appropriate to the region and wholly in step with international thinking.

The Programme was ultimately withdrawn due to lack of capital funding and subsequent problems with cash-flow. It is clear from the research conducted here that it succeeded perfectly in terms of security: illegal fishing was pretty much eradicated; piracy was brought under control; the President's authority was reinforced; and legal order was established throughout the EEZ.

In an international sense, this latter point was a first for the region in more than ten years of political and (largely) physical isolation. Its a point the international community, and particularly the United Nations, should note, for this was achieved without the loss of life, using very little money, and with the proactive co-operation of the local population.

Observations

Research undertaken using the security management model as a tool of analysis has generated, and to a degree validated, the following observations on the Puntland Fisheries Management Programme and security management within its EEZ:

- Controls

These were generally strong, but more emphasis needed to be given to the education of both international fishermen and locals on jurisdictional issues as they pertained to the Puntland EEZ.

- Structures

The various structures that comprised the 'homogeneous matrix' of the Programme were reasonably well understood by the various actors involved in the Fisheries Management Programme. They were effectively controlled by the processes of security management, but less well controlled in terms of the Programme's overall aims. In particular, certain

entities proved impossible to control or indeed engage at levels commensurate with the Programme's requirements for sustainability. This is particularly true of the international fishing industry, which was (and is likely to remain) the confounding variable.

- Systems

The Programme deployed a robust and effective security system that, in the fullness of time, promised to enable the full implementation of the Programme's stated requirements. This would have included provision for the effective study, preservation and conservation of the marine environment. Operationally, the Programme only managed to realise the protection of the environment. This is an essential precursor to all other activity, but was not sustained long enough to have the desired wider effects.

- Procedures

The procedures that were developed to support the Programme were implemented effectively. They were developed in the light of experience, and codified in strict accordance with controls identified from UNCLOS and international law. Justice was served on vessels breaking the law, and recourse to law was facilitated both nationally and internationally. This cluster of the model can only be seen as very successful.

- Intelligence

Internal communications within Puntland and those entities directly involved in implementing the Programme were very good. Communications with external entities was less effective. Greater emphasis should have been placed on this, though this would have been difficult in the Programme's early days as great importance was attached to achieving tactical surprise in deploying the Fisheries Patrol Vessel.

The biggest failing in precursor activity was almost certainly an inability to secure meaningful data on regional fishing patterns. This must, of course, be balanced against the simple fact that the Fishery Patrol Vessel's observations within the operational area were in themselves a form of primary data. However, the truth remains that the most expensive asset of a financially delicate project was deployed at the wrong time of year and with too many personnel on board. She should have been the project's sheet anchor; instead, she became in many respects its Achilles heel.

If the Programme had not generated significant intelligence on the Munya operation and useful information about how regional piracy operates, the intelligence cluster would have scored abysmally. It still came in as the weakest cluster across the management model, and this may properly be seen as the main reason why the Programme stalled.

- People

On balance, the management model influenced and educated the Programme's staff to a good standard, and it dealt effectively with those engaged in criminal activities. Many fishermen did finally engage with the Programme on a legal basis, and there was every indication that, had patrol activity be sustained for a longer period of time, high levels of success would have been achieved. If this been the case, there was every reason to believe the Programme would have contributed in a meaningful way to the prospects of regional peace.

Further Research

This research project has demonstrated clearly that the application of a structured security management model to the question of EEZ security can significantly facilitate the success of initiatives such as the Puntland Fisheries Management Programme. Whilst the model presented here is not necessarily perfect, it does have the major strength of being linked directly to the provisions of UNCLOS. As such, it (or a derivative from it) may be

carried forward as an instrument of significant authority, and as a useful tool in structuring or analysing fresh initiatives.

During the implementation phase of the Puntland Fisheries Management Programme it became increasingly clear that the migratory nature of tuna and the pattern of monsoon seasons that exists in the area ensures that the international fishing fleets are not limited to Somalia in plying their trade. If ships are obliged to pay a licensing fee off the coast of one country, they will simply set their linear fishing ambush elsewhere along the coast where there is no patrol capability, catching fish as they longshore migrate (Senior Fisheries Protection Officer, Hart, 2002: Interview). This is a classic example of displacement theory in that ‘crime may be displaced to less protected [areas]’ (Jacques, 1994: 53).

There falls out from this a clear requirement to establish a sub-continental EEZ along the coast of East Africa, incorporating the waters of Mozambique, Tanzania, Kenya and Somalia. If this cannot be achieved, and the extended EEZ effectively patrolled, then logic dictates that these countries will never be able to take effective control of their natural oceanic resources.

Research has revealed that Hart Nimrod is in the process of trying to generate the political consensus required for such an initiative. Whilst visionary in nature, it is strongly suggested that the proposal should be subject to detailed analysis in the context of a security management model that draws its structural methodology from UNCLOS. Further research is therefore encouraged in the context of the security management model presented here to lend greater authority to the commercial aspects of this proposal.

The results of analysis should be compared and contrasted with the Puntland experience to demonstrate how systems may be better supported by the plan’s recommended procedures. Research has shown that

accurate and cogent intelligence will play a highly important role in this, and research must endeavour to identify the best and most reliable sources of information in facilitating the programme's development. The Puntland experience has shown that this will be of fundamental importance in allowing the best possible chance of overall success.

# CHAPTER FIVE

## Conclusion

The primary research undertaken in this study has identified and confirmed the utility of the proposed security management model as a tool of analysis and as an instrument of authority in facilitating a structured approach to EEZ security management design. Although the study lacks a high degree of external validity, it represents a firm start point for further research.

The research set out to establish what has being going on in the eastern Indian Ocean, and specifically in Puntland, State of Somalia in terms of EEZ security. It is felt that this aim has been achieved to a high level of success. The study also proposed a security management model based on the provisions of UNCLOS, utilising this as a tool for both qualitative and [limited] quantitative analysis. It is felt that this has also proven to be successful, generating a high degree of internal validity.

It was identified that the validity of any research required a triangulation of research methodologies. The study proposed a combination of questionnaires and interviews; a detailed case study of the Puntland Fisheries Management Programme; and a literature review. Although the latter of these may be seen as somewhat weak due to the general paucity of available publications, questionnaires achieved a 100% return rate and interviewees provided exceptionally candid comment within the parameters of their own experience. As the majority of respondents were in some way connected with the Fisheries Management Programme, it is therefore concluded that the case study has probably achieved an exceptional degree of validity (albeit of the internal variety).

As well as the identification of what had been going on, questionnaires and interviews set out to establish imbalance and inconsistencies in security management within the Puntland EEZ. This was achieved to a reasonable degree of success, and in the context of the chosen method of analysis the weaker areas of security management were identified as a failing of intelligence and an inability to prevent crimes other than illegal fishing and piracy. However, it must be borne in mind that the mandated role of the principle entities and resources engaged in the project (namely the Fisheries Patrol Vessel and the Marine Force) was *fisheries protection*. Additional security responsibilities were embraced as co-incidental to the central task: however, the principle of multi-roling is one worth taking forward as it is a cost-effective use of limited assets.

The causality of failure of the Fisheries Management Programme was identified as a combination of cash-flow limitations, poor initial intelligence and weak communications with the international fishing fleets. The latter was by no means the fault of those responsible for implementing the Programme, for significant efforts were made to embrace this requirement. It is more the fault of the fishing community itself, which has an endemic attitude tending to secrecy and isolation. However, this doesn't detract from the fact that this was a major reason why the initiative failed.

The United Nations FAO identifies four cornerstones required for the effective implementation of operational management: *enforcement, detection, deterrence* and *compliance*. It is quite clear from research findings that the first three of these were achieved to considerable effect. The latter enjoyed only limited success. As the Programme's long-term sustainability hinged on the generation of licensing fees, this may be rightly seen as a fundamental failing.

In making recommendations for further research, this study strongly supports Hart Nimrod's view that a sub-continental EEZ extending along the coast of East Africa is required to secure those countries' natural ocean

resources and prevent illegal fishing. Research should be aimed at supporting this strategic aim by generating both qualitative and, where possible, quantitative data on fishing patterns, fish stocks, the identification of key political and commercial entities, and current levels of crime. Such research will both strengthen the validity of the proposed security management model, and provide a baseline of data across a number of areas that may be deployed in future comparative analysis.

That this research was unable to generate any useful data for comparative analysis is indicative of how isolated the peoples of the former Somali State have become over the last decade. This study concludes with the observation that the smallest of actors can generate the winds of change in the most difficult of circumstances. This was certainly the experience of Hart Nimrod and it staff in Puntland. Although it currently remains on hold, the Puntland, State of Somalia Fisheries Management Programme was a brave attempt by a small commercial company to take the lead in restoring hope to a largely abandoned people. It stands as an example of what can be achieved commercially in apparently impossible circumstances given a little bit of courage and the willingness to engage proactively with people who can see no further than the lights of foreign fishing boats clustered on their horizon.

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