US Coast Guard Case Study of the
24 November 2021 UK Small Boat Incident

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Submitted

14 July 2023

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Introduction

The United Kingdom (UK), United States (US) and many other States are Parties to the International Convention on Maritime Search and Rescue, 1979 (referred to hereafter as the *SAR Convention*) which provides the framework for States to establish the maritime Global SAR System. The goal of this System is to provided effective and efficient responses to actual or potential distress incidents. The effectiveness and continuous improvement of the Global SAR System is based, in part, on the continued analysis of responses.

In that effort, in September 2022, the US Coast Guard (USCG) received a diplomatic request[1] to review a SAR response conducted, in part, by His Majesty's Coastguard (HMCG) in the UK. The USCG Office of Search and Rescue convened a team of subject matter experts to analyze the response and associated factors[2]. While HMCG and USCG staff, operate, and equip uniquely, both States follow the international SAR framework and doctrine[3] making this request akin to a peer review for system improvement.

This study was guided by the USCG standard process for conducting analyses of SAR responses as well as International Aeronautical and Maritime Search and Rescue (IAMSAR) Manual Volume II. SAR case studies are not investigations. They are intended primarily as a means of contributing to the continuous improvement of the SAR system. SAR case studies are also valuable teaching tools that benefit current and future SAR professionals. To maximize utility and value, case studies should consider actions that could or should have been taken, as well as those actions which, although not typically expected, may offer a benefit to the SAR system. The goal of this case study is to review the incident and provide feedback to HMCG on challenges and opportunities to improve their SAR system.

The specific SAR incident reviewed occurred on 24 November 2021. An inflatable small boat became inoperable and sank while crossing the English Channel from France to the UK. 27 of the 29 persons recovered had perished and the remaining persons onboard were unaccounted for; the UK's Marine Accident Investigation Branch (MAIB) estimates there were 34 total persons on board.[4] The persons on board were not typical merchant or recreational mariners and were ill-equipped to respond to their circumstances. This incident was one of 99 individual reports of small boats made during on 24 November 2021.

In October 2022, an initial meeting in Washington, D.C., with USCG staff and HMCG Assistant Director for Policy, Standards, and International developed the scope of the case study. HMCG provided a detailed overview of the case and access to known files, logs, standard operating procedures, and audio recordings associated with the SAR incident. While French authorities were involved in this case, no documents were provided to the USCG by the French authorities. The USCG has not requested any further information from France regarding this incident. Additionally, the two SAR survivors, under legal advice, have not provided any information or interviews.

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[1] Diplomatic Note NV69-2022 dated 2 Sep 2022
[2] USCG convening memo 16107 dtd 16 Sep 2022
[3] International Aeronautical and Maritime Search and Rescue Manual published jointly by IMO and ICAO.
[4] UK MAIB Interim Report issued November 2022

A follow-on site visit of HMCG Headquarters, Joint Rescue Coordination Center (JRCC) Fareham, and the Dover Coastguard Station/Maritime Rescue Coordination Center (MRCC) and Vessel Traffic Service (VTS) provided familiarization with daily operations, processes, and access to information and decision management tools. HMCG staff, in a range of roles, were interviewed and provided detailed accounts of both the specific SAR incident as well as background on HMCG and other government agencies and supporting parties. Additionally, personnel from the UK Border Force Maritime Command Center provided a brief on their operations and capabilities.

It is recognized that the incident reviewed herein intersects SAR responsibilities and border security authorities. By agreement, this case study analyzed this incident solely from a SAR perspective.

From the time of the incident through submission of this case study, HMCG has instituted many changes to improve their SAR system. Therefore, some of the recommendations provided by this report may have already been addressed through policy, capability, or procedural changes. The agility to implement these changes and challenge the status quo are commendable.

Background

SAR System Background

The SAR Convention provides a framework for establishing a global maritime SAR system. Other Conventions and agreements obligate participating states to establish search and rescue regions (SRR) and national SAR systems and commit to providing assistance to any person in distress at sea, regardless of the nationality or status of such a person, or the circumstances in which that person is found.[5] The UK is signatory to the International Convention for the Safety of Life at Sea (SOLAS) 1974, International Convention on Maritime Search and Rescue 1979 and the United Nations Convention on the Law of the Sea (UNCLOS) 1982.

HMCG is the national agency responsible for the implementation the UK's SAR System. HMCG personnel operate rescue coordination centers (RCCs), facilities to conduct search and rescue, vessel traffic monitoring, maritime security, pollution response, maritime safety, and disaster management.[6]

Personnel at JRCC Fareham and a network of 9 MRCCs and one Maritime Rescue Sub Center (MRSC) receive and evaluate maritime emergency notifications, develop search action plans, mobilize SAR resources, communicate, and oversee operations through to conclusion. For each incident, a SAR Mission Coordinator (SMC) is assigned and an emergency phase declared. An SMC is knowledgeable in tactical planning, an experienced supervisor, and competent at all aspects of a SAR mission. The emergency phase (e.g., uncertainty, alert, and distress) is classified by the SMC based on the level of concern for the safety of persons or craft which may be in danger.[7] The SMC may reclassify an emergency phase as the situation evolves. The emergency phase communicates to the involved parties the current level of concern and helps determine response actions to be taken for each incident.

The English Channel, la Manche in French, is the body of water separating France and the UK. The confined area between seas creates significant tidal affects and highly variable weather conditions including rain, wind, and poor visibility. Water temperatures range from 7-16 C. The Channel a is major commercial shipping route with mandatory vessel traffic routing.[8]Additionally, there are ferry vessels, active fishing grounds and a host of recreational mariners. France and the UK's mutually agreed upon SRRs as well as territorial sea claims bifurcate the English Channel. The States maintain a Manche Plan aiding in SAR and emergency coordination as well as numerous treaties and agreements. Additionally, liaisons and

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[5] SAR Convention, 2.1.9.
[6] HM Coastguard Act 1925 and HM Coast Guard Responsibility Statement.
[7] SAR Convention 4.4. Emergency phase terms in order of increasing level of concern.
Uncertainty: A situation wherein doubt exists as to the safety of an aircraft or a marine vessel, and of the persons on board.
Alert: A situation wherein apprehension exists as to the safety of an aircraft or marine vessel, and of the persons on board.
Distress: A situation wherein there is reasonable certainty that a vessel or craft, including aircraft or a person, is threatened by grave and imminent danger and requires immediate assistance.
[8] Channel Navigation Information Service (CNIS).

regular informal and formal meetings support intelligence sharing and operational coordination. MRCC Gris-Nez and MRCC Dover are the respective RCCs responsible for coordinating responses to maritime SAR incidents in the area.

Small Boat Background

Irregular maritime migration is especially hazardous and not unique to the English Channel. The Mediterranean Sea, United States southern approaches and Australian northern approaches are all regions challenged by the increasing numbers of migrants in generally unseaworthy vessels. In recent years, the UK has seen a major increase in maritime migrant crossings via the English Channel. In 2021, the UK documented 980 such crossings with 27,046 persons saved.

The unique nature of migrant small boats challenges the traditional SAR response paradigm. Subjects of SAR incidents that lack the ability to effectively communicate basic navigational information, lack distress signaling devices, and do not possess basic survival equipment, severely hinder their chances of survival. Many calls from migrant small boats are received without positional information, identifying characteristics of the vessel, an accurate number of persons on board, and elevated natures of distress.

Traditional subjects of SAR incidents are usually able to help themselves, readily receive assistance rendered, and contribute to their rescue. The occupants of these small boats often evade SAR responders until such time their location is beneficial to their migration status. They may also intentionally deceive SAR authorities of their actual situation to illicit expedited SAR responses.

The general profile for the small boats departing from the French coast en route the UK are poorly constructed rubber boats, often home-made tubes with rubber flooring and an outboard engine attached. Requisite fuel and provisions are not always included, and the boats often overloaded. Boats do not have navigation equipment, lights, or other maritime communications equipment.

The primary means of communication is via mobile phone to 999 emergency services or directly to HMCG coordination centers. Occupants also call other agencies, such as harbor masters, or acquaintances directly who are not linked to emergency services.

Illegal Migration Element

Small boat incidents are a form of unconventional maritime activity that intersect traditional SAR and Border Security. Transnational criminal elements actively facilitate the movement of migrants exploiting the seam between legitimate States and take advantage of vulnerable migrant populations for their own benefit. Continued small boat events attract illegal migrants to the region and threaten the border integrity of both the UK and France.

In 2018, the UK Home Secretary declared a major incident in the English Channel due to maritime migrant crossings. This action resulted in UK Border Force assets being assigned to the area to respond to small boat incidents. In 2020, a Clandestine Channel Threat Commander

was appointed to reduce the number of crossings. Small boat incidents are the topic of numerous multi-agency and international meetings between the UK and France aimed at improving response efforts.

Executive Summary

This case study examines the events surrounding the response to a small boat incident that was conducted on 24 November 2021 in the southeast portion of the English Channel. This is a review of the actions taken by HMCG as determined from the documents and statements provided by UK government officials. Although no logs or statements were collected from the French Government during this review process, French communications with HMCG and the documents French officials provided to HMCG were recorded as part of the data log collected from HMCG and included as part of this case study.

On 24 November 2021, HMCG responded to almost one hundred reports of migrant small boats crossing the English Channel. All the small boat crossing occurred in MRCC Dover's area of responsibility. The MRCC responders experienced numerous challenges associated with such a high volume of incidents. The small boats were typically overloaded with migrants and had limited safety or communications equipment beyond a cell phone. While the sheer number of migrant small boat incidents was an extenuating factor in this case, this case study focuses only on the actions surrounding the subject of the SAR case in question. The objective of this case study is to evaluate the SAR agency's actions, the interagency coordination, and international coordination with a goal of providing actionable recommendations for process improvement.

The incident began in the early morning of 24 November 2021 when MRCC Dover received a report from the Port of Dover of a small boat crossing. MRCC Dover then contacted French MRCC Gris-Nez and learned additional migrant vessels were transiting towards the UK's SRR throughout the morning. The reports were transmitted via phone calls and emails listing contacts' position, course, speed, last time seen, and estimated number of persons on board. Per operational guidance given to the MRCC Dover watch standers, once a migrant vessel enters the UK SRR, the SMC will classify the incident as being in the distress phase and coordinate the response. After receiving cell phone calls from migrants on the small boats requesting assistance, HMCG was able to confirm that migrant small boats had begun entering UK SRR. The SMC was unable to collect complete reports from reporting sources due to language barriers, inaccurate information, and limitations of cell phone reception.

The MRCC Dover SMC had a high level of apprehension after speaking to a reporting source on board one particular small boat, later assigned the identifier CHARLIE, and made the decision to broadcast a Mayday relay. The Dover MRCC directed a helicopter, the R163, to search the area, and dispatched a Border Force surface asset, His Majesty's Cutter (HMC) VALIANT, to assist. Both air and surface assets were directed to focus search efforts on the most likely location of the subject small boat. The HMC VALIANT arrived on scene first and located a vessel that the SMC believed correlated with incident CHARLIE. The R163 continued to search the immediate area locating three small boats in the vicinity; HMC VALIANT was tasked to assist the boats. The case was closed after the R163 and HMC VALIANT completed SAR efforts for the located small boats. The SMC concluded that the boat assisted by HMC VALIANT correlated with the distress report. Upon conclusion of helicopter R163 and HMC VALIANT sorties, MRCC Dover continued to be inundated with additional reports of migrant small boats and coordinated rescue operations throughout the remainder of the operational period.

At 1257 UTC 24 November 2021, MRCC Dover received notification that MRCC Gris-Nez was coordinating rescue operations with persons in the water who originated from a migrant small boat. Based on the position of the recovery and after-the-fact cell phone forensics, it was determined that the persons in the water were the subjects of incident CHARLIE. During the French coordinated response, 27 persons were recovered deceased, two alive, and unknown number remain missing.

Findings of Fact

On 24 November 2021, HMCG recorded 99 incidents related to migrant small boats. Within the mission management system, ViSION, a new incident was created with a unique identifier every time a new call was received. The 99 incidents did not correlate to 99 individual small boats, as some occupants on small boats generated multiple calls resulting in duplicate incident creation. A UK Border Force report at 2300UTC on 24 November 2021 indicated there were 27 small boat incidents with 852 migrants onboard within the UK SRR during the 24-hour period.

HMCG was able to confirm, post-incident, that cell phone calls from the small boat that sank were received by MRCC Dover. The ViSION incident that correlates to the confirmed phone number was incident CHARLIE. Other incidents later linked to incident CHARLIE are ALPHA, BRAVO, FOXTROT, and INDIA, as well as Global Incident Numbers 041393-24112021 and 041394-24112021.

The incidents were coordinated by the HMCG officers at MRCC Dover with oversight and support from the JRCC in Fareham. HMCG operates a National Network of MRCCs where operators can virtually support other MRCCs. The JRCC staff includes the Tactical Commander and Strategic Commander who support the MRCCs, broker resources, and maintain mission oversight. The SAR Units (SRUs) available are contracted SAR helicopters and fixed wing aircraft, Unmanned Aerial Vehicles, Royal National Lifeboat Institution (RNLI) Lifeboats, UK Border Force Vessels, and HMCG Rescue teams.

In addition to the MRCC and JRCC, the SAR response included two SRUs; a contracted helicopter, the R163, and the Border Force Vessel, HMC VALIANT. The MRCC Dover had two qualified personnel on duty: a Maritime Operations Officer (MOO) and Senior Maritime Operations Officer (SMOO) who was the SMC and Team Lead. The maritime watch for the JRCC had an additional 9 persons on duty, 2 of which were SMCs. The network system configuration allows HMCG to virtually surge watch officers if needed to adjust for operational demand. The total number of personnel available within the entire network was 35 during the overnight period from 23-24 November. The recommended minimum staffing level was 22.

The SMC at Dover anticipated the potential for small boat crossings based on weather conditions and OP Deveran[9] predictions. The Dover SMC facilitated break periods for all watch positions including, VTS watch officers, prior to the anticipated busy small boat response period. While the Dover SMC facilitated the break period, personnel at JRCC covered the Dover area of responsibility.

On 24 November 2021, the first report of a small boat call came in at 0024 UTC. This was incident ALPHA. When the MRCC operator attempted to call the phone number associated with ALPHA, a foreign dial tone was heard with no answer. The foreign dial tone was an indicator that the small boat was not in the UK SRR at the time of the call. It was confirmed, post-incident,

[9] Operation Deveran is a report prepared by the Home Office to assist with the prediction of likely crossings. The report looks at the forecasted weather and sea state as well as other indicators from both French and UK agencies and provides a high, medium, or low assessment of the likelihood of crossings.

the phone number associated with ALPHA was also associated with the small boat that later sank.

Over the next 24 hours, numerous reports of small boat crossings were reported to MRCC Dover. One reporting mechanism was from MRCC Gris-Nez; positions, courses and speeds were passed to MRCC Dover as the French collected them. MRCC Gris-Nez consolidated all reports and passed the information on a Microsoft Excel spreadsheet. The spreadsheet was emailed from the MRCC Gris-Nez to MRCC Dover.

MRCC Gris-Nez called to verbally pass additional reports of small boats with associated phone numbers and positions. One of the verbal reports was "French Migrant 7," the small boat UK classified as incident CHARLIE. The reported position of CHARLIE was a time delayed position because there were no French assets currently on scene with, or in sight of, the small boat.

The French had only one vessel underway, the Public Service Patrol-boat (PSP) FLAMANT, and was not able to maintain visual contact with all the small boats crossing the English Channel. The French passed reports of positions at the time the small boats were sighted by the PSP FLAMANT, or other reporting sources, via the emailed spreadsheets, however some reports included time delayed positions. Due to poor visibility conditions, the normally scheduled UK fixed wing surveillance flight was grounded, so MRCC Dover did not have the benefit of the additional maritime domain awareness normally provided by this asset.

Based on last known positions and estimated courses and speeds, the MRCC Dover officers assumed the small boats had begun crossing into the UK SRR and notified the UK Border Force. The UK Border Force tasked HMC VALIANT to respond.

At 0143 UTC, MRCC Gris-Nez transferred a phone call from French Migrant Vessel 7 to MRCC Dover. The SMC was able to talk to a reporting source on the small boat, UK incident CHARLIE, and a position was obtained via WhatsApp. The position placed the vessel in UK SRR and the incident was classified as being in the distress phase. The SMC's conversation with the reporting source, "Mubin," lasted for 21 minutes; the only discernable information from the call was that the small boat was broken down and there were 40 persons on board. No amplifying information could be collected due to the language barrier, shouting in the background, and excessive noise.

MRCC Dover contacted a commercial vessel transiting the area at 0206 UTC. The vessel, GASCHEM SCHINANO, was asked to keep a sharp lookout to see if any small boats were operating. The GASCHEM SCHINANO reported no sightings and continued transiting. A more general safety broadcast to vessels transiting the area had been issued earlier in the morning when small boat activity was first reported.

After receiving the WhatsApp location, the SMC created a Mayday relay broadcast and at 0227 UTC JRCC issued the first Mayday relay. Responding assets reported hearing the broadcast. Shortly thereafter, the UK Border Force received an updated tracker spreadsheet from the French stating that incident CHARLIE was resolved, which created some doubt as to the tasking of

HMC VALIANT. The SMC confirmed that the incident was not resolved, and VALIANT should continue with her 45-minute transit to the incident.

At 0242 UTC, MRCC Dover received a call from MRCC Gris-Nez. MRCC Gris-Nez passed information about French Migrant 7 they had just received. The MRCC Gris-Nez operator stated that the French Migrant 7 reporting source indicated that the boat was sinking, and the persons were in the water. MRCC Dover reported that the HMC VALIANT was responding with a 35–40 minute ETA and a Mayday relay broadcast had been issued. The Dover SMC passed that HMCG issued a Mayday relay hoping for a response. The Dover SMC stated that the PSP FLAMANT was the closest vessel to the Mayday relay position and would be able to respond faster than HMC VALIANT. MRCC Gris-Nez stated PSP FLAMANT was with another small boat, and therefore unavailable to respond to the that position. The Dover SMC stated the HMC VALIANT would continue to make best speed towards the incident and repeated that the PSP FLAMANT was closer.

The JRCC coordinated with the Aeronautical Rescue Coordination Center (ARCC) to task R163 to conduct surveillance in the area to obtain an assessment of the small boat crossings. The aircrew was instructed to call the SMC prior to launching for specific tasking. After receiving a SAR mission brief from the SMC at 0249 UTC, R163 was unable to achieve its 45-minute launch window due to technical issues. The SMC had originally planned for the HMC VALIANT to arrive on scene and for the R163 to be airborne at approximately 0330 UTC.

At 0306 UTC, MRCC Dover received a call with no associated data (i.e., no position or phone number was recorded). The caller was calm, indicated that they were in the water, and they were cold. There was little background noise and the call cut out prior to gathering any additional information.

During the transit of HMC VALIANT to the last known position, MRCC Dover received a call and an updated position from small boat CHARLIE on the MRCC's stand-alone cell phone. The call went unanswered because the stand-alone cell phone was not monitored or integrated into the watch console. The updated WhatsApp location was not recorded, and consequently, neither the Mayday relay nor SRU tasking were updated to reflect the new position. The WhatsApp location was received at 0221 UTC, and not seen by MRCC until 0328 UTC.

HMC VALIANT arrived on scene at 0325 UTC and proceeded on a trackline from the Mayday relay location in the direction of drift towards Sandettie Light. Within 10 minutes of commencing the search HMC VALIANT reported two small boat sightings, one making way and one stopped in the water. HMC VALIANT transited to the stopped vessel, as this was suspected to be small boat CHARLIE. The stopped vessel was approximately 2 NM away from the 0221 UTC WhatsApp location in the direction of drift. HMC VALIANT reported the location of the vessel and number of persons onboard as 41. The SMC stated that this vessel was likely small boat CHARLIE and the HMC VALIANT was tasked to determine if their names or phone numbers correlated to the names and phone numbers associated with small boat CHARLIE. HMC VALIANT reported that nobody onboard the stopped small boat claims to have called HMCG. The SMC asked the HMC VALIANT to stand by while he attempted to call the reporting source's phone number.

R163 was airborne and proceeding to the incident at 0350UTC with an on-scene time of 0403UTC. By the time R163 launched, HMC VALIANT had already begun assisting persons on the stopped small boat in the vicinity of Sandettie Light. The SMC updated R163's tasking to search for additional small boats in the area.

The SMC tasked R163 to complete a parallel or expanding square search pattern in the vicinity of Sandettie Light. The R163 pilot chose an expanding square search pattern. Three additional small boats were located during the R163 search, two within the search area, and one to the west of the search area. All were reported as underway. At 0609UTC, R163 completed the search and returned to base.

The HMC VALIANT assisted the vessels located by the R163 and questioned the rescued persons regarding whether they called HMCG. None initially admitted to calling HMCG, but there were conflicting reports about whether some persons made phone calls. Interviews with HMCG personnel indicate that it is not uncommon for migrants to say that they did not call HMCG when they had. The language barrier between small boat occupants and the rescuers and the urgency to safely rescue everyone limited conclusive inquiries.

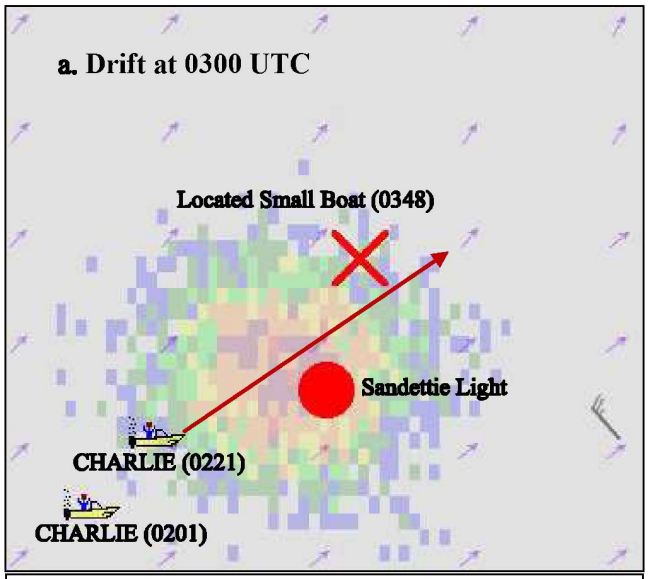
After the HMC VALIANT effected the rescues, no additional response actions were logged in incident CHARLIE. At 1048 UTC, the Tactical Commander at JRCC recorded VALIANT had rescued 41 persons from the small boat CHARLIE. At 1521 UTC the incident was marked as resolved and the incident was closed. No amplifying information regarding the rationale for correlation of facts or assumptions that led to that conclusion were recorded.

There were several other incidents within the ViSION log that were associated with incident CHARLIE; ALPHA, FOXTROT, BRAVO, and INDIA were all correlated to CHARLIE or each other and closed. Since a new incident is opened for every call, it is not uncommon for incidents to be closed as repeats.

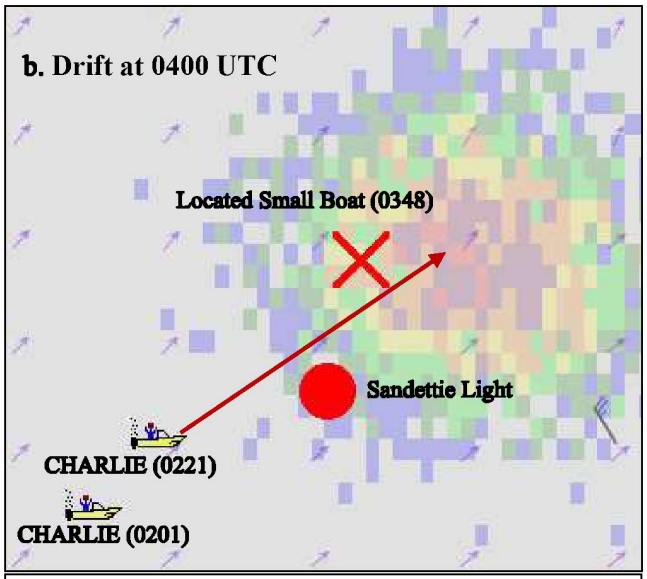
It is noted that prior to, during, and after the events outlined in these findings of fact, MRCC Dover was inundated with calls reporting other small boats. The additional reports were not noted in this section as the focus of this case study was on the response actions surrounding the small boat that sank, incident CHARLIE.

Drift Evaluation

Upon arriving on scene, HMC VALIANT located a vessel thought to correlate to incident CHARLIE. The rational for correlation was at least partially attributed to the location of the vessel, meaning the found vessel was in the expected location of the distressed vessel. To determine if the located vessel's location corresponded to the estimated position of the distressed vessel, a drift simulation was completed with the United States Coast Guard's Search and Rescue Optimal Planning System (SAROPS). Using archived current and wind data a simulation was created within SAROPS using the 0221 UTC WhatsApp location as the start position. The system simulated the drift and plotted the projected possible locations of simulated particles on the hour, every hour until 0400 UTC (simulation end time). In lieu of plotting the individual particles, a probability grid was generated depicting the higher probability areas in red and orange, and the lower probability area as green and blue. For this simulation, a partially submerged vessel and persons in the water were chosen as simulated search objects. The results are shown in the figures below. Since the data is only available in hourly increments, the system can only plot the results at the top of the hour. Therefore, a plot showing the probable location of drift at the exact time of location (0348 UTC) cannot be depicted, instead the 0300 UTC figure is shown on the left and 0400 UTC is shown on the right.



a. Plot depicts small boat CHARLIE at 0201, 0221, Vessel located by HMC VALIANT at 0348 UTC, Sandettie Light, and drifted high probability areas at 0300 UTC.



b. Plot depicts small boat CHARLIE at 0201, 0221, Vessel located by HMC VALIANT at 0348 UTC, Sandettie Light, and drifted high probability areas at 0400 UTC.

The lightly colored arrows on the base map indicate the direction and magnitude of the surface current. The long red arrow was added to show the direction drift; the arrow originates in the last known position and points to the center of the high probability area at the end simulation

time, 0400 UTC. The vessel icons represent the WhatsApp locations, and the red "X" represents the location of the small boat that HMC VALIANT located and assisted. For reference, the closest point of approach between the red "X" and the red arrow is approximately 0.4 nautical miles. The wind barb on the plot shows a northwest wind direction which resulted in the simulated drift being offset from the surface current direction due to leeway.

The location of the small boat that was located by the HMC VALIANT was directly in-line with surface current vectors and within the higher probability area of the simulated drift. Based on the drift evaluation it is reasonable to conclude that the small boat located by HMC VALIANT did correspond with estimated drift location of the distressed vessel. There was a high probability that a disabled vessel that began drifting from the time and location of the last WhatsApp location would end up in the location where the HMC VALIANT effected the rescue.

Discussion

Case Management

HMCG officers took prompt, decisive actions in response to the numerous small boat notifications received that day. The SMC assumed responsibility for the incidents, made multiple attempts to gather additional information, issued a Mayday relay, directed UK Border Force and contract aircraft assets to respond, and worked with the VTS to identify and query merchant traffic to assist.

The prompt response, however, was also complicated by several factors. The watch officers were hindered in their ability to accurately account for each small boat and plan response efforts accordingly. At any given time, the watch officers were generally unaware of how many small boats were crossing the channel and had poor positional awareness of the vessels that were crossing. The method for documenting the incidents may have further confused the effort.

The case management system guidance for HMCG watch officers is to create a unique incident number for each call, unless it could be immediately correlated with a previous report. In addition to the incidents generated from incoming calls, more incidents were created based on information passed via email spreadsheets sent from MRCC Gris-Nez. Since the incidents were created from the French tracker without much information other than approximate location, each new 999 call to HMCG had the potential to generate a new incident. At the end of the 24-hour period there were 99 incidents in ViSION and only 27 small boats were confirmed to be underway. The only way to reconcile the duplicate incidents was to make several assumptions regarding possible correlations or repeats.

The extremely high number of distress reports created confusion and the need to triage incidents quickly. Consequently, numerous distress incidents can potentially draw attention away from higher apprehension incidents. The SMC exercised the authority to manage case decisions, however, the incident conclusion procedures are not well defined with in HMCG policy. When the assumption was made that a case was repeat or could be correlated with a previous report of distress, the SMC closed the case with little or no oversight. When an incident was not resolved, or a search effort was unsuccessful, the SAR case was terminated as per HMCG policy. The policy states that a SAR response can be terminated if "reliable and credible sources suggest emergency no longer exists. This must be agreed by JRCC Commander."

In this case, small boat CHARLIE was assumed to be the same small boat located by HMS VALIANT, so the case was closed. All the other incidents associated with incident CHARLIE were closed by the SMC and merged as repeats of CHARLIE. The Tactical Commander did make an entry in the ViSION log about the case closure, but it was hours after the SAR operations had concluded. Also, there was no discussion of search effectiveness, rationale, or risk evaluation recorded in the ViSION log or in the phone records.

At the time of the incident HMCG had adopted the practice of opening one "ADMIN" incident within ViSION to generally account for all migrant small boat operations for the day. Some of the incidents were recorded as their own incident, and some were recorded within the "ADMIN"

incident. The practice of using the "ADMIN" incident has since ceased, and now each incident is given its own unique number.

International Coordination

This case was coordinated with voice and email communications between MRCC Dover and MRCC Gris-Nez. Both countries used a different naming configuration to identify small boats; UK used an alphanumeric method and France used a numeric convention (i.e., French Migrant 7 was UK small boat CHARLIE). There were some delays in emailing spreadsheets and each MRCC had divergent priorities creating confusion during the response. Additionally, the SMC for HMCG cases is on the watch floor while the Gris-Nez SMC is an on-call position available by phone.[10] This can delay direct SMC to SMC communications vital in prioritizing and correlating the different incidents.

This incident occurred near the boundary between UK and French SRRs and reporting source passed different pieces of information to UK and France. Each country effectively gathered as much information as possible and shared it with the other. MRCC Dover and MRCC Gris-Nez were able to obtain GPS locations for the subject vessel and both agreed the boat was in the UK SRR. Despite being in UK SRR, some of the phone calls were first received by MRCC Gris-Nez and forwarded to MRCC Dover. Both MRCCs had higher than normal apprehension for this case and HMCG classified it as in the distress phase.

Despite having good information sharing practices and a cooperative relationship, the 0242 UTC call between the Dover SMC and MRCC Gris-Nez marks the point in this response where SAR coordination became less effective. In that call, MRCC Gris-Nez informed the Dover SMC that the boat was sinking and there were persons in the water. Although speculative, it appears that the MRCC Gris-Nez operator had a high apprehension regarding the incident and seemed to express concern when she learned the HMC VALIANT's response time was 40 minutes. However, the MRCC Gris-Nez operator seemed to only be focused on passing the information so the UK could respond. The Dover SMC repeatedly attempted to tell the MRCC Gris-Nez operator that the PSP FLAMANT was the best and closest asset to respond to the Mayday relay.

When questioned, the Dover SMC stated that he had hoped the Mayday relay would prompt a response from the PSP FLAMANT, but during the 0242 UTC call, he never explicitly or formally requested assistance from France. Although the explicit request was not made, he did tell MRCC Gris-Nez the Mayday relay broadcast asked for vessels to respond and asserted, repeatedly, that the PSP FLAMANT was closest vessel available to respond. During the call, the MRCC Gris-Nez operator did not offer assistance from the PSP FLAMANT. MRCC Gris-Nez appeared to believe the decision to not offer assistance was justified by PSP FLAMANT's tasking to another French migrant incident and mitigated by the fact that HMCG had already tasked an asset, the HMC VALIANT, to respond.

[10] The IAMSAR Manual does not dictate a staffing configuration. SAR agencies design their own staffing requirements. SMCs may be watch officers in the RCC or in an on-call/external to the RCC location; both situations are utilized internationally.

At the conclusion of the 0242 UTC call the Dover SMC was aware the PSP FLAMANT would not be responding, but his repeated mention of the PSP FLAMANT's position in relation to the Mayday relay throughout the call indicated his reluctance to accept the decision. Although prompted by the Dover SMC, MRCC Gris-Nez did not provide amplifying information about the ongoing French incidents or attempt to articulate why the PSP FLAMANT's tasking took priority over the Mayday relay. A follow-on SMC-to-SMC discussion did not take place to discuss the relative urgency, apprehension, and risk associated with the UK's and France's ongoing incidents.

Staffing

The recommended staffing levels for the HMCG national network at night was 22, with 35 officers on duty. At a minimum, the officers assigned to a MRCC are the Maritime Operations Officer (MOO) and the Senior Maritime Operations Officer (SMOO). The HMCG can flex operators from other MRCCs or the JRCC when operations warrant. During this incident numerous JRCC officers assisted by taking routine and emergency calls, VHF CH16 watch, radio calls, updates to ViSION and reviewing messages.

MRCC Dover had the recommended staffing present on the watch floor. As operational tempo increased, additional resources were not sought, or offered, in a manner consistent with the mission demand. Although assistance was provided by the JRCC, the brunt of the mission coordination was handled by the staff at MRCC Dover. Virtually surging watch officers from the National Network has proven to be effective and efficient during traditional SAR operations, but MRCC Dover had almost 100 incidents and 852 persons reported in distress in a 24-hour period. Virtually supporting operations from the National Network potentially added a layer of complexity during the large-scale incident.

In accordance with Appendix C of the IAMSAR Manual, Volume II, large-scale incidents (e.g., Mass Rescue Operations (MROs)) often necessitate a separate Incident Command System. While this incident was not a traditional MRO, there were hundreds of persons in overloaded inflatable rafts in a busy shipping channel. The large number of incidents strained the normal staffing of MRCC Dover. HMCG is in a unique position from a technology standpoint to flex Incident Command Post (ICP) functions away from an MRCC, or use an MRCC facility to stand up an ICP and flex normal operations elsewhere. Viewing the mass maritime migration incidents through an MRO lens may lead to staffing adjustments commensurate to the challenges of small boat migrant rescue operations.

Emergency Classification

The SMC's apprehension was higher for incident CHARLIE than any other report. This was evidenced by the fact that the SMC requested JRCC issue a Mayday relay; Mayday relays were not issued for the other small boats despite the UK's practice of classifying every small boat incident as in the distress phase. In the Mayday relay, the broadcast stated that the small boat was taking on water. The reporting source did not initially report the small boat as taking on water. When questioned about it, the SMC stated that the taking on water language was used

because, based on his experience, he had higher-than-normal apprehension after taking the initial call.

At 0231 UTC, and at 0242 UTC, the SMC did receive amplifying information indicating that the small boat was sinking, and the persons were now in the water. These two calls came in after the Mayday relay was issued. It is very common for small boat occupants to exaggerate the details of their circumstance to illicit a faster response. The amplifying information was noted, but not necessarily believed to be true due to the overwhelming number of false, exaggerated reports. It was unknown if these reports were true or not, but the apprehension remained high. The classification remained distress, therefore the SRUs continued with their tasking to respond to this incident.

Mayday relays are not typically issued for migrant small boats in the English Channel. The MRCC operators stated that doing so would be more disruptive than helpful. The consensus was that it would be impractical and dangerous to ask the commercial vessels in the area to divert from transit to assist; therefore, reports and positions are shared with responding assets, and a general broadcast is sent warning mariners that SAR operations are being conducted in the area.

There were commercial vessels and a French Naval Vessel operating in the vicinity of the Mayday relay position. Commercial vessels were queried and directed to be on the lookout as they passed the broadcasted distress location; no sightings were reported to HMCG.

Every small boat crossing is classified as in the distress phase. The poor construction of the craft, overloading, inadequate safety gear, and proximity to major shipping channel constitute manifestly unsafe conditions. The result is all small boats crossing the English Channel are likely in immediate need of assistance. Reports are often exaggerated or false, making it difficult to identify and prioritize which small boats are in the most immediate need of assistance.

Case Conclusion and Documentation

The case was closed after and HMC VALIANT located and assisted a small boat. Additionally, the R163 completed a search in the area, and after HMC VALIANT assisted, no further calls were received from the subject small boat. Therefore, the small boat that was assisted was assumed to be subject of incident CHARLIE. The small boat was in the area in which distressed boat was expected to be and had a similar number of persons on board. The rationale for the correlation was reasonable, however, the decision was not reviewed, discussed, or documented in real-time. Since the original reporting source could not be identified among the rescued individuals, there remained a possibility that the rescued small boat was not small boat CHARLIE.

Being able to close a SAR case depends on the status of the subject or subjects, specifically whether they have been rescued or are no longer in need of assistance. If a positive identification of the reporting source is made, then closing a case would be appropriate; the SMC could be certain that the persons in peril were assisted or are no longer in distress. Without positive identification, however, the SMC could not be certain of the subject's status. When the requisite

information needed confirm that a craft or persons are no longer in distress is not available, categorizing the case as "active search suspension" in accordance with the IAMSAR Manual is more appropriate.

In practice, suspending the search and closing the case would likely result in the same outcome. In both scenarios search efforts would cease. The suspension, however, would create an opportunity to review the facts and rationale for making a probable correlation, acknowledge the possibility of that the distress situation still exists, and communicate that responders should be vigilant for any new information that could re-activate the case.

In this case, the Tactical Commander did review the incident hours after the fact and concurred with the decision to close the case. There was no record of a formal briefing or documentation of the assumptions and facts the SMC used correlate the located vessel with incident CHARLIE. The lack of real-time formalized evaluation and documentation of case conclusion prevented the opportunity to scrutinize the decisions and evaluate all possible outcomes.

Interagency Coordination

HMCG is a SAR and emergency management agency with no law enforcement authorities. UK Border Force is tasked with securing the UK border and conducting law enforcement, immigration, and customs duties. Additional supporting agencies have their own primary missions and focus when not actively supporting SAR.

Migrant small boat crossings are SAR incidents due to the danger associated with the transit, however, the situation involves other secondary incident or mission types as well. To address the multi-mission aspect of migrant small boat incidents the UK incorporated other agencies into the coordination center. MRCC Dover now includes co-located Defense, Border Force, and Intelligence personnel.

Recommendations

National and International

Institute a bilateral (FR-UK) multi-agency task force that incorporates all stakeholder agencies to the specific maritime region of small boat migration. A dedicated task force can develop standard operating procedures that incorporate all agency capabilities and authorities, enable direct communications, real time information sharing and prioritization, common terms and expected actions by all parties.

Develop a shared common operational picture with visual mapping to plot, share, and fuse known and suspected small boats and track and task response resources. Reducing duplicative efforts and harmonizing deterrent strategies may decrease the overall financial and resource burden on each State.

Develop a Mass Rescue Plan specifically tailored for the risk small boats present. A mass rescue operation (MRO) is one that involves the need for immediate assistance to large numbers of persons in distress such that capabilities normally available to search and rescue (SAR) authorities are inadequate.[11] No single organization is fully equipped to mount an effective response. During periods of small boat activity, the response is beyond the normal SAR capabilities of RCCs Fareham, Dover, and Gris-Nez and the dedicated resources available to them.

Other UK agencies frame small boats as primarily a SAR response under HMCG's responsibility. However, there is clearly a secondary law enforcement and immigration responsibility as well. MRO plans address the full scope of such responses to include command and control, coordination, external stakeholders, medical and law enforcement roles, public and external affairs. MRO Plans often shift the organizational structure to an Incident Command System (ICS) to best coordinate across agencies, prioritize resources, and leverage all authorities. An SMC, still responsible for the SAR response, would fall under an Incident Commander or Unified Command responsible for the entirety of the incident or operational period. The International Maritime Rescue Federation and other organizations provide myriad tools to broadly evaluate and develop plans.

As plans and standard operating procedures (SOPs) are revised, c*onduct UK MRCC to French MRCC level exercises that include stakeholders and liaisons.* Additionally, *functional exercises with vessels and crews that are called upon to assist in small boat operations can develop best practices and identify equipment to assist in such rescues.*

Organizational Process

HMCG policy and doctrine classifies small boat cases as in the distress phase. This is the highest emergency phase and requires maximum effort by responders. In a traditional SAR case in the distress phase, a Mayday relay broadcast seeking nearby mariner's assistance, expedited

[11] IAMSAR Mass Rescue Operations definition

dispatch of SAR resources and SAR planning is standard. With high numbers of small boats transiting the Channel, all treated as distressed, requires SAR officers to triage response efforts with limited and imprecise information.

Small boat notifications should initially be evaluated as in the distress phase. As additional information is gathered, the SMC should formally re-evaluate the emergency phase. If there is sufficient evidence, the SMC may downgrade the emergency phase to alert and monitor the incident as appropriate. This formal shift will allow critical resources to be directed to the most urgent incidents. Decision making criteria should be provided in a SOP. Examples may be providing the small boat with a tracking device, active surveillance, or evaluation of the vessel seaworthiness. If the case remains in the distress phase, then all available resources should be made available to respond to include UK Border Force, Defense resources, and good Samaritans.

Develop an affirmative criterion for closing or correlating cases. At the conclusion of a SAR case in line with international terms, a case is either "closed" in which the distress situation is affirmatively resolved, or "suspended" where the person or vessel in distress remains unlocated but based on all available information continued searching would be ineffective in locating those in distress. Positive identification, phone forensics, and other specific identifiers should be considered.

Institute a deliberate process to include an authority above the SMC to objectively evaluate the information and actions prior to suspending a SAR case for unlocated persons or vessels. A similar process with articulatable factors should also be instituted for correlating multiple reports as a single incident. These determinations should be a collaborative, thoughtful, and documented.

Develop standard procedures for shifting SMC to minimize the loss of situational awareness and ensure appropriate area and resource familiarity. Although HMCG has the technology to shift SMC and flex other watch functions, standard procedures to ensure that such a transition is efficiency and effective should be standardized and enforced.

Resource Management

HMCG relies on governmental, contracted, and volunteer support to respond to SAR cases including the RNLI, UK Border Force, Ministry of Defense as well as other HMCG assets. Mission and staff fatigue has eroded the availably and vigor of some resources for small boat incidents, particularly volunteers.

Implement formal mental health and peer support networks to mitigate the fatigue and stress such cases can elicit. HMCG personnel having coordinated numerous small boat cases have been subject to significant emotional strain.

Communications

SAR incidents are complicated and despite best efforts and technology, there is always some doubt or lack of information available to the SMC and RCC personnel. Watch officers conduct investigative communications efforts, seek out additional information and confirm facts. *SOPs or checklists should contain specific, prioritized questions that may decrease any ambiguities as to location, description, number of persons onboard, and nature of distress during an incident. These checklists should be shared with other entities that may receive calls from small boat occupants.*

Investigative communications with reporting sources are often hindered by language gaps. When the origination country of the migrants can reasonably be anticipated, *consider requiring the use of on-call interpreters or a translation service to assist with collecting reports.*

Continue seeking mobile phone location data capability and have access integrated into HMCG console systems for continuous monitoring and case documentation. The use of a standalone mobile phone to access "WhatsApp" was an off the shelf solution to fill an immediate need.

Standard briefing templates and IAMSAR terminology can aid in ensuring all relevant information is passed and provides a consistent brief for responders. When providing mission and coordination briefings, tasking, requests, and all relevant information should be clearly communicated.

Watch officers must treat every distress alert as genuine until they determine otherwise. Supervisors must be alert to normalcy bias and take actions including regular training to counter the detrimental effects. Small boat occupants often relay concerns of taking on water or emergent medical conditions to watch officers; such reports would normally be treated a distress. These reports are not always true and are fabricated to compel a faster response by UK resources. These historic false reports have allowed normalcy bias to develop in watch officers.

Conclusion

Migrant small boat operations are challenging. The high number of incidents that occur within compressed timeframes can overwhelm MRCC watch officers. The occupants of migrant vessels are desperate and determined, often putting themselves in dangerous conditions to achieve their goal of crossing the border. Unfortunately, the criminal elements assisting the migrant occupants of small boats show a blatant disregard for safety and human life. The boats, floatation devices, and safety equipment are often inadequate, unsafe, or not on board, and in most cases, small boat operators are inexperienced in boat handling or navigation.

Despite the challenges, on 24 November 2021, HMCG appropriately anticipated the small boat movements, positioned assets to respond, and derived effective operational plans based on fragmented information. The dedication of the SMC on watch at MRCC Dover is commendable. Additionally, the efforts made by HMCG since November of 2021 are impressive regarding the speed of implementing capability improvements. HMCG improved the SARIS system, updated the ViSION system, launched a new cell phone system that can acquire GPS locations, and contracted additional aircraft, drones, and higher-capacity vessels to serve as SRUs.

HMCG also demonstrated a commitment to process improvement by asking the USCG to conduct a case study for this incident. Voluntarily opening all the logs and inviting other professionals full access shows a true dedication to the mission. This case study identified areas for process improvement and made recommendations. The objective of this case study is to provide a peer review of the response and provide feedback to HMCG on challenges and opportunities to improve the SAR system.

This case study found the MRCC and JRCC were inundated with reports of small boat crossings. Many reports contained false or incomplete information and communication was hindered by language barriers. Ultimately, HMCG did not have complete awareness of the number and location of migrant small boats crossing the channel. Given the extenuating circumstances, however, it would be unreasonable for a precise level of awareness to be attainable. MRCC Dover assisted or monitored every migrant small boat that was located, and, at the time, believed every small boat had been located.

The one migrant small boat that wasn't located communicated with MRCC Dover and MRCC Gris-Nez. The small boat successfully passed a WhatsApp GPS location and nature of distress. A search was planned for the appropriate area, and migrant small boats were located within the search area. The SMC correlated the report from the distressed vessel with one of the vessels located in the search area; the correlating factors were reasonable, but the reporting source could not be identified among the rescued persons. The Tactical Commander reviewed the case afterwards and agreed with the SMC's assessment. The decision resulted in no further search efforts. Unfortunately, the incident resulted in 27 casualties.

Several recommendations are outlined in this case study. Primarily, the reviewers identified opportunities to improve interagency and international coordination at the tactical level. Enhancing shared capabilities used to develop maritime awareness between both UK and France

could reduce inefficiencies in small boat tracking. Standardizing joint tactics, policies, and procedures and conducting exercising create opportunities for re-evaluation and mission improvement. Finally, using standard IAMSAR Manual terminology can remove ambiguity when communicating requests for assistance, tasking SRUs, and briefing for case closure or suspension.

It is understood that the USCG operates in a different fashion than HMCG, but both organizations adhere to the same requirements in the SAR Convention and the guidance provided in the IAMSAR Manual. The US's different application of SAR framework hopefully offers a unique perspective that enables meaningful recommendations for SAR system improvement. The USCG would like to thank the UK for the opportunity to evaluate this incident and provide feedback. The relationship between the US and UK SAR professionals is strong and leveraging that strong relationship to improve the Global SAR System is a worthy endeavor.