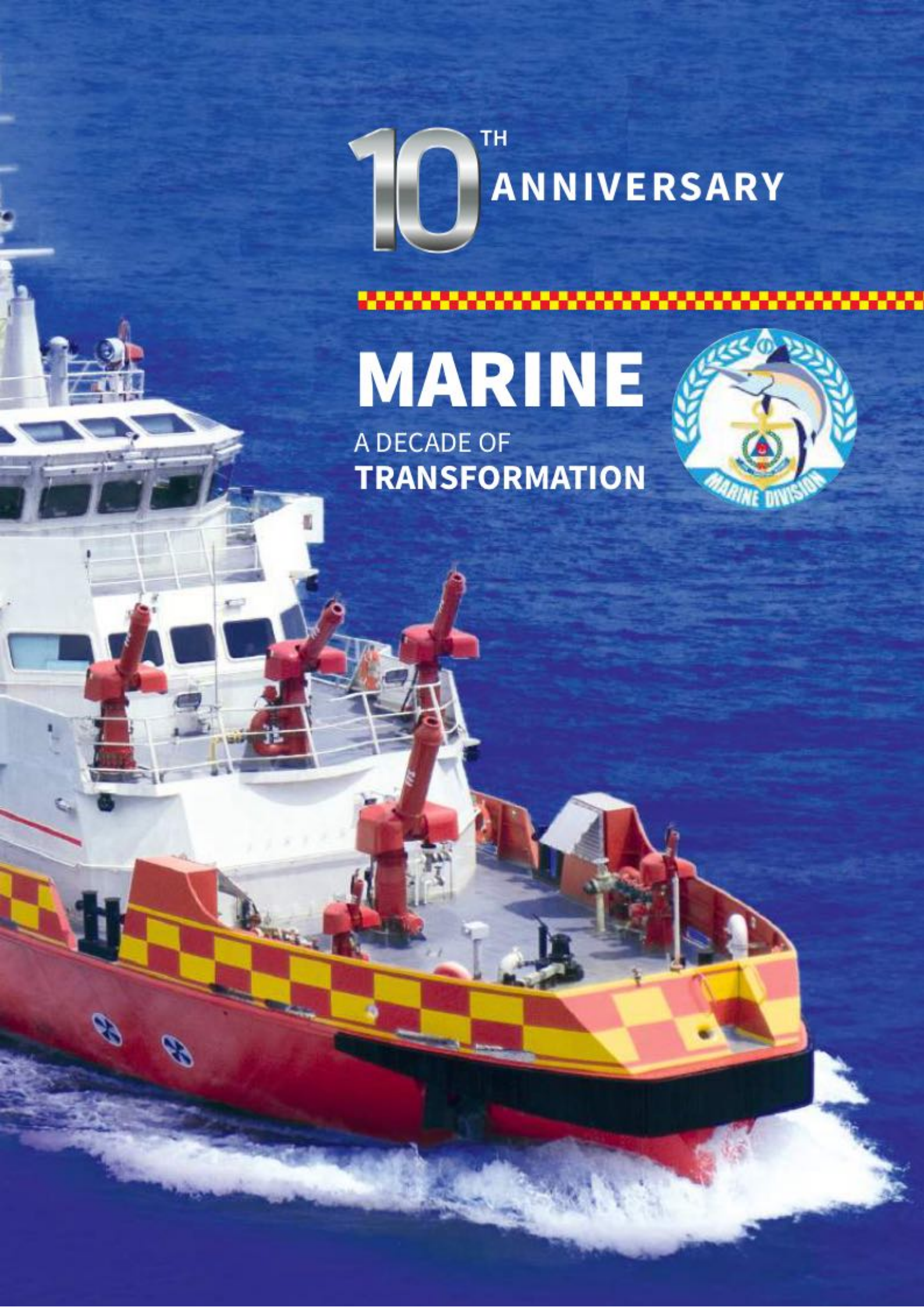


10TH ANNIVERSARY

MARINE

A DECADE OF
TRANSFORMATION



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Acknowledgement

This Anniversary Book "A Decade of Transformation" was officially launched on Thursday, 18 August 2022 by COL Ryan Ong, Commander SCDF Marine Division, and H.E. Ekkaphab Phanthavong, Deputy Secretary General of ASEAN for Socio-Cultural Community.

This is the first publication by SCDF Marine Division to commemorate Marine Division's 10th Anniversary as a unit.



Commissioner's Message

Eric Yap Commissioner Singapore Civil Defence Force

In 2012, SCDF took over the marine firefighting and rescue functions from the Maritime and Port Authority of Singapore (MPA). With two ageing Marine Fire Vessels, we took on this new responsibility with determination and resolve to build up SCDF's marine firefighting and rescue capabilities that would commensurate with Singapore's international reputation as an international maritime hub with one of the world's busiest container ports and the top refuelling port for ships.

The then Civil Defence Marine Command was specifically set up to oversee the Marine development plans and to build up this new capability. Within a short period of 10 years, we have surpassed all our objectives and put in place infrastructure and capabilities that enable SCDF to effectively respond to not only fire and rescue incidents, but also to chemical, biological and radiological related incidents. With these expanded capabilities and responsibilities, the Marine Command was redesignated as a Marine Division in 2019, achieving yet another milestone in its development.

These operational capabilities did not happen by chance but was the result of meticulous planning and hard work put in by dedicated officers who displayed tremendous ambition, grit, and tenacity. Working tirelessly, these officers studied and developed competency training modules, conceptualised different vessel designs by learning the best practices of other Marine firefighting organisations in the world and adapted them to the local operating context. On this note, let me put on record and acknowledge all the Marine specialists and firefighters, both past and present, including our full-time National Servicemen and Operationally Ready National Servicemen, who worked together over the past decade in steering Marine Division and bringing it to where it is today - a beacon of the highly modern, professional, tech-enabled marine capability of the SCDF.

The next decade holds many exciting possibilities for Marine Division. I look forward to seeing the next phase of the infrastructure and capability development, including the use of more advanced technologies and unmanned surface vessels in marine operations. Technology is a great enabler and is something that we would actively seek to incorporate as part of our operational workflow processes. Congratulations on the 10th Anniversary and I wish Marine Division all the best as you begin your journey for the next 10 years and beyond.



Commander's Foreword

Ryan Ong Commander, Marine Division Singapore Civil Defence Force

I am truly honoured to be entrusted with the responsibility to lead Marine Division as Commander. When I took over, as Marine was a new specialisation to me, my foremost task was to quickly learn the ropes to be familiar with the operations of Marine. I recall having to attend the Marine Specialist Course, the Steersman Course and the RFV Vessel Handling Course, coupled with numerous sorties and familiarisation sessions, all within a short span of a year. Going through the courses also allowed me to immerse myself in the true Marine experience, which is to be adept in not only marine firefighting skills, but navigation as well. This rite of passage certainly helped me to assimilate into the Mariners' family with ease.

The 10 years' milestone for Marine is a significant one and that is why we have named this momentous celebration "A Decade of Transformation". Since its inception in 2012, Marine's capabilities have transformed by leaps and bounds with the development of six state-of-the-art fire vessels capable of managing a major maritime crisis, two Marine stations and fire posts to provide swift response within Singapore waters, and a team of highly skilled Marine Specialists cross-trained in multiple skillsets. Credit to the pioneers (including former Commander AC Derek) for persevering and overcoming all odds to build a strong foundation for Marine.

This anniversary book will take us on a trip down the memory lane, to reminisce about the challenges, achievements, memories and camaraderie forged over the years. The anniversary book will also hopefully serve as an inspiration for the newer generation of Marine Specialists, to propel them forward and encourage them to continue to be bold in exploring uncharted waters, just like their trailblazing pioneers.



The Journey of SCDF Marine Division

CHAPTER 1

- Our History
- Development and Commissioning of Marine Vessels

Singapore Civil Defence Force (SCDF) Marine Division 10th Anniversary Book



Exercise Northstar VI on 23 May 2008



10TH ANNIVERSARY

Introduction

This book was written to commemorate the 10th anniversary of SCDF Marine Division. In the past decade, the Division has been keeping Singapore waters safe by responding to emergencies out at sea swiftly and effectively. This book will showcase the journey of Marine Division, how she transformed from humble beginnings in 2012 to a world-class marine firefighting unit, covering her history, development, capabilities and achievements. Through the book, the reader will also be able to see how our personnel, especially the pioneers, persevered and overcame their challenges to become the accomplished Mariners that they are today. Though we have achieved much over this decade, our future looks exciting as we work towards even greater excellence.

The Journey of Marine Division

Our History

Civil Defence Marine Command (CDMC) - 2012

SCDF Marine Division started from ground zero and saw a comprehensive and rapid build-up of its capabilities over the decade. It was first established as the Civil Defence Marine Command (CDMC) on 1 April 2012 to provide marine firefighting and rescue functions to meet the dynamic demands of the ever-changing landscape of the Singapore waters.

Before CDMC was established, the first ever maritime civil emergency exercise codenamed "Exercise Northstar VI" was held on 23 May 2008. This exercise was designed to stress test the capabilities of the agencies that would be working together to deal with a large-scale maritime incident. Exercise Northstar VI tested the contingency plans based on a fire and rescue scenario onboard a large cruise ship in Singapore's Eastern Anchorage. The exercise came at the right time as Singapore opened the International Cruise Terminal in 2013 and started operating the Marina Bay Cruise Centre in 2012, which led to a rise in high passenger-carrying cruise ships in Singapore's waters.



SCDF taking over Marine firefighting function from MPA on 1 April 2012



Handing over of command from Commissioner SCDF to LTC Derek Tan on 1 April 2012



CDMC pioneer batch



As there was an increase in large cruise ships sailing in Singapore waters with a high number of passengers, this also increased the risk of maritime emergencies involving a large number of casualties. To manage the potential rise in maritime incidents, CDMC was established to provide a dedicated unit of responders who specialise in marine firefighting and rescue operations to boost maritime safety and security. The takeover of Marine firefighting and rescue functions from the Maritime and Port Authority of Singapore (MPA) enabled the SCDF to build a more integrated and seamless response for both land and sea emergencies.

Another important point was that by taking on the marine firefighting and rescue functions from MPA, SCDF was in unfamiliar territory. Even though they provided firefighting functions on land, this was the first time they would firefight out at sea. The pioneering personnel at CDMC faced much uncertainty as they ventured into uncharted waters. In this book, through interviews with SCDF officers, we see how the first batch of CDMC personnel had demonstrated their courage and perseverance as they braved new territory to create a SCDF division that can successfully handle risky maritime incidents.

The Birth of Marine Specialisation in SCDF

One of the key moments in the establishment of CDMC was its creation of a team of personnel that would specialise in dealing with marine incidents. This was not an easy task for SCDF as they faced the challenge of developing a new team that had a very steep learning curve during their training sessions. In the interviews later in the chapter, our Marine Specialists will share on how they overcame many challenges through their grit, perseverance and innovation. The creation of Marine Specialists was an important step in CDMC building up its capabilities to deal with maritime incidents. CDMC also worked closely with MPA to create the pioneer batch of Marine Specialists in SCDF. These pioneers included carefully selected SCDF emergency response specialists from land fire stations and a small pool of MPA crossovers. The MPA crossovers allowed CDMC to benefit from their navigational and marine firefighting expertise. To ensure that they had the skills they needed, MPA crossovers followed the same firefighting training and regime as SCDF officers.



Oath-taking by LTC Derek Tan on 1 April 2012



CDMC personnel with the Commissioner

Why did you decide to crossover from MPA to SCDF?

I wanted to continue my passion of saving lives out at sea.

What is the main difference between MPA and SCDF?

When I was at my stint in MPA, I was with the Marine emergency department. We attended to Fire and Rescue incidents, as well as oil pollution incidents within the Singapore waters. Back then, I observed that MPA lacked medically trained personnel and we also did not have the capability to respond to chemical incidents. SCDF is a well-prepared organisation with a new fleet of vessels and a pool of Marine Specialists who are always ready to respond to any fire, medical, as well as rescue incidents.



WO1 Cheong Kwong Hui
Marine Section Commander
WCMFS



SGT3 Mohamed Irzan
Bin Busari
Marine Specialist
WCMFS

Why did you decide to crossover from MPA to SCDF Marine?

Firefighting has always been a passion of mine since my days in National Service. Hence, when the opportunity presented itself, I jumped at the first chance I was given to crossover. Compared to the good old days in MPA, I find myself constantly learning ever since I crossed over to SCDF. Every day is a learning experience, whether it is in training, navigation out at sea or responding to emergency incidents. I never thought I would say this, but I enjoy every challenge marine firefighting has offered me and I cannot wait to see what is in store for me next.

How has SCDF transformed since you joined?

When the SCDF Marine Firefighting unit was first developed, we started out with only two vessels at WCMFS and dealt only with fire and rescue incidents. Look at us now! Our growth has brought us to this juncture where we are now equipped with operational capabilities to handle any fire, rescue, medical and CBR (Chemical, Biological and Radiological) incidents out at sea with our vast fleet of exciting vessels.

If you could turn back time, would you still have chosen to crossover to Marine?

100%. One of the reasons I decided to crossover was because I knew this Specialist track was unlike any other that was available back then. Being in Marine is challenging but I am always ready for any challenges and even to this day there is still a lot more to learn so as to become a better Mariner.

What is the difference in the equipment used in Land and Marine stations?

Not much difference as both uses equipment with one common objective - to save lives and properties with safety as our utmost priority. However out at sea, especially when time is of the essence, we need to be able to conduct height rescue operations by ourselves without the assistance from DART. Some of the equipment used for water rescue and height rescue operations which land stations do not have are the floatation basket stretcher, electrical submersible pump, height rescue tripod and rigid hull inflatable boat.



LTA Md Naizal Bin Md Rashid
Deputy Rota Commander
BMFS

What was the hardest part of becoming a Marine Specialist?

During the initial days when we first started the Marine journey, it felt like we were operating on uncharted waters. We went through a very steep learning curve as we did not know much about Marine Firefighting and vessel handling. However, with a positive mindset and willingness to learn, we managed to pick up the skills to become effective Marine Specialists.

Why Marine?

Crossing over to Marine is a decision that I do not regret as it has value-added to my skills and experience as a senior fire fighter. It has also given me the opportunity to grow in my career, leading a whole new generation of self-sufficient fire fighters out at sea. Fast forward 10 years to 2022, look at the personnel and vessels that we are currently operating with. We have shown that we are able to adapt well amid all the challenges, coming out stronger as a division.



WO2 Noh Ridzuan Bin Khosnen
Deputy Rota Commander
BMFS

West Coast Marine Fire Station (WCMFS) – 2012

An important development in the build-up of CDMC's capabilities was the establishment of its first base of operation. CDMC's first new home was the WCMFS, situated at West Coast Pier. The establishment of WCMFS was momentous as it was the first base that enabled CDMC to start the provision of emergency services. This new base was a building taken over from MPA. It provided marine operational coverage for the western Singapore waters, including Tuas, Jurong Island, Penjuru and Lim Chu Kang.

SGT (NS) Muhammad Hairul
Navigational Specialist, posing in front of
the WCMFS



Construction of CDMC HQ and BMFS in Brani in 2013



CDMC HQ and Brani Marine Fire Station (BMFS) – 2014

The next major development in the ramping up of CDMC's capabilities came with the establishment of its central base and headquarters at Brani Island in 2013. CDMC now had a strategically located facility from which it could deal with maritime incidents. SCDF constructed a Marine base that co-located the CDMC HQ and BMFS within the Police Coast Guard (PCG) HQ compound in Brani. The CDMC Brani Base Groundbreaking Ceremony was held on 12 March 2013, with the event graced by Mr S Iswaran, Minister in Prime Minister's Office, Second Minister for Home Affairs and Trade and Industry. With the establishment of a proper HQ, CDMC reached the milestone of moving from just being a unit Fire station to becoming a Division HQ with a few fire stations under its control.

The construction of CDMC HQ and BMFS was completed in 2014. The base was officially opened by Mr Teo Chee Hean on 24 September 2014, who was the Deputy Prime Minister and Minister for Home Affairs back then. Being the second Marine Fire Station, BMFS further broadened CDMC's operational coverage by expanding on the boundary to cover incidents at Marina Bay Cruise Centre, Keppel Terminal, Marina South Pier, and other important port facilities located in Singapore Southern Waters.



WO2 Md Firhin Bin Wahab
Deputy Rota Commander
WCMFS

What made you decide to come over to Marine?

After serving 6 years at Woodlands Fire Station, I felt the desire to pursue new challenges. Coincidentally, a recruitment drive for Marine Specialist came along. Hence, I jumped on it and began embarking on a new journey to seek new experiences. Some of the deciding factors of why I joined the Marine Specialist track was the fact that it would enable me to acquire new knowledge and also it would give me the opportunity to be one of the pioneers in helping set-up the first Marine Fire Station.

What is the biggest difference between Land and Marine Fire Stations?

When they mentioned that the knowledge to be gained was aplenty, they were not joking. As the pioneer batch, every day was a new learning experience. We had to learn new skillsets such as steering of vessels, navigating safely and learning survival techniques out at sea. When we took over from MPA in 2012, we were just a small unit consisting of around 10 Regulars per Rota. Hence, responding to incidents out at sea have been challenging all the time but nonetheless, we always got things done.



Mr and Mrs S Iswaran, Guest-of-Honour, at the CDMC Brani Base Groundbreaking Ceremony



Unveiling of CDMC and BMFS official opening plaque



Tour of CDMC and BMFS with DPM Teo Chee Hean and Commissioner SCDF



Congratulatory message from DPM Teo Chee Hean



CDMC pioneers at BMFS





LTA Mohammad Rafi Abdul Majid
Discipline & Security Officer
1st SCDF Division

What is your fondest memory of Marine?

We started as a new unit and we were only given temporary offices at SCDF HQ level 6, courtesy from our Public Affairs Department back then. Together with the pioneer batch, we had to brainstorm about Marine's uniform, unit logo and allowance etc. We were also constantly moving around, visiting marine yards and stakeholders to understand the concept of Marine operations. Eventually, we were able to build up our home base at Brani, obtain our boat licenses and become trainers for the unit.

Interesting stories to share from your time in Marine?

There was one incident involving a fish farm and our vessel was not able to move in due to shallow water. Fortunately, one of the fish farm owners saw us and brought us in using his small little boat. When Marine first started, I was involved in various SCDF Workplans, sharing with people the future of Marine. Looking back, Marine has really transformed a lot in the past 10 years.

Renaming CDMC to SCDF Marine Division

By 2019, CDMC had made significant progress in expanding its capabilities as it now had a team of highly trained Marine Specialists with state-of-the-art vessels. In recognition of its new comprehensive capabilities, CDMC was officially renamed SCDF Marine Division in 2019. Since SCDF Marine Division took over marine firefighting operations in 2012, it has been growing steadily both in terms of capacity building and infrastructural development.

Along with a new name, SCDF Marine Division also came up with a new logo to better symbolise its fresh new identity, one that showcased its improved strengths and capabilities with a more striking image.



Official opening of Loyang Marine Fire Post on 14 July 2017 by Dr Mohamad Maliki Bin Osman, Senior Minister of State, Ministry of Defence and Ministry of Foreign Affairs

Establishment of Marine Fire Posts

To further support its growth, CDMC continued to expand its capabilities by adding two Marine Fire Posts. The establishment of Loyang Marine Fire Post in 2017 and Gul Marine Fire Post in 2019 helped improve the emergency response coverage in our waters. Both Marine Fire Posts are located within PCG Loyang Base and PCG Gul Base respectively. These two Marine Fire Posts enhanced the operational coverage to allow CDMC to reach more parts of Singapore's waters quickly and also helped improve response time, enabling the officers to reach the incident locations within minutes.

Development and Commissioning of Marine Vessels

One important part of the building up of Marine Division's capabilities was the creation and development of its own fleet of marine vessels. Marine Division started its fleet by taking on the old vessels from other organisations and as it advanced in maturity, began to develop its own fleet of vessels.

SCDF Pioneer Vessels

Marine Fire Vessel (MFV, 2012 to 2021)

Marine Division's pioneer vessels came from MPA as it received two firefighting vessels formerly known as Api Api 1 and Api Api 2. Under SCDF's charge, the two vessels were subsequently refurbished with a fresh look and painted with SCDF's branding such as the Battenberg pattern and livery line to mark our readiness to provide emergency services. These 10-year-old vessels were officially operationalised in 2013 under a new callsign "MFV" (Marine Fire Vessel) and were renamed as Firefighter I/Firefighter II. Both vessels were officially commissioned by Mrs S Iswaran at the CDMC Brani Base Groundbreaking Ceremony held on 12 March 2013.



Before refurbishment - Api Api 1

After refurbishment - MFV, Firefighter I

Thus, SCDF now had vessels that enabled it to start fulfilling its mission. Each MFV was capable of operating three water monitors at any one time with a total pumping capacity of 40,000 litres/min. Such specifications allowed the MFVs to perform critical operations such as defensive firefighting as well as boundary cooling of the stricken vessel. SCDF could now engage in numerous major joint exercises such as "Exercise Highcrest" led by the Republic of Singapore Navy (RSN), "FEREX" led by MPA as well as "Exercise Bobcat" led by Airport Emergency Services (AES). The MFVs also showed their worth as they were deployed in many notable ship incidents such as the fire at Jalan Samulun in 2013, the Tuas South Boulevard fire in 2016 and a container ship fire in 2018.

An important development in the growth of the responsibilities of Marine Division came in November 2013, when SCDF was given the in-principal approval to undertake the role as Incident Manager (IM) to handle the consequences arising from a CBR incidents within Singapore waters. After this appointment as IM, SCDF went on study visits to government agencies in USA and Germany to better understand the operational practices and training regimes regarding responding to marine CBR incidents.

On 28 March 2018, the capability of MFVs together with the deployment of the improvised decontamination system, were validated at Ex Bluewhale (Carina). This event was a major exercise at sea that simulated a mass casualty incident on board a ferry due to a terrorist Marine CBR attack.



Tuas South Boulevard fire in August 2016



MFV in action during Exercise Highcrest



MFVs involved in Exercise Bluewhale (Carina) on 28 March 2018

After serving SCDF for close to 10 years, the MFVs' operational lifespan finally came to an end in 2021. Right before sunset on 3 August 2021, Firefighter I and Firefighter II were officially decommissioned. It was the first time that SCDF held a decommissioning ceremony for our vessels and was attended by a contingent of Marine personnel. Against the setting sun, the blue ensign flags from the two MFVs were lowered to symbolise the end of their service. It was a formal and solemn ceremony, befitting the retirement of our pioneer vessels. The MFVs bade farewell in a water salute, sailing under the water curtain into the distance while Marine personnel said goodbye to the vessels, acknowledging the end of their tow.



MFVs Decommissioning Ceremony

Lowering and handing over of blue ensign flags



Personnel from Marine waving their final goodbyes to the MFVs



Marine Command Vessel (MCV, 2012 to 2020)

As part of the building of its fleet to empower the growth of its capabilities, SCDF received four small class vessels from the PCG in 2012. SCDF refurbished the vessels and renamed them as MCVs. Although the MCVs were not equipped with any firefighting capability, these vessels could achieve a top speed of 30 knots and thus were used for sea transportation as well as fast evacuation of casualties. This greatly mitigated the shortcoming of MFVs which could only achieve a maximum of 12 knots.

The MCVs were vital in boosting Marine Division's capabilities, as it could be used by SCDF for training and exercises. When SCDF decided to take on the self-helming capability back in 2013, MCVs were deployed as the platform to train our Marine Specialists on attaining the Steersman licence, a skillset that was required to operate both MFVs and MCVs. The experience from self-helming the MCVs was a stepping stone to developing Marine Division to what we are today, where we now have the ability to self-helm our wide range of vessels of different tonnage and sizes. After serving SCDF for a good nine years, all the MCVs were officially decommissioned in 2020.



First batch of MCV trainees

While the pioneer vessels were marginally capable to meet the operational requirements in firefighting operations, there were constant challenges and setbacks faced by our Marine frontliners such as a longer response time by our vessels to reach waters further out at sea due to speed limitations as well as risk of damages to vessel due to collision or being grounded. The pioneer vessels were crucial to the development of Marine Division as it taught us many valuable lessons to help us create our next generation of state-of-the-art firefighting and rescue vessels to keep Singapore waters safe.



Before refurbishment - PCG PC Class boat



After refurbishment - MCV

SCDF First Generation of Vessels

Rapid Response Fire Vessel (RFV, 2017 to present)

The MFV could fight fires but was slow while the MCV was fast but lacked firefighting abilities. The limitations of the pioneer vessels of MFVs and MCVs which SCDF took over from MPA and PCG inspired SCDF to build its own new vessels that could both travel at high speeds and fight fires. This need marked a new beginning in the development of SCDF's Marine vessel fleet as it started to customise and construct new vessels to boost its capabilities at sea, instead of relying on vessels taken over from other organisations. Prior to the construction, SCDF sent officers to the United States of America, Hong Kong, China, Germany and the Netherlands to study their vessel design and to observe their firefighting and rescue capabilities. These officers then adopted the right concepts and introduced relevant features to the new vessels to better suit our local operating environment and operational needs.

Following the overseas study visits, SCDF collaborated with Lung Teh Shipyard, a Taiwanese shipbuilding company, to begin construction of two RFVs. The RFV is equipped with powerful firefighting monitors and designed to travel at fast speeds. This vessel is capable of reaching its location within minutes and can extinguish small to moderate fires effectively. Due to its light weight and agility, the RFV can manoeuvre fast in heavy traffic conditions, in narrow straits and in locations where the water is shallow.

By early 2017, the construction of the two purpose-built RFVs, named Red Swordfish and Blue Swordfish, was completed and delivered to SCDF. This was a significant milestone in the history of SCDF as it now had two new vessels that, unlike its pioneer vessels, were both fast and can fight fires. To mark this momentous occasion, both RFVs were launched by Mr K Shanmugam, Minister for Home Affairs and Minister for Law, at the SCDF's annual workplan seminar 2017 held at One Degree15 Marina Club.



RFV during construction

Delivery of RFV



Today, they will be launching the Rapid Response Fire Vessels. It will enhance maritime firefighting capability. They have been designed by SCDF. If you look at the new Rapid Response Fire Vessels, they can reach the speed of more than 40 knots, so it allows SCDF to respond much faster to maritime fires and also conduct rescue operations in a maritime environment.

Speech by Mr K Shanmugam



RFVs launched by Mr K Shanmugam, Minister for Home Affairs and Minister for Law at SCDF Workplan 2017



White Swordfish



Blue Swordfish



Red Swordfish



Commissioner Eric Yap splashing seawater on the bow of White Swordfish during the launching ceremony

RFV1G (left) vs RFV2G on the right, which is equipped with an IRB (Inflatable Rescue Boat) for deployment in shallow water operations



Length	20m
Total output	10,000 litres/min
Carrying capacity	5 passengers
Top speed	40 knots
Built by	Lung Teh Shipping Co. Ltd

Manned by a crew of four Marine Specialists, the RFV utilises water jet propulsion which allows the 20-metre vessel to travel at a top speed of 40 knots with high maneuverability. Both RFVs are equipped with two FFS water monitors which are able to discharge seawater at a rate of 10,000 litres/min, powered by two fire pumps. Four deck hydrants on the port and starboard provide water supply for internal ship firefighting. Each RFV is also equipped with 1300 litres of foam for firefighting operations.

In addition to its firefighting capabilities, the RFVs are equipped with unique features that facilitate search and rescue functions. Special xenon and halogen search lights are mounted on the wheelhouse, allowing the crew to conduct surface search operations under night and low visibility conditions. They are also equipped with an advanced Electro Optics (EO) camera which will allow casualty and heat detection during any day or night operations.

SCDF saw a notable jump in the development of its capabilities with the launch of a second generation of RFV, named White Swordfish in October 2018, by Commissioner SCDF, Commissioner Eric Yap. Unlike its predecessors, the White Swordfish is further equipped with an inflatable rescue boat that allows shallow operations on beaches and reefs less than one metre in depth.

Heavy Vessels, 2018 to present Marine Rescue Vessel (MRV) / Heavy Rescue Vessel (HRV) / Heavy Fire Vessel (HFV)

The development of Marine Division's vessels is intricately linked to the development of Singapore's status as a major port and maritime destination. Singapore has one of the busiest ports in the world and with the first phase opening of the Tuas Mega Port in 2021, it will eventually become the world's largest container terminal when fully operational in the 2040s. The high volume of sea traffic means that Marine Division needs to build a new fleet that would give it the capability to handle increasing types of maritime emergencies so as to keep Singapore's waters safe. Thus in 2016 and 2017, SCDF started the construction of three heavy vessels that could comprehensively tackle marine firefighting and rescue operations. The growth of Singapore's port thus spurred the growth of SCDF's fleet in terms of numbers and operational capabilities.



Marine Rescue Vessel (MRV) – Dolphin

The Marine Rescue Vessel (MRV) - also known as the Dolphin - is the designated workhorse of Marine Division. The MRV is built for both marine firefighting and rescue operations, and it is the primary vessel for major incidents out at sea. The MRV is the vessel that is first mobilised upon receiving a call for fire or rescue assistance.

The MRV is a significant development in the line-up of SCDF's Marine vessels as it has capabilities the pioneer generation of vessels did not have. For example, the MRV is equipped with a CBR filtration system, decontamination cubicles, and positive-pressure cabins. The MRV also has a Seaborne Electro-Optics Systems (SEOS) that can detect casualties from a further distance under low visibility conditions, and it can also identify heat spots on affected vessels for effective cooling operations.

During operations, the vessel can achieve a top speed of 30 knots. It is equipped with three fire monitors (two fire monitors capable of pumping 20,000 litres/min and one more powerful single water monitor capable of pumping out 40,000 litres/min). A first aid room and rescue room in the vessel also allows officers to treat casualties requiring medical attention.

Length	35m
Total output	80,000 litres/min
Carrying capacity	30 passengers
Top speed	30 knots
Built by	Penguin Shipyard International



Dolphin is built for major firefighting and rescue operations



Heavy Rescue Vessel (HRV) – Manta

The opening of the International Cruise Terminal and Marina Bay Cruise Centre led to a rise in high passenger-carrying cruise ships in Singapore's waters, thus SCDF needed a vessel that could handle mass casualty incidents out at sea. Therefore, the HRV, also known as the Manta, was built by SCDF to become their first vessel designed to manage a mass casualty emergency. The HRV has a carrying capacity of 300 passengers, a medical treatment room, a decontamination chamber, and a command post for command and control during major operations.

The Manta is SCDF's first catamaran (twin-hulled) vessel, which provides great stability and control for vessel-to-vessel transfer during operations. Additionally, the HRV can achieve a top speed of 35 knots. While its primary role is to serve as a vessel for mass evacuation, dealing with a large number of casualties, and serving as a Marine Tactical Headquarters during major incidents, the HRV is also capable of firefighting operations as it is equipped with two water monitors that pump 20,000 litres/min.

Length	40m
Total output	40,000 litres/min
Carrying capacity	300 passengers
Top speed	35 knots
Built by	Penguin Shipyard International



Manta is built for mass evacuation and rescue operations involving large number of casualties

Heavy Fire Vessel (HFV) – Sailfish

The HFV, also known as the Sailfish, is the flagship and pride of Marine Division. The HFV is one of the largest and most powerful firefighting vessels in the world today. It is also equipped with a unique Dynamic Positioning System that allows the vessel to maintain its position in the water automatically, which significantly reduces the crew's workload, and increases precision and accuracy during operations.

The HFV is also equipped with a FiFi Class 3 external firefighting system - 12 fire and foam monitors for 360° firefighting coverage with a total output of 240,000 litres/min. In addition, the HFV has a medical treatment room, decontamination room, rescue room, CBR filtration system, positive-pressure rooms, and a command room for command and control during major operations.

Thus, it can be seen with the Sailfish how SCDF has boosted the technology and capabilities of its vessels in the past 10 years, as a vessel like the Sailfish is capable of doing so much more than the pioneer vessels that SCDF had. From MCVs with no firefighting capabilities and to MFVs that travelled at a relatively slow speed, SCDF now operates vessels like the Sailfish with state-of-the-art firefighting equipment and facilities to deal with CBR incidents.

Length	50m
Total output	240,000 litres/min
Carrying capacity	30 passengers
Top speed	20 knots
Built by	ST Engineering Marine



Sailfish, one of the most powerful firefighting vessels in the world

Vessels Development

Marine Rescue Vessel (MRV)



2016
Design Reviews

May 2017
Steel Cutting Ceremony

2017/2018
MRV Construction

April 2018
MRV Launching Ceremony



November 2018
MRV Delivery

December 2018
MRV Training

September 2019
MRV Delivery

September 2019
MRV Operationalisation

Heavy Rescue Vessel (HRV)



March 2017
Design Reviews

September 2017
Steel Cutting Ceremony

2017/2018
HRV Construction



November 2018
HRV Launching Ceremony

December 2018
Systems Installation

May 2019
HRV Delivery

February 2020
HRV Operationalisation

Heavy Fire Vessel (HFV)



2016
Contract Signing

March 2017
Design Reviews

August 2017
Steel Cutting Ceremony

2017/2018
HFV Construction



June 2018
HFV Launching Ceremony

November 2018
Harbour Acceptance Test

March 2019
HFV Delivery

April 2022
HFV Operationalisation

To supplement the capabilities of the vessel fleet, Marine Division acquired four Rigid Hull Inflatable Boats (RHIB) and two jet skis to conduct surface water rescue. With the RHIB and jet skis, responders can reach out to casualties on water and rescue them swiftly and safely.

Rigid Hull Inflatable Boat (RHIB)

The RHIB serves as a swift rescue boat for search and rescue operations. It can travel up to 10 knots and take up to six persons, including one casualty on a stretcher. The RHIB can be found on the HRV, MRV, HRV and RFV White Swordfish.

Jet Ski

The jet ski is fast and nimble, thus capable of supporting search and rescue operations. It can take one casualty per jet ski using the rescue board. With a top speed of more than 54 knots, the jet skis can be deployed swiftly to the casualties to bring them to safety. The jet ski can be found on the back of the HRV.



RHIB in action



Jet ski in action



Mr K Shanmugam and his wife at the Vessels Commissioning Ceremony at Keppel Bay



Parade contingents made up of Marine personnel at the Commissioning Ceremony



Mr K Shanmugam speaking at the Vessels Commissioning Ceremony

Marine Vessel Commissioning

The three state-of-the-art vessels – Marine Rescue Vessel, Heavy Rescue Vessel, and Heavy Fire Vessel – were commissioned by Mrs Shanmugam on 20 August 2019 at Marina at Keppel Bay, and was witnessed by Minister for Law and Home Affairs, Mr K Shanmugam. Speaking at the ceremony, Mr Shanmugam said the new vessels would further enhance SCDF’s marine firefighting capabilities as each vessel serves distinct roles that comprehensively tackle marine firefighting operations.

In a short span of 10 years, Marine Division has transformed from having just two firefighting vessels to establishing our own fleet of six vessels capable of carrying out prolonged and complex firefighting and rescue operations, as well as responding to CBR incidents at sea. These vessels started from humble beginnings of being refurbished from vessels taken from other organisations, to new state-of-the-art vessels customised to give it high speed and the capability to combat dangerous firefighting and maritime emergency incidents. With each new vessel that is added, the Marine Division becomes more capable of responding to numerous fire and rescue incidents. Marine officers also receive all round exposure as they command their vessels during various maritime contingency exercises with related agencies. This leads us into the next segment of this publication.

Mariners in Action! 🚩

CHAPTER 2

- Marine Trainings
- Marine Exercises
- Marine Operations

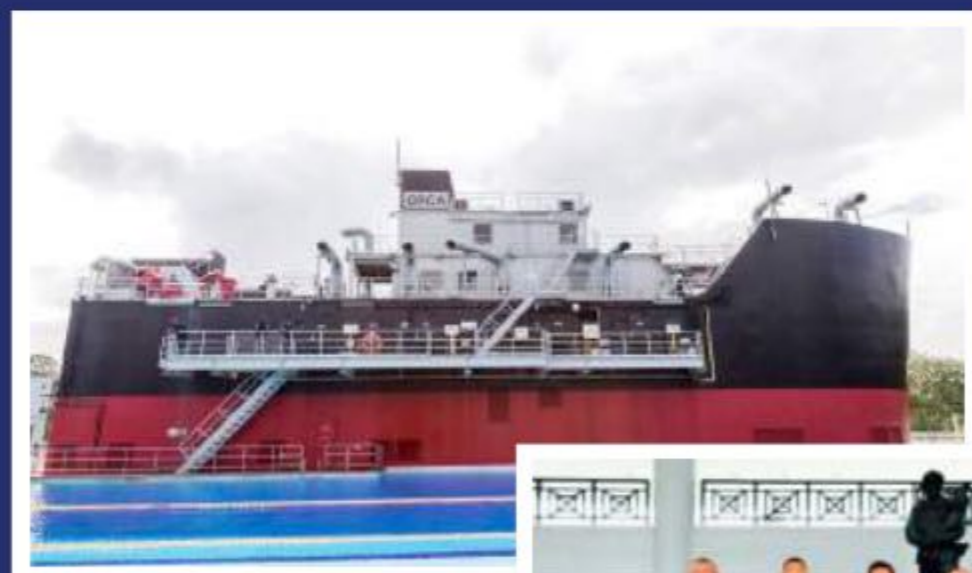
Mariners in Action!

In the previous chapter, we saw how Marine Division established itself by firstly developing its infrastructure, through setting up its bases and building up its own fleet of vessels. Apart from developing its hardware, Marine Division also had to equip its personnel with specialised skills, a process we will see in this chapter. The following part of the chapter then shows how through undergoing large-scale exercises, our Marine Specialists further polished their skills. Finally, we end the chapter by recounting how our Marine Specialists put what they learnt in action, through accounts of the operations they went through that they handled successfully.

Creating a team of Marine Specialists

One of the key steps in building the capabilities of Marine Division when it was first established came in the training of its newly assembled team. In this chapter, we will see how our officers came to successfully pick up the skills needed to become a highly regarded team of Marine Specialists.

One of the challenges faced in the training of our Marine officers came with the fact that it was not just enough for our officers to have firefighting skills, they also needed to learn how to handle the SCDF vessels, including the different types of vessels in the fleet. This ability to overcome learning challenges to both fight fires and navigate vessels earned our officers the right to be called Marine Specialists.



The ORCA caters for various training scenarios for Marine Specialists



First Marine Firefighting Specialist Course conducted at the Civil Defence Academy



25th ARF workshop on Ferry Safety in Guangzhou



CPT Ling Meng Hong, first senior instructor of MFFSB to attend the Marine Firefighting Symposium at Norfolk, Virginia in 2011



Attachment to Hong Kong Fire Safety Department (HKFSD) to learn how HKFSD handles firefighting and rescue operations at sea

Equipping our officers through overseas training

Marine Division started its training programme by sending our Marine officers to visit agencies in China, Hong Kong and the United States of America where they learnt best practices in marine firefighting and rescue operations, including command and control of operations at sea. With the knowledge and experience they gained from their overseas counterparts, these officers adapted it to our local context and taught what they learnt to our officers. Marine also adopted the train-the-trainers concept to ensure the effective dissemination of valuable information and expertise.

To provide Marine personnel with the necessary training required, Marine Firefighting Specialist Branch (MFFSB) was established in 2011 in Civil Defence Academy (CDA) as the training arm for Marine Division. Before the establishment of MFFSB, a group of SCDF officers who were earmarked to become Marine Senior Instructors were sent to Hampton Roads Marine Firefighting Symposium, located in Norfolk Virginia, USA, for one week of shipboard firefighting training which was designed for land-based firefighters. After this training, the officers developed lesson plans and imparted their knowledge to the Marine Specialist trainees. In November 2011, CDA conducted the inaugural Marine Firefighting Specialist Course (MFFSC) to train the pioneer batch of Marine Specialists using meticulously curated lesson packages that have since set the foundation for marine response training till today.



Participants undergoing marine firefighting training by MFFSB

Every Marine Specialist is required to complete the MFFSC before he or she is ready to turn out to any maritime incident. During the course, the participant would be trained in water confidence, Hazmat, rescue techniques, basic height rescue and Marine vessel fire scenario-based exercises. This training is essential to equip Marine Specialists with the knowledge and skills to handle any incidents out at sea.

Marine Specialist in Operational PPE



Marine Firefighting



Hazmat Response



Search and Rescue



Water Rescue



Marine pioneers taking over the navigation of vessels

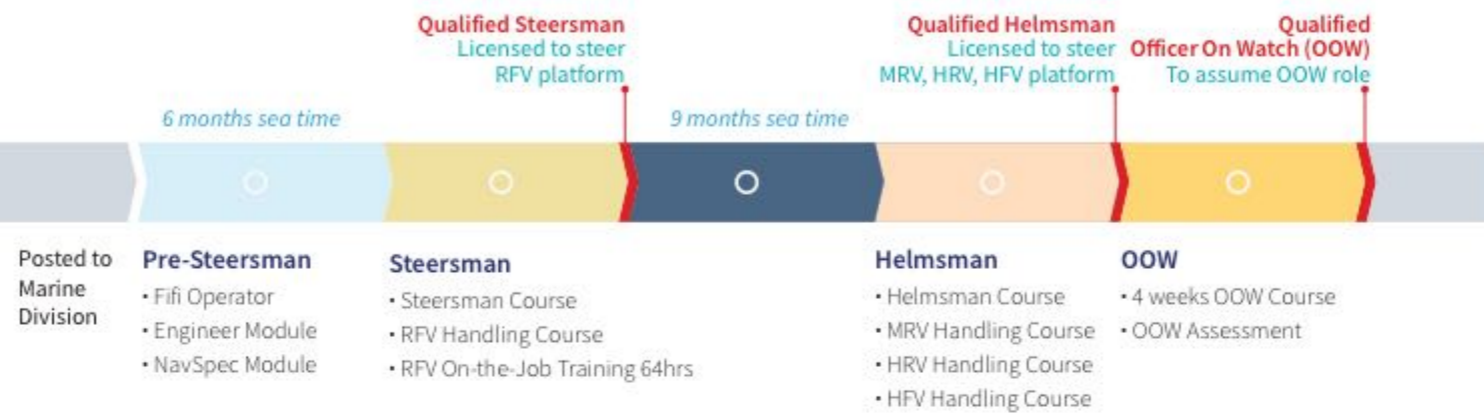
Self-Helming Capability

One of the most important moments in Marine Division's officer training history was the training of its officers to be able to navigate its own vessels without having to rely on external contractors. In the initial years, the operation and navigation of Marine vessels faced much difficulties as we relied on external contractors to do the job. During that period, we experienced problems such as communication breakdowns, unfamiliarity with our concept of operations as well as poor positioning of vessels. Therefore in 2014, Marine Division started training its personnel in navigational skillsets with the aim to reduce and ultimately cease reliance on external contractors for vessel navigational and maintenance purposes.

The first step to being able to self-helm our vessels is to complete the Steersman and Helmsman courses to be familiar with the navigation knowledge applicable within the port limits. Marine Specialists are then put through respective vessel handling courses conducted by Marine Division's training officers in order to be ready for helming the various types of Marine vessels.

When Marine Division finally managed to train our officers to self-helm our vessels, it was a big achievement and a major milestone in the building up of our capabilities. Navigating a vessel is a complex skill as the Marine Specialists need to learn how to handle the vessel well so it does not get into accidents. We are now confident that we can handle more advanced and sophisticated vessels on our own, and be able to navigate our own vessels well because of our extensive training.

Navigational Training Roadmap of a Marine Specialist



SSG Muhd Firdaus Bin Rahim

Steersman

RESPONSIBILITIES

- The Steersman is responsible for conducting the propulsion and steering test, and reporting any anomalies to the OOW
- The Steersman is also in charge of steering the vessel in accordance with the OOW's instructions, and station keeping of the vessel during firefighting operations
- Able to steer RFV



WO2 Ahmad Zohri Bin Saad

Officer On Watch (OOW)

RESPONSIBILITIES

- The OOW holds the overall responsibility of the vessel by ensuring the safety of those onboard by executing early, clear and safe instructions to the navigation crew
- The OOW also determines the course of the vessel and establishes communication with other vessels



SGT3 Mohd Fairus Bin Ahmad

FiFi Operator cum Engineer

RESPONSIBILITIES

- The FiFi Operator conducts functional test on auxiliaries and firefighting systems on the vessel to ensure operational capability
- The FiFi Operator is also in charge of operating vessel machineries
- The Engineer is in charge of reporting faults related to engineering issues



WO1 Muhd Yazid Bin Mahony

Helmsman

RESPONSIBILITIES

- The Helmsman is responsible for conducting the propulsion and steering test, and reporting any anomalies to the OOW
- The Helmsman is also in charge of steering the vessel in accordance with the OOW's instructions and station keeping of the vessel during firefighting operations
- Able to steer heavy vessels – HRV and HFV



SGT2 Har Kai Yang

Navigational Specialist

RESPONSIBILITIES

- The Navigational Specialist is responsible for conducting operational tests on communication and navigation equipment onboard the vessel
- The Navigational Specialist also updates the OOW on environmental factors expected and records the vessel voyage
- This role can be undertaken by both Regular and NSF Section Commander



Marine Division's Vessel Handling Courses

To become qualified trainers for vessel handling courses back then, our pioneer trainers had to go through training by PCG to acquire the necessary skillsets and knowledge. Subsequently, these pioneers established the navigational training framework and took on the role as trainers to teach vessel handling courses to Marine Specialists. Till this day, some of our pioneer trainers continue to impart their knowledge and groom more Marine Specialists. The expertise of this pioneer batch of trainers was crucial in the development of the capabilities of Marine Division, as it created a team of Marine Specialists who have top-notch firefighting and rescue function skills.

Every vessel handling course completed was a milestone for the trainers and trainees, and the successful operationalisation of the Marine vessels is a testament to the tremendous effort by each Marine Specialist to undertake the challenge to learn and operate the vessels for fire and rescue missions in Singapore waters.

Here, we hear from some of Marine Division's trainers to find out more about their experiences and how they overcame their challenges through perseverance and grit.



MAJ Landon Leong
Commander Fire Station,
Trainer for HFV vessel
handling course

What are your roles and responsibilities in the project?

My role was to learn as much about the vessel during construction phase and to translate the learning into proper learning materials for training the future HFV helmsmen. I also provided inputs on issues related to HFV such as engineering issues, vessel performance and system maintenance.

What are some valuable takeaways?

The opportunity to partake in such a project opened my eyes to how vessels are built from the ground up and how simple sentences in tender specifications can result in huge impacts on the end product. Also, this project has allowed me to develop my knowledge on marine engineering and naval architecture.



CPT Soh Cheng Wei
Navigational & Training Officer
Trainer for HRV vessel handling
course

What are some valuable takeaways from taking part in such a milestone project?

It has provided a good exposure to learn from the shipyard and Original Equipment Manufacturer (OEM) engineers. It is also interesting to work with other Marine Specialists to put things together to develop and conduct the HRV vessel handling course.

Any challenges faced?

It was a steep learning curve due to HRV's unique design and operational capabilities among other Marine vessels.



LTA Muhd Azlan
Operations Management
and Training Officer
Trainer for MRV vessel
handling course

What are your roles and responsibilities in the project?

I oversaw the forming of the trainers' group to attend OEM training workshops, and assisted in developing the MRV training program, syllabus and training materials. I was involved in the construction, delivery, commissioning, training, and operationalisation of the MRV.

Any interesting encounters during this project?

The whole process from the construction to the operationalisation of the MRV gave the team invaluable in-depth knowledge, skills, and experience. The first time we steered the vessel was very interesting as we were unsure of how the vessel would react given the steering, propulsion, and weight that we put into it.





Advanced Marine Specialist Course

In 2022, experienced and qualified Marine Specialists with the potential to take up a command role will be upgraded to become Advanced Marine Specialists. The Advanced Marine Specialist Course (AMSC) is a step up from the Marine Firefighting Specialist Course where participants can acquire additional operational knowledge and skillsets. The Advanced Marine Specialist Course is an 8-day course where Marine Specialists are trained in advanced tactical marine firefighting, Hazmat procedures, marine search and rescue operations, and advanced height and rescue techniques.

Marine Exercises

Exercises are a major contributor to the development of Marine Division's capabilities. The exercise scenarios help enhance the Marine Specialists' training programme by giving them an opportunity to undergo training in a real life situation. Marine exercises simulate a real incident and help those involved to gain confidence in their abilities, look for potential risks, and improve shortcomings and safety. Thus to prepare our Marine Specialists to be operationally ready for any maritime incident, Marine Division frequently conducts exercises with our key related agencies such as RSN, PCG, MPA and AES. These exercises are important to validate agencies' contingency plans and ensure that they can work as one when they respond to emergency incidents at sea.

Exercise Bluewhale

Exercise Bluewhale is an SCDF-led multi-agency exercise involving either a CBR terror attack at sea or fire involving passenger or commercial vessels. The exercise is designed to validate the emergency preparedness and interoperability of related response teams in managing a marine CBR or fire incident in an open sea environment. SCDF's roles and responsibilities in the exercise is to conduct snatch rescue, containment of hazardous materials, decontamination as well as evacuation of passengers to safety. The first Exercise Bluewhale with a marine CBR scenario was conducted in 2018 and involved a total of five related agencies: PCG, ICA, MOH, RSN and MPA.

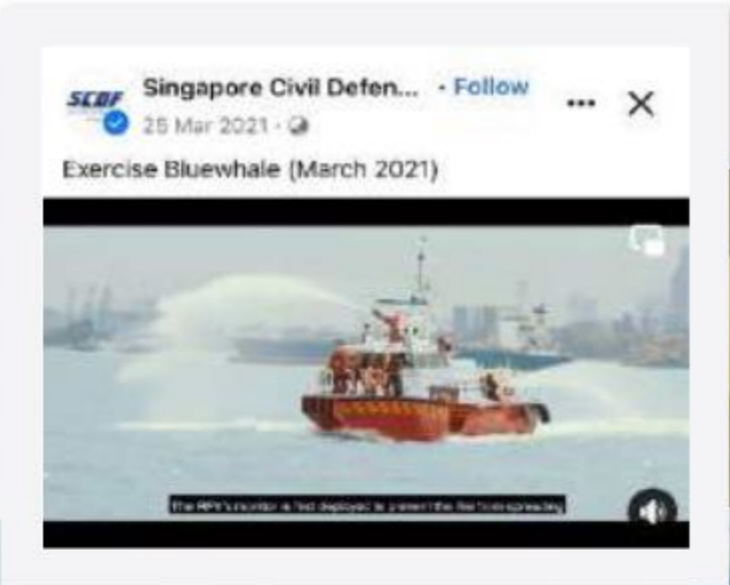
In Exercise Bluewhale 2021, Marine Division responded to a simulated fire on a passenger ferry. Two crew members suffered from burn injuries, while another crew member had slipped on the deck and was immobilised. The RFV, MRV and HFV were deployed for firefighting and rescue operations, and the casualties were evacuated and conveyed safely to the hospital.

First Advanced Marine Specialist Course



SCDF in Exercise Bluewhale 2018 involving Marine CBR attack on ferry





The Republic of Singapore Air Force • 31 Aug 2019

A ferry headed from Batam to Singapore has collided. It starts to flood, passengers are evacuated onto life rafts, and some are critically injured. #TheRSAF's RESCUE 10 Search and Rescue team is scrambled to evacuate a casualty from the Singapore Civil Defence Force's Heavy Rescue Vessel.

Thankfully this is just a Ferry Emergency Exercise (FEREX) held by the Maritime and Port Authority of Singapore - MPA to drill the multi-agency response should such an unfortunate incident happen.

Seatrade Maritime News

RECOMMENDED PODCAST: Maritime in Minutes - Container line mega profits - Greek fleet in numbers - Fake seafarers - CMA... [... BE SO MORE](#)

ASIA

Singapore in ferry rescue exercise

Singapore tested out its response to a ferry accident on Friday in an exercise involving both a collision and a medical evacuation.

Marcus Hand | Aug 30, 2019

The ferry emergency exercise (FEREX) involved a regional ferry with 150 passengers on board that collided with a large underwater object and started taking on water.

SCDF in Exercise Bluewhale 2021 involving simulated fire on a ferry

Ferry Rescue Exercise (FEREX)

FEREX is an annual emergency exercise led by MPA on stipulated scenarios involving passenger vessels that could potentially result in a mass casualty situation. The exercise enabled officers from the various agencies (RSAF, PCG, SCDF, ICA and MPA) to be validated on their response plans and to further improve the joint response mechanism in times of crisis at sea.

In the 2019 FEREX, the capabilities of the HRV was one of the main highlights as the exercise involved a critically injured passenger being medically evacuated by RSAF's Super Puma helicopter from our HRV's heli-winch zone.

Exercise Highcrest

Exercise Highcrest is a maritime security exercise to validate the Whole-of-Government response against potential attacks on Singapore's coastal installations. Led by the Singapore Maritime Crisis Centre (SMCC), the annual exercise simulates perpetrators launching an attack in Singapore waters and agencies such as RSN, PCG, SCDF, ICA as well as MPA would respond to the incident. Like Exercise Bluewhale and Ferex, the exercise is designed to validate response procedures as well as the agencies' coordination. Marine Division's primary role in this exercise is to conduct seaward firefighting and rescue operations.

Exercise Highcrest in 2021 involved a hijacked chemical tanker with hostile intentions. Marine Division participated by deploying the RFV and HRV to perform firefighting operations after the onboard storming/assault was successfully completed by the Special Operations Task Force.



SCDF in Exercise Highcrest 2021 with heavy vessels participating for the first time. Senior Minister and Coordinating Minister for National Security Teo Chee Hean (left) observing the exercise and briefing by Commander Marine Division, COL Ryan Ong (right)



Tanoto Shipyard Fire: Three men still missing



THREE men were still missing in the waters off Jurong yesterday, after a blaze destroyed four tugboats the previous night.

Rescuers in three craft fanned out to look for the three foreigners, who are believed to have been on the tugboats at Tanoto Shipyard in Jurong.

They are from the Maritime and Port Authority of Singapore, which is coordinating the search and rescue mission, and the Police Coast Guard.

Source: The Straits Times



Marine Operations

Thus far in this book, we have traced the growth in capabilities of Marine Division as it assembled its own fleet of state-of-the-art vessels and trained its personnel to become highly skilled Marine Specialists. Now Marine Division is capable of dealing with complex and dangerous operations and its impressive abilities can be seen in its response to over 56 fire incidents and 77 rescue incidents between 2012 to 2021. These are some of the notable incidents that we have responded to:

Fire at Jalan Samulun Shipyard

On 27 March 2013, SCDF received reports of tugboats on fire and immediately dispatched two Marine fire vessels along with four fire engines and two red rhinos to the location. Upon arrival, the officers saw that four tugboats berthed alongside one another were on fire. One was fully engulfed in flames and it later sank. Three men were also reported missing.

While MPA and PCG commenced a search and rescue mission for the missing personnel, SCDF conducted firefighting operations using monitors from the two Marine fire vessels as well as handheld jets deployed by SCDF land firefighters. The huge fire was extinguished after seven hours. All casualties were later accounted for and conveyed to hospital by SCDF ambulances.

This was an incident that clearly demonstrated an effective Whole-of-Government response effort where each agency was responsible for their respective area and executed a well-coordinated operation.

Fire at Tuas South Boulevard

On 1 August 2016 at approximately 4pm, SCDF dispatched two Marine fire vessels, three fire engines, three red rhinos, two fire bikes as well as an unmanned firefighting machine to a fire involving a barge at berth in Sembcorp Marine Tuas Boulevard Yard. Upon arrival, officers saw that the fire was raging intensely so the land firefighters set up jets for offensive firefighting operations. Our Marine vessels immediately conducted boundary cooling on the hull using water monitors to ensure the integrity of the ship's superstructure was kept intact.

More than six hours after SCDF was alerted to the fire, the team was still simultaneously conducting interior firefighting operations within the barge and cooling the exterior of the 200m by 50m barge. At the height of the operation, the fiery inferno within the barge affected Deck 4 and was burning several cabins on Deck 3. Most of the internal wooden structures of the cabins on the barge had collapsed, wrapped in flames and posing a severe challenge to the firefighters.

The fire was finally extinguished at approximately 1am on 2 August 2016 after several hours of intense operations. This case was also a great display of SCDF's unified response where operations were conducted simultaneously by both seaward and landward forces.

Singapore Civil Defence Force
1 August 2016 at 19:38

[FIRE @ 80 TUAS SOUTH BOULEVARD]
SCDF firefighters are currently cooling the bulkhead exterior of the barge with water jets in order to contain the fire, cool the structure and prevent fire spread. Marine Firefighting Vessels (MFV) are conducting boundary cooling with water monitors too. SCDF firefighters are also deployed on the deck of the vessel for interior firefighting.



Teo W Cheak and 366 others

Fire involving contents of containers

There has been a substantial increase in the number of fires in containers carried on board container ships worldwide. Every year, Marine Division responds to cases of fire involving contents of containers. 2018 to 2019 was a significant year, as Marine Division responded to a total of six containers on fire over a span of 12 months. Such fires usually involve contents such as batteries, power banks and charcoal dust etc.

Marine fire vessels are instrumental to such operations. Using its powerful monitors, the vessels will conduct cooling operations on the container to prevent heat from spreading to other containers as well as using containment as a strategy to extinguish the fire. Arising from the trend of containers on fire, Marine Division is also working on the acquisition of specialised firefighting equipment that can penetrate the container and release the water spray to extinguish the contents on fire.



Search and rescue operations involving vessels collision

On 13 September 2017, a collision between a Tanker Kartika Segara (KS) and a Dredger JBB De Rong 19 (JDR) in Singapore waters resulted in one of the vessels capsizing, becoming partially submerged. There were five crew missing as well. A total of nine vessels from MPA, Marine Division, PCG and RSN were involved in a seven-day search and rescue operation.

Each agency was allocated a specific search area. Marine vessels were deployed to sail around our search area 24/7 to look out for the missing crew. Inter-agency teams that were activated for the operation added up to approximately 200 personnel involved. This was a good example of an operation that SCDF was involved in that was large-scale, involving many people from various agencies in a Whole-of-Government effort and which involved long hours.



Ng Eng Hen
12 September 2017

<<Another Collision in Singapore Strait>>

Another collision has occurred between ships in Singapore territorial waters. Earlier this morning, the Maritime and Port Authority of Singapore - MPA was informed of a collision between tanker KARTIKA SEGARA and the dredger JBB DE RONG 19 about 1.7 nautical miles south-west of Sisters Island.

The dredger capsized after the collision. 7 of the 12 crew on board were rescued by Singapore Police Force Police Coast Guard and were transferred to Singapore General Hospital for treatment of injuries. The remaining five crew are still missing. The tanker sustained damage too but thankfully, none of its 26 crew were injured.

MPA is now leading the search for the five missing crew. The Republic of Singapore Navy Patrol Vessel RSS Fearless, The Republic of Singapore Air Force Super Puma Rescue 10 and Chinook, Police Coast Guard and Singapore Civil Defence Force craft have been deployed to assist in the search and rescue operations.

I hope the missing seamen can be located.
Ministry of Defence, Singapore (MINDEF)



Marine rescue operations

On top of fire incidents, Marine Division also responds to rescue operations out at sea frequently. Such operations involve risk to both our responders and the patient as the rescue often requires technical skills to extricate the casualty from a confined space. After that, specialised skills are also needed to send the immobilised casualty onto our vessel. Conducting height rescue operations out at sea is no easy feat as the rescuers would often face challenges such as bad sea state, poor visibility at night as well as stormy weather during the operations.

In August and September 2021, two of our Marine firefighting vessels were deployed to separate calls for medical assistance, one for a crew member who fell from a ladder and another involving a crew member who was suspected of suffering from a stroke. In both cases, our Marine Specialists with one trained as an EMT (Emergency Medical Technician), boarded the vessel and conducted rescue operations. Both victims were immobilised and we had to handle them with great caution when securing them to the stretchers and lowering them to our vessels using the height lowering system that was set up by our Marine Specialists. Both incidents happened at night and therefore visibility was poor. Nonetheless, our Marine Specialists handled both cases professionally and the operations were well executed.



27 August 2021 –
Marine rescue operation
at Southwest of Singapore



13 September 2021 –
Marine rescue operation at
Eastern part of Singapore

Fire at Kusu Island

On 17 April 2022, two firefighting vessels together with crew from Marina Bay Fire Station jointly responded to a case of fire reported on Kusu Island. Upon SCDF's arrival at the island, the fire was raging and involved a cluster of shrines located at the top of a hill. A fire like this required a combination of both land and sea tactics, so our MRV was used as a water pump to pump seawater to the scene while the firefighters from Marina Bay Fire Station laid out the hoses over 520m to reach the hilltop.

The situation was made worse as it was raining and this caused the path to the hilltop to become muddy and slippery. Since it was nighttime and there were no streetlights, the officers had to cope with poor visibility. Nonetheless, these challenges did not hinder our responders in carrying out their jobs and the fire was swiftly extinguished within an hour of SCDF's arrival on the island.

Thus, it can be seen that Marine Division has the capability to undertake firefighting and rescue operations in the face of intense challenges. No matter day or night, good or bad sea state, hot or stormy weather, we are trained to operate regardless of conditions and can respond to any firefighting and rescue emergency as a world class unit.



16 BUREAUS
WORLDWIDE



Singapore

Kusu Island fire: How SCDF firefighters braved heavy rain, darkness to put out blaze at shrine



Firefighters from Brani Marine Fire Station and Marina Bay Fire Station who helped put out the recent Kusu Island fire. (Photo: CNA/Gaya Chandramohan)

Source: CNA

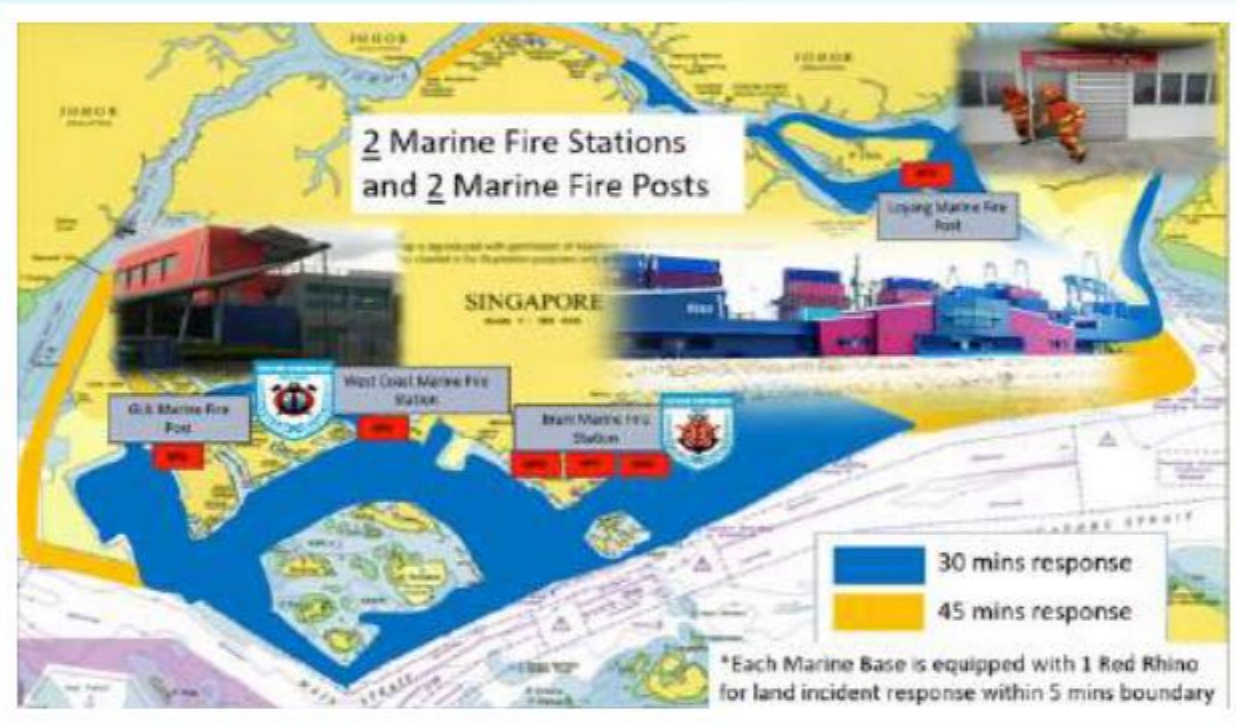
Our Pride and Honour

CHAPTER 3

- Our Bases
- Our People
- Our Events
- Our Celebrations
- Our Achievements

Our Pride and Honour

This chapter focuses on what Marine Division has accomplished in the last decade of transformation. We highlight our important bases and meaningful insignia, then move on to showcase significant events and celebrations we have participated in, and finally ending the chapter with an account of our major achievements and awards.



Our Bases

Marine Division, with its two operating Marine Fire Stations - WCMFS and BMFS, provides coverage for marine fire and rescue incidents within the Singapore waters. The unit and the sub-units' insignias respectively are:



Sailfish is one of the fastest known aquatic animals in the world

Anchor is a symbol of hope, often acting as the only thing enabling the vessel to stay stable in rough waves during stormy weather

The combination of the sailfish and the anchor symbolizes Marine Division's mission to provide assistance to distressed vessels at sea, enabling them to be rescued swiftly and effectively.



West Coast Marine Fire Station



Brani Marine Fire Station

Our People

Marine Division HQ – Leadership Group



Marine Division HQ – Operations and Training Branch



Marine Division HQ – Personnel Branch





BMFS (Stn 82) was established in 2014 and is co-located with the Marine Division HQ at Brani Island. It provides marine operational coverage for Southern and Eastern Singapore waters, including Sentosa, Marina South Pier and the Southern Islands. BMFS has responded to many high key operations and participated in numerous multi-agency exercises.

The introduction of heavy vessels has greatly bolstered Marine Division's emergency response capabilities given the advanced technologies they possess. Along with my team of highly competent officers, we stand ready to safeguard and mitigate any marine incidents within Singapore's territorial waters.

MAJ Landon Leong
Commander BMFS



Rota 1



Rota 2



Rota 3



Office-Hour Staff



Established in 2012, WCMFS (Stn 81) is Marine Division's first operational fire station, located at West Coast Ferry Road. WCMFS provides marine operational coverage for Western Singapore waters including Tuas, Jurong Island, Penjuru and Lim Chu Kang.

In a Marine operations, Marine Specialists have only ourselves to depend on as any reinforcements would only come hours later. Therefore, we have to be operationally skilled and technically sound to be able to mitigate and handle all kinds of incidents effectively, efficiently and safely.

MAJ Alex Chan
Commander WCMFS



Rota 1



Rota 2



Rota 3



Office-Hour Staff





National Day Parade 2020 sailpast



LTC Seth Wong, former Commander of BMFS, who was involved in NDP2020

“ The salute segment was truly a proud moment for SCDF Marine Division as it marked our critical role in safeguarding Singapore's waters as well as the progress of our maritime transformation journey. ”

Our Events

In this part of the chapter, we look back on the key events that are significant in our history.

NDP 2020:

Maritime Sailpast return to National Day Parade after 20 years

The Maritime Sailpast was one of the highlights during NDP 2020 as SCDF showcased three of its marine firefighting vessels - the Heavy Fire Vessel (Red Sailfish), the Heavy Rescue Vessel (Red Manta) and the Rapid Response Fire Vessel (White Swordfish).

For the Sailpast, a total of 13 vessels took off from the Marina South Pier and made their way across the Singapore waters, covering a distance of approximately four kilometres, including the Marina Bay skyline. Along with SCDF's vessels were vessels belonging to RSN, PCG and MPA. The parade of vessels was the first time that Marine Division participated in and was certainly a magnificent sight that wowed the onlooking crowd.



Marine officers controlling the vessel from the bridge

10TH ANNIVERSARY

Marine Division 10th Anniversary

On 1 April 2022, Marine Division held a commemorative event to mark a decade of Marine Division officially taking over the maritime firefighting function from MPA. Gracing the event as the Guest-of-Honour was Associate Professor Muhammad Faishal Ibrahim, Minister of State (MOS) for the Ministry of Home Affairs and Ministry of National Development.

MOS Assoc Prof Faishal also witnessed the operationalisation of our flagship HFV which was part of the event's highlights. Our specially designed Marine medallions were also presented by MOS Assoc Prof Faishal to 10 long serving officers to honour their efforts in taking on the challenge of building up Marine Division since 2012.



Group photo with MOS, Commissioner SCDF, related agencies and Marine Division's personnel



MOS delivering his opening address



MOS accompanied by Commissioner Eric Yap (left) and COL Ryan Ong (Right) sounded the bell 10 times to symbolize Marine Division's 10th anniversary



Medallion recipients with Commissioner SCDF, Deputy Commissioner and Commander Marine



From left to right: (2nd row) WO2 Mohammad Fazli Bin Kamaruddin, WO2 Muhammad Idros Bin Abubakar, WO1 Cheong Kwong Hui, WO2 Chan Kim Mun, WO2 Mohammed Firhin Bin Wahab. (1st row) LTA Mohamad Rafi Bin Abdul Majid, LTC Mohamed Nazim Bin Kudin, COL Ryan Ong, Commissioner Eric Yap, SAC Ling Young Ern, LTC Neo Jia Qi, MAJ Alex Chan



MOS accompanied by SCDF Senior Management on HFV tour by LTA Naizal



HFV water display signifying its operationalisation

RESCUE 995

The SCDF's response

Our Veterans of the Sea,
In Commemoration of SCDF Marine Division's 10th Anniversary



Marine veterans interviewed by Rescue 995

Visits to Marine Division



Visit by Minister for Home Affairs and Minister for Law, Mr K Shanmugum on 25 December 2020



Visit by Fire and Rescue Commissioner, Israel Fire and Rescue Authority, LT. GEN. Dedy Simhi in November 2019



Visit by Director Civil Protection Department, Malta Civil Protection Department, Mr Emanuel Psaila in November 2019



Visit by Permanent Secretary (Home Affairs), Mr Tan Tee How in January 2013



Visit by Chief of Airport Emergency Services, Changi Airport Group, Mr Alvin Lee Fook Wing in September 2019



Visit by Commander Maritime Security Task Force, COL Yong Wei Hsung in January 2020



Visit by MPA Port Master, Maritime and Port Authority of Singapore, CAPT Chong Jia Chyun in January 2022



Visit by Crisis Manager (MARSEC)/ Chief of Navy, Republic of Singapore Navy, RADM Aaron Beng in April 2022



AC Derek Tan handing over the command mace to COL Ryan Ong

Building up SCDF's Marine capabilities from scratch eight years ago was like a ship sailing through uncharted waters – there were many unknowns, challenges and learning moments as well. I am proud to have been part of the pioneer team of mariners that worked very hard to build up the infrastructure and marine operational response capability as it stands today.

- AC Derek Tan



AC Derek Tan



COL Ryan Ong taking the oath-of-command

Change of Command Ceremony

On 3 December 2020, outgoing Commander AC Derek Tan, who had served as the first Marine Division Commander since April 2012, handed over the command mace to the incoming Commander, COL Ryan Ong.

SCDF Marine Inter-Rota Team Event (SMITE)

In August 2021, Marine Division introduced its inaugural SMITE challenge. The SMITE challenge is an initiative by Marine Division to build rapport between station and division personnel through a series of friendly games. SMITE also challenges Marine Specialists to display the necessary physical qualities of a Marine personnel – Speed, Endurance, Strength and Agility. Annually, the three Rotas from WCMFS and BMFS will send at least two teams of five participants to compete in SMITE. The champion team will be recognised on the challenge shield and prizes will be presented to the top three teams.



Corporate Social Responsibility (CSR)

SCDF contributes back to the community by volunteering with our adopted homes and charities while also supporting other social and environmental causes. Marine Division adopted Jamiyah Home in 2016 and Pacific Healthcare Nursing Home in 2018. Apart from adopting homes, Marine Division has regularly conducted beach clean-ups as a way to give back to the community. Starting from 2022, Marine Division has also collaborated with NParks to commence a series of new initiatives with the purpose to further care for and protect our marine habitats.



Social engagement with Jamiyah Home in January 2016



Cleaning of wheelchairs at Pacific Healthcare Nursing Home in April 2018



Outing to Changi Airport with Pacific Healthcare Nursing Home in July 2018



Outing to Gardens by the Bay with Pacific Healthcare Nursing Home in July 2019





Beach clean-up at Lazarus Island in February 2016

Singapore-Global Firefighters & Paramedics Challenge (SGFPC)

The SGFPC is an annual signature event organised by SCDF where firefighters, rescuers and paramedics from SCDF and around the globe come to compete in various grueling and highly demanding scenario-based challenges. Marine Division introduced our "Sailfish" mascot at the 2016 SGFPC. The presence of the mascot greatly boosted the morale and team spirit of our Marine Specialists.



Marine Division's debut at the SGFPC in 2016



Our Celebrations



Lo Hei'21 with CFS 81 and Commander



Lucky draw winner during Chinese New Year'21 celebration



Chinese New Year'21 bento lunch with Commander



Distribution of welfare items



Birthday celebration



Personnel Branch engagement talks with Rotas



End of year celebration'20



Marine's NSF and civilian staff sailing on HRV



Break fast with Rota personnel during Ramadan



Treats for our NSFs



Marine's Cohesion Activities



Our Achievements

This section highlights the key achievements of Marine Division in the past decade, including awards we are proud to have won. Marine Division constantly comes up with new ideas and projects that have improved the efficacy of our operations. We seek to innovate often as with the ever-changing landscape, there is a need for us to look ahead to devise new ways to overcome challenges so that we can perform our duties better.

The next section after our innovation awards highlights the operational awards we have received for our excellent firefighting and rescue operations. We then close this section by describing the awards given to our outstanding personnel.

2nd Runner Up of Best 3I Project, Shine Awards 2017

In 2017, SCDF retrofitted both MFVs with a mobile rapid decontamination system, called MRDS (Marine Rapid Decontamination System) for swift decontamination operations. This innovation project allowed SCDF to decontaminate up to 40 lying casualties or 100 walking casualties per hour. The MRDS is portable and can be set up as a decontamination facility in just 20 minutes. Before the decommissioning of MFVs in 2021, the MRDS was a key piece of equipment for decontamination operations till the arrival of heavy vessels in 2019, when decontamination could be performed on the vessel's built-in facility.



MRDS set up on board MFV during Exercise Bluewhale (Carina)

Winner of Spark Innovation Award

Our Flagship HFV is the first firefighting vessel in the world to adopt the DP (Dynamic Positioning) system and this innovation helped us win the SPARK Innovation Award on November 2018. The DP on board the HFV helps the vessel to maintain a fixed position and heading when using its firefighting monitors during operations. It is able to do this by cleverly controlling the propulsion and thrusters of the vessel while taking into consideration external forces.



Winner of Exemplary Innovation Award, Public Sector Transformation Award

Marine Division won the Exemplary Innovation Award for the development of our Sailfish HFV platform in 2019. This award is the highest-level innovation award given in the Public Service and is a testament to Marine Division's commitment to continuously push boundaries to do our life saving work so that we can serve the public better.



The project team behind the development of HFV
From Left: LTA Mohd Fazil, MAJ Alex Chan, LTC Mohd Nazim and MAJ Landon Leong

Achieved Silver Award for Home Team Innovation Award (HT InnovA)

Our team of Marine officers was also the brainchild behind the development of HRV. In 2019, the team won the prestigious Innovation Award for Offshore Mass Rescue Emergency Response – HRV. This is an award given for operational excellence.

After we started using the Heavy vessels in 2019, these vessels not only achieved prominent awards because of their innovative features, the crew who operated these vessels also won multiple awards for operational excellence.

Our bigger and more sophisticated vessels can face greater challenges at sea and here are some of the examples of outstanding operational excellence Marine Division has demonstrated in the last three years:



Operational Excellence Award – 2019

Firefighting operation onboard Panama registered chemical tanker off Pedra Branca



Award recipient: BMFS, Rota 3

Operational Excellence Award – 2020

Marine rescue involving immobilised casualty onboard container vessel



Award recipient: BMFS, Rota 1

Operational Excellence Award – 2022

Marine medical rescue onboard MV Yasa Mehmet



Award recipient: BMFS, Rota 2



Our Officers' Proud Achievements

Here are some of the awards our Marine Division officers have won in the past three years for their outstanding performance and for going the extra mile in their services:

MHA Star Service Award

SGT Jet Chiew from WCMFS assisted in a road traffic accident while she was off duty. She performed first-aid on the casualty to stop the bleeding and immobilised the fractured limbs till the arrival of ambulance. She was awarded the MHA Star Service Award for demonstrating high standards of service excellence in 2020.



SGT2 Jet Chiew from WCMFS

Operational Excellence Award – 2022

Marine medical rescue off Marina South Pier



Award recipient: BMFS, Rota 3

Commissioner of SCDF's Commendation Award

This is an award to recognise personnel and teams who have provided outstanding contribution and support to the advancement of the Force.



WO2 Noh Ridzuan from BMFS, Winner of 2021 Commissioner of SCDF's Commendation Award

Project HRV by Marine Division - Winner of 2021 Commissioner of SCDF's Commendation Award (Team)

• LTC Noor Azam • MAJ Alex Chan • MAJ Landon Leong • CPT Soh Cheng Wei • CPT Sheryl Sia • CPT Hans Poh • LTA Shuhrawardi • LTA Jalil • LTA Mohd Azlan • WO2 Idros • WO2 Ridzuan • WO1 Nazli • WO1 Tsuba't • WO1 Ahmad Zohri



Minister's National Day Award

This is an award presented to personnel who have made consistent and significant contributions of work.



“ I am grateful to be surrounded by a good team. It is humbling and astounding to know that my peers and leaders place their trust in me in carrying out my responsibilities and tasks in difficult times. ”

WO2 Rudy Asmara from BMFS,
Winner of 2021 Minister's National Day Award

Pride and Care Star Award

SGT Muhammad Rasul and SGT Muhd Khalis from BMFS rendered first aid and comforted a member of public who was suffering from a medical condition. As a result, both were awarded the prestigious Pride and Care Star Award in 2021.



SGT Muhammad Rasul and SGT Muhd Khalis from BMFS



National Day Award – Efficiency and Commendation Medal

This award recognises personnel who have shown superior performance, consistent diligence and dedication in their work.



COMMENDATION
MEDAL

Commendation Medal 2021 MAJ Abdul Razak
Senior Supply Management Officer



EFFICIENCY MEDAL

Efficiency Medal 2021 CPT Soh Cheng Wei
Navigation and Training Officer



EFFICIENCY MEDAL

Efficiency Medal 2021 SWO Mohamed Affino
Deputy Rota Commander



Pride and Care Award

This award recognises personnel who have performed beyond the call of duty and displayed the core values of "Pride" at work and "Care" for our people and those we serve.



LTA Wong Muhammad Nasir Bin Mohd Imran Wong
EMS Ops Readiness Officer
Marine Division
(Previously from Alexandra Fire Station)



SSG Ong Bee Chye
Infocomms Specialist
In-Situ Marine
Corporate Service Hub (East)



MX15 Koh Yuh May
Registry & Admin Officer
Personnel Branch
Marine Division

From Left, LTA Wong Muhammad Nasir, SSG Ong Bee Chye and MX15 Koh Yuh May, Winner of 2022 Pride and Care Star Award



Service Excellence Award (Platinum / Gold)

This award is for individuals who have displayed good performance, good service, as well as a citizen-centric mind-set in daily work. They have also displayed the core values of "Pride" and "Care" in their service.

LTA Mohammad Naizal from BMFS was awarded the Service Excellence (Platinum) Award in 2022. He was also the award recipient for Service Excellence (Gold) in 2021. LTA Naizal is an exemplary officer who demonstrates positive ethics and displays SCDF's core values of "Pride" and "Care", even beyond his call of duty.



Marine Division's 2022 Service Excellence (Gold) Award Winners
From Top left, WO Syed Muhammad Nazri, LTA Naizal, SGT Muhammad Rasul and MX15 Koh Yuh May

An Exciting Future for Marine Division

CHAPTER 4

- Our Future
- S.A.V.E

An Exciting Future for Marine Division

Marine Division is continuously expanding its capabilities through the construction of new bases and acquisition of new vessels to manage the increasing operational demands and threats in the maritime domain. For the next generation of Marine vessels, Marine Division is working on the development by adopting cutting-edge technologies.

Second Generation Marine Rescue Vessel (MRV 2G)

By 2025, Marine Division will acquire an MRV 2G. Equipped with a CBR filtration system, decontamination cubicles, positive pressured cabins, and a top speed of 30 knots, the MRV 2G will be capable of a swift and effective response to Marine CBR incidents as well as firefighting and rescue operations.

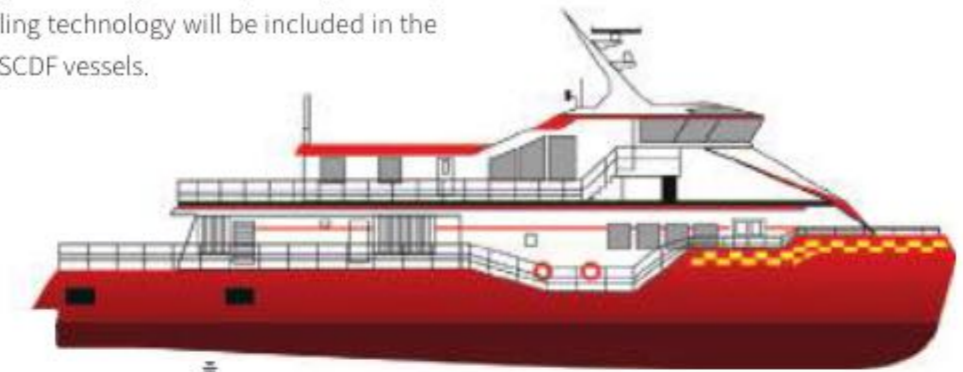


Artist Impression of MRV 2G

The MRV 2G will be larger than the first generation MRV with an improved layout and ergonomic workflow. The MRV 2G will also be equipped with a vessel control system to assist with the manoeuvring of vessel and station keeping during ops, and Hazmat detection capability with a 5km radius. Additionally, solar panels will be built on the vessel to power bridge equipment.

To further sustain our operational capabilities for maritime emergencies, Marine Division has embarked on using ultrasonic anti-fouling transducers on our vessels to prevent any growth of biofouling that will impede our vessel's performance. The ultrasonic anti-fouling transducers work by emitting bursts of ultrasonic sound waves at multiple frequencies that create alternating positive and negative pressures. These pressures would then create microscopic bubbles that would implode to produce micro jet actions to clean the underwater hull.

Working with HTX, Marine Division has installed the ultrasonic transducers on the existing MRV for evaluation and the results show that the technology is able to enhance the underwater hull's protection against fouling. As such, moving forward, ultrasonic anti-fouling technology will be included in the next generation of SCDF vessels.



Ultrasonic reduces the growth of biofouling on the hull

Second Generation Heavy Fire Vessel (HFV 2G)

The HFV is a crucial asset for effective response to any major seaward incident. Currently with only one in service, this heavy capability would be adversely affected should the vessel encounter any technical difficulties or undergo maintenance. Hence, Marine Division will be acquiring a second-generation HFV to bridge the gap.

The HFV 2G will be equipped with an integrated command room to function as a Forward Command Vessel (FCV) for SCDF during major maritime incidents, and it will also house an Unmanned Surface Vessel (USV) and Unmanned Aerial Vehicle (UAV). In addition, the HFV 2G will be constructed as a slightly bigger platform as compared to HFV 1G to cater for the unmanned technologies as well as for enhanced stability for mass evacuation of up to 150 passengers.



Artist impression of HFV 2G

Remotely Operated Underwater Vessel (ROV)

Marine Division will be exploring the procurement of a second generation Remotely Operated Underwater Vessel (ROV) to enhance its search and rescue operations. This ROV is capable of conducting search operations and sense making without the need to deploy responders into deep water. In addition, the new ROV will be equipped with revolving robotic arm(s) to locate and lock on the target while performing underwater operations.



Remotely Operated Underwater Vessel

Unmanned Surface Vessel (USV)

The Marine USV is capable of autonomously responding to incidents swiftly and safely, and it can travel up to a speed of 30 knots. It is equipped with a total of 32 day and night cameras, a Collision Detection and Collision Avoidance (CDCA) algorithm and various sensors.



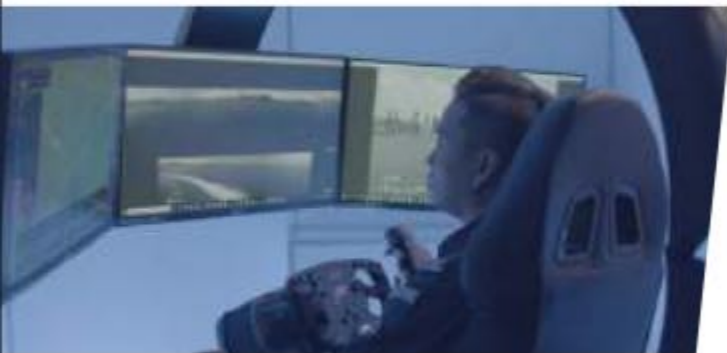
The USV has three modes of operations:

- Remote Piloting via the Ground Control Station (GCS)
- Autonomous Mode
- Local Operation Mode

USV firefighting capabilities:

- Two water monitors with an output of 300m³/hr each
- Heat and hot spot detection
- Maintaining vessel position autonomously during firefighting operations.

Capitalizing on the same technology as the USV, a fourth RFV, RFV 3G, is designed in a similar manner. The key feature of the RFV 3G is that it can be operated unmanned to optimize manpower during prolonged incidents.



Unmanned Aerial Vehicle (UAV)

The UAV is capable of mapping real-world scenarios into digital assets to facilitate incident planning. During Urban Search and Rescue (USAR) incidents, UAV 3D mapping can be used to conduct an initial assessment to identify or prioritise the assessment and rescue activities to enhance the probability of a successful rescue.

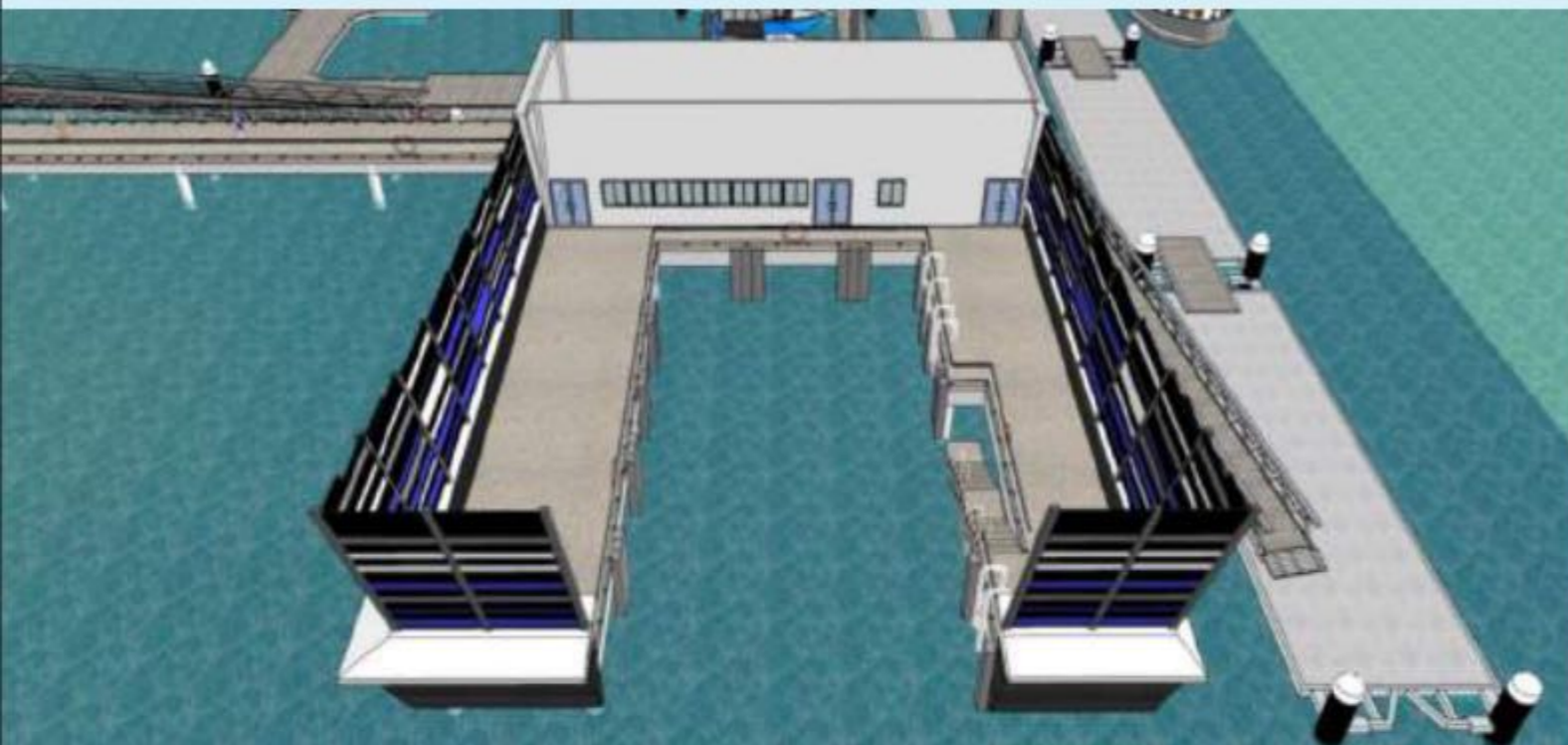
The UAV provides real-time images of the incident back to the Forward Command Post on SCDF vessels to assist the Ground Commander in sense-making to optimise deployment. The Marine UAV also has the ability to carry modular payloads of up to 10kg, depending on the mission profile. Some examples of the payloads include fire extinguishers, Hazmat detectors, Automated External Defibrillator (AED), life buoys and other flotation devices, and communication sets to distressed vessels.



Gimbal-stabilized platform compensates movement and allows deployment of UAV while vessel is making way



Free-flying UAV capable of autonomous launching and recovery on a moving vessel



Artist impression of Punggol Marine Fire Post

Punggol Marine Fire Post

SCDF will establish Punggol Marine Fire Post as the first hybrid fire post in Singapore and when operationalised in 2025, a Rapid Response Fire Vessel (RFV), a Light Fire Attack Vehicle (LFAV), a Fire Bike and an Ambulance would be deployed at the Fire Post to enable SCDF to provide better operational coverage for both land and sea in the North-Eastern region.

Punggol Marine Fire Post would also have the infrastructure capacity to accommodate up to 12 crew and would be equipped with essential facilities such as front desk, Advance C3 Emergency System (ACES) monitoring, office, dormitory, meeting room, and storage area. Several facilities in the accommodation area are designed for multi-purpose usage to promote interaction and productivity. Additionally, there would also be a jetty walkway surrounding the RFV berthing bay which serves several purposes: to facilitate regular vessel inspection, for the conduct of drills by both Emergency Medical Services (EMS) crew and Fire Rescue Specialists (FRS), and to simulate a stricken vessel to conduct component firefighting and rescue exercises.

The Fire Post will also serve as a strategic location for Hazmat detection. As part of the Nationwide sensor grid, fixed chemical sensors will be installed at the Punggol Marine Fire Post. The fixed sensors will transmit the readings directly to Hazmat Incident Management System (HIMS) 2 and therefore will not require the personnel to actively monitor the readings.

New Marine Division HQ

Marine Division is also establishing a new Marine Division HQ building that will be constructed adjacent to the existing BMFS cum Marine Division building. It will be equipped with enhanced security features that will meet the requirement of a critical infrastructure and provision of future proofing space to provide optimum support to Marine operational and administrative needs.

The new Marine Division will be equipped with key facilities such as:

- Full-fledged Division Command Post that is equipped with a Readiness Duty Room (RDR), command room and operation cell
- Office space to accommodate the Marine Division organisation structure
- New stores for the storage of operational items such as foam totes, foam tote carriers and vessels' buffer equipment
- Multi-purpose hall, lecture rooms, gym, mess, dining area and training rooms

The new Marine Division building is expected to be completed by 2025, and it will provide adequate work and accommodation areas, storage facilities and space to establish a command post for enhanced management of incidents and exercises. This will also ensure continued productivity and effective span of control for Marine Division over its command responsibilities.



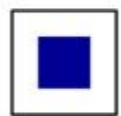
Artist impression of the new Marine Division HQ

S.A.V.E

In April 2022, Marine Division unveiled four core values that are unique to Marine - Safety, Adaptability, Valiance, Excellence (SAVE). These core values were derived during Marine's leadership retreat in early 2021.



MARINE VALUES



S

SAFETY



A

ADAPTABILITY



V

VALIANCE



E

EXCELLENCE

S A

<p>SAFETY</p> <p>SAFETY IS PARAMOUNT IN THE FACE OF DANGERS AND RISKS OUT AT SEA</p>	<p>ADAPTABILITY</p> <p>ADAPTABILITY IS KEY TO OPERATE EFFECTIVELY IN A DYNAMIC AND UNPREDICTABLE MARITIME ENVIRONMENT</p>
<p>VALIANCE</p> <p>VALIANCE WILL HELP TO OVERCOME ANY ADVERSITY AND CHALLENGE</p>	<p>EXCELLENCE</p> <p>EXCELLENCE IS THE HALLMARK OF ALL OUR ENDEAVOURS</p>

V E



*As we brave the wind and the billows,
safety is of paramount importance to
each and every one of us.*



Acknowledgement

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SCDF
The Life Saving Force

For a safer Singapore