

Indian Coast Guard's role in Operation "Sagar Aaraksha"

Averting a major
marine environmental disaster
in the Indian Ocean Region



GENESIS OF "SAGAR AARAKSHA"

The code word "**SAGAR AARAKSHA**" was coined for this High Level Joint International Maritime Firefighting Operation in the Indian Ocean Region to signify :

- "**SAGAR**" - India's Hon'ble PM's vision of
'Security And Growth for All in the Region'
- "**AARAKSHA**" - Means "**PROTECTION**" in Sinhala
(Sri Lankan Language)



राजनाथ सिंह
RAJNATH SINGH



सत्यमेव जयते

रक्षा मंत्री
भारत
DEFENCE MINISTER
INDIA

FOREWORD

India occupies a unique position in the history of economics and trade in the Indian Ocean, courtesy its geography which has ensured that we occupy the center stage. This ocean holds particular significance for India as it is the most populous littoral country in the region. 95% of India's trade by volume and 68% by value is conducted through the waters of this ocean and the Indian Ocean Region (IOR) is at the very top of our policy priorities.

Under the visionary leadership of our Hon'ble Prime Minister, India has enunciated two policies that have become the cornerstone of our foreign engagements. These are '**Neighbourhood First**' for the South Asian Region and '**SAGAR - Security and Growth for All in the Region**' for the IOR.

The IOR is prone to natural disaster and India has always been at the forefront of providing assistance to its neighbours in mitigation of these disasters. In the case of responses to blazing tanker 'Motor Tanker New Diamond' we have again reaffirmed our commitment to the Safety and Security of the region. The professional manner in which Indian Coast Guard coordinated operation "**SAGAR AARAKSHA**" with Sri Lanka Navy and other Sri Lankan authorities is commendable. Though the threat of oil spill from the tanker was mitigated, the operation highlighted that the capacity and capability of a singular nation is inadequate to address these maritime challenges. We need to enhance institutional cooperation between our specialised Maritime agencies and also engage in capability building of littoral friends to present a common front against future challenges.

A collaborated and Cooperative Mechanism between the neighbours in the IOR can address the shared maritime challenges. India aims to have a collective growth for all nations and ensure that peace and prosperity prevails in region.

"JAI HIND"

(Rajnath Singh)

Place : New Delhi

Date : 29th Oct 2020



डा. अजय कुमार, आई ए एस
Dr. Ajay Kumar, IAS



PREFACE

रक्षा सचिव
भारत सरकार
रक्षा मंत्रालय
**Defence Secretary
Government of India
Ministry of Defence**

Times immemorial, oceans known for their continuum on the planet have been a source of livelihood and development for humanity. Even in today's fast changing world, the oceans hold the key to its fortunes and humanity will prosper when the global commons are safe, secure and clean.

The Indian Ocean Region (IOR), in which India occupies a centre-stage today, is at the crossroads of global trade interconnecting the Atlantic and Pacific oceans. The Indian Ocean whose waves lap the shores of Australia, South-East Asia, South Asia, West Asia and the Eastern seaboard of Africa is critical to the future of the world as two-thirds of the world's oil shipments, one-third of its bulk cargo; and half of its container traffic transit through its Sea Lines of Communication.

The maritime domain is challenging, complex and dynamic and this belief was reinforced in the recent incidents with oil spill off Mauritius declaring National Emergency and explosion and major fire onboard "Motor Tanker New Diamond" off the Sri Lankan East coast. The vessel chartered by the Indian Oil Corporation was carrying more than 2 million barrels of Kuwait crude from Mina Al Ahmadi, Kuwait to Paradip, India. The danger of an oil spill and the consequent marine environmental disaster of epic proportions in the IOR loomed large.

Hon'ble Prime Minister of India had enunciated the vision of "**SAGAR**" and in sync with this vision, India responded with alacrity to the request for assistance from Sri Lanka and Indian Coast Guard (ICG) was directed to immediately lead the Indian response towards assisting the Sri Lankan authorities. It is a matter of pride for us that an ICG ship was the first responder and commenced the firefighting operations. India deployed six ICG ships, one Naval ship, two emergency towing vessels and three ICG aircraft. The operation was coordinated by ICG with multiple Indian and Sri Lankan agencies and resulted in dousing the fire onboard after six days of continuous and sustained firefighting operations in close proximity.

The incident of "Motor Tanker New Diamond" has also served a timely warning for India and the IOR as we see the large density of vessels transiting in the region laden with crude oil and other dangerous cargo. This potential disaster could have wreaked widespread

devastation and the marine ecology, bio-diversity along with livelihood of those dependent upon the ocean would have been severely affected for years in Sri Lanka, Maldives and Southern India.

India has been at the forefront of leading the regional response whenever called upon for assistance from our maritime neighbours. The swift Indian response and successful conduct of operation prevented a major ecological disaster in the Bay of Bengal and the wider Indian Ocean. This operation in the neighbouring country highlighted India's capacity and capability as a dependable regional maritime partner in South Asia and IOR.

The Operation "**SAGAR AARAKSHA**" which was jointly coordinated by India and Sri Lanka will provide an insight into the conduct in averting a huge potential disaster in our country's backyard. We need to realize that while harnessing the bounty of nature from the oceans, equilibrium must be maintained between ocean-based economic development and preservation & protection of marine environment. We seek a future for Indian Ocean that lives up to the name of "**SAGAR**" – **Security and Growth for All in the Region**.

"JAI HIND"



(Dr. Ajay Kumar, IAS)

Place : New Delhi
Date : 27 Oct 2020



महानिदेशक
भारतीय तटरक्षक
Director General
Indian Coast Guard
Chairman, NOSDCP
&
CNA under SACEP

INTRODUCTION

महानिदेशक के नटराजन, रा.त.प., त.प.

DG K Natarajan, PTM, TM

The seas and oceans around us are the source of life on earth and vital to our economic well-being. However, in today's world they are increasingly threatened by a wide array of challenges. To be good stewards of the oceans, nations around the world need to embrace regional cooperation in realms of the safety, security and environment protection.

It is a known fact that the dynamic maritime challenges of today can be addressed only through a cooperative and collaborative framework as the seas and oceans are all interconnected. It is beyond the capability of any nation to address these challenges alone. As **Coast Guardians**, we understand the complexity of the maritime environment and recognize the efficacy of bilateral and regional cooperation for ensuring safe, secure and clean seas for maritime community.

ICG has been at the forefront of responding to maritime emergencies in the IOR and assisting our international partners in their hour of need. In the case of "Motor Tanker New Diamond", Coast Guard Headquarters received the request for assistance from Sri Lankan authorities through the High Commission of India and promptly launched the Operation "SAGAR AARAKSHA". ICG being the Competent National Authority and National Operational Authority from India under the MoU with South Asian Cooperative Environment Programme (SACEP) is mandated to assist in responding to oil and chemical pollution in the (South Asian Seas) Region.

Within half-an-hour of the request from Sri Lanka, our multi-mission offshore patrol vessel ICGS **Shaurya** was steaming towards the scene of incident. **Shaurya** was the first responder to arrive in the area and commenced firefighting operations. Considering the scale of emergency, additional ICG ships with firefighting and pollution response capability were deployed to augment firefighting efforts. These included specialized firefighting and pollution response vessel ICGS **Samudra Paheredar** and multi-mission OPVs ICGS **Sujay** and **Sarang**. The fire was successfully extinguished after six days of sustained fire-fighting operations which was coordinated by ICG. In all, six ICG ships and three aircraft formed part of the massive effort in the operation.

The synergetic response by the ICG, the Sri Lanka Navy and other authorities demonstrates the success of our cooperative framework and the mutual trust in steering the efforts in responding collectively to any maritime emergency. The operational level interaction between the points of contact established under the MoU with Sri Lanka Coast Guard and SACEP was instrumental in expeditious sharing of information and coordinating operational, administrative and logistics support.

The prompt response by the Sri Lankan authorities in facilitating mobilisation of assets and resources using their airport and port by the ICG enabled smooth conduct of the operation. The successful conduct of Operation "**SAGAR AARAKSHA**" has reaffirmed the significance of regional cooperation in addressing common maritime challenges. It will also serve as an excellent example of bilateral cooperation and our collective effort will to jointly respond to any maritime incident in our Region.

I am confident that our growing collaborative efforts with international partners will assist in mitigating future maritime challenges. The ICG is always Ready, Relevant and Responsive in addressing any maritime emergency within our area of responsibility and will live up to our motto "**VAYAM RAKSHAMAH**" meaning "**We Protect**".

"JAI HIND"



(DG K Natarajan)

Place : New Delhi
Date : 23 Oct 2020

Indian Ocean – An Ecological & Maritime Hotspot

The Indian Ocean remains an important lifeline to international trade and transport being the third-largest ocean woven together by trade routes, with large vistas of major sea-lanes carrying half of the world's container ships, one-third of the world's bulk cargo traffic, and two-thirds of the world's oil shipments.

Home to nearly 2.7 billion people, the Indian Ocean region consists of 28 states, spans across three continents, and covers 17.5% of the global land area.

The landlocked character of the Indian Ocean along its northern boundary and the resultant seasonally reversing wind and sea surface circulation patterns are features unique to this Ocean. It accounts for 30% of

the global coral reef cover, 40,000 Sq. km of mangroves, some of the world's largest estuaries and nine large marine ecosystems.

In the present context, the significance of the Indian Ocean has enhanced considerably as a major conduit for international trade especially in energy resources. India which lends its name to this Ocean, aims to preserve its resources and unique ecology while mitigating the effects of man-made and natural disasters through close regional cooperation under its stated policy of **SAGAR – Security And Growth for All in the Region**. Thus, when Sri Lanka requested Indian assistance to deal with the emergency onboard MT New Diamond, India became the first responder and assisted Sri Lanka in averting a major environmental disaster.



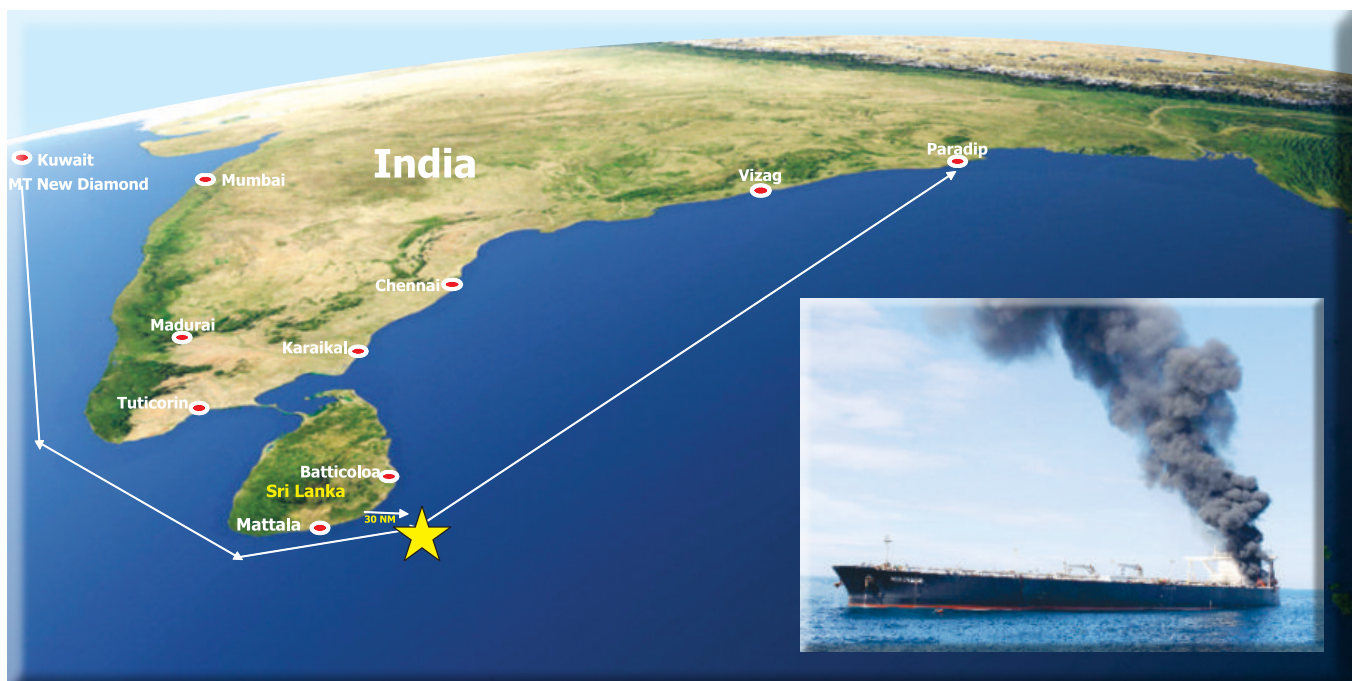
Real time Marine Traffic in IOR

The Unfolding of an Emergency – Sri Lanka Coast

On 23 August 2020, Motor Tanker New Diamond, a Panama flagged Very Large Crude Carrier (VLCC), departed Mina Al-Ahmadi in Kuwait for Paradip, India with a cargo of 2,70,000 metric tons of Kuwait crude. The tanker with an overall length of 333 metres and manned by 23 Greek and Filipino crew members, was chartered by the Indian Oil Corporation. At around 0800 hours on 03 September, while rounding the Sri Lankan Eastern coast, an unfortunate incident of boiler room explosion led to the breakout of a major fire onboard in the engine room. The situation turned instantly perilous for the crew members who required immediate assistance and evacuation. As the vessel was only 30 nautical miles from the coast, the threat of an unprecedented oil spill in the Indian Ocean Region loomed large with

potentially devastating consequences for Sri Lanka, Maldives and India. Assessing the gravity of the situation, Sri Lanka requested India for assistance in dealing with this gigantic maritime emergency. The emergent requirement was three-fold; rescue of the crew, extinguishing the fire onboard and preventing oil spill from the tanker.

Vessel Details	
Flag	Panama
IMO No	9191424
Gross Tonnage	160079 T
Year of Built	2000
LOA	333 m
Cargo	2,70,000 MT – Kuwait Crude
Owner	Porto Emporio Shipping
Operator	New Shipping Ltd, Greece
Charterer	Indian Oil Corporation
LPC	MINA AL AHMADI
NPC	PARADIP
Crew	23 (Philippines-18 & Greece-05)



MAYDAY – Distress in the Oceans & Coordinated Response

As soon as the crew of MT New Diamond sent a distress message through the global **COSPAS-SARSAT** system, their message was received immediately by Maritime Rescue Coordination Centre (MRCC), Mumbai at 0802 hours. The distress message was relayed to MRCC Chennai to initiate further coordination with MRCC Colombo as the incident had occurred in the Sri Lankan Search and Rescue Region (SRR). 19 crew members were rescued by MT Helen M and the tanker with major fire onboard was abandoned.

The vessel was transiting through the area and promptly proceeded for rescue, bound by the

noble code of mariners to render assistance to each other in distress. The Master and two members who stayed back on MT New Diamond were later rescued by the Sri Lankan Navy. One crew member was reported missing and subsequently declared dead.



Rescued crew onboard MT Helen M



MRCC Mumbai

Tanker Ablaze – A Potential Environmental Disaster

Although all crew members barring one were safely rescued, the ship remained engulfed in fire and the threat of a maritime environmental disaster increased with every passing moment. At 1030 hours on 03 September 2020, the Indian Coast Guard Headquarters in New Delhi received a request for assistance from the Sri Lankan Authority through the High Commission of India in Colombo. A similar request was also received from the **South Asia Cooperative Environment Program (SACEP)** Headquarters in Sri Lanka, with both countries being members of SACEP.

Under Section 14 of the Coast Guard Act, 1978 ICG has been entrusted with the responsibilities of ensuring the safety of

life and property at sea, preservation & protection of the maritime environment and prevention & control of marine pollution, in addition to other mandated charter. Given the cordial relations between the two countries and seeing the enormity immediately directed the Indian Coast Guard for Indian response towards assisting the Sri Lankan Authorities. ICG was directed to respond to this herculean operation based on its charter of duties and well developed professional capabilities to deal with such emergencies, as suitably tackled by ICG in the past.



Prompt and Swift ICG Response

The Indian Coast Guard is the Central Coordinating Authority in the country for Maritime Search and Rescue and Oil Spill Response. It is also the Competent National Authority for Oil & Chemical Spill Response under SACEP. In compliance with the Government of India's directives, ICG immediately launched Operation "SAGAR AARAKSHA", and ICGS **Shaurya**, a multi-mission capable Offshore Patrol Vessel was diverted within half-an- hour of receipt of the request for rendering assistance. The ICG ship was the first responder to arrive at the scene at 1730 hours and commenced firefighting operations. The firefighting efforts of ICGS **Shaurya** which began within the 'Golden Hour' ensured that the fire was contained and did not spread further towards the cargo tanks containing the inflammable crude. ICG Dornier aircraft

undertook aerial assessment of the situation in the afternoon of 03 September and reported that the tanker was drifting towards the Sri Lanka coast due to the localized sea and weather conditions. ICGS **Shaurya** continued its undaunted firefighting efforts throughout the night despite the oil tanker suffering another explosion in the engine room.



Shaurya engaged in firefighting

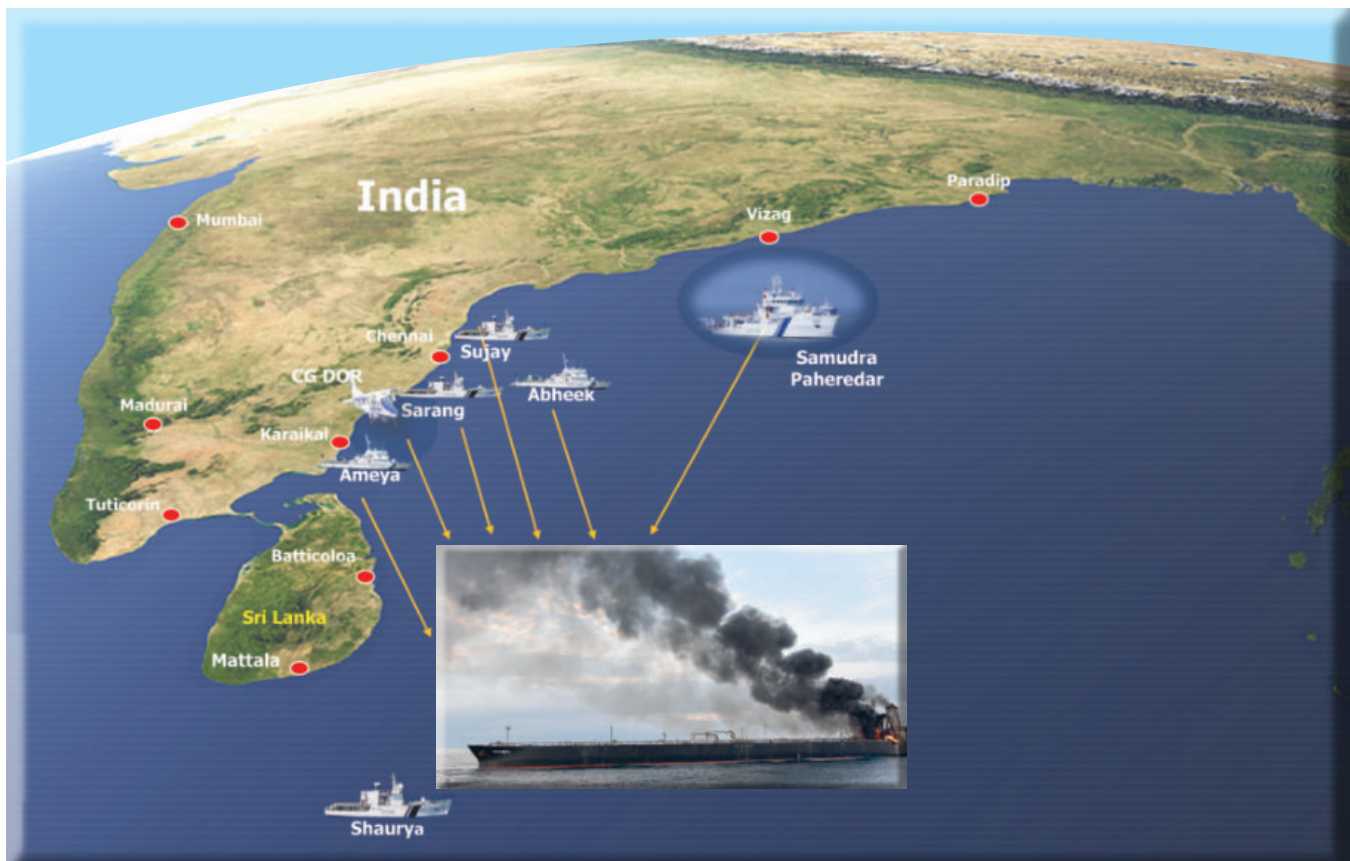


Shaurya fighting the raging fire

Rapid Mobilisation & Deployment

The severity of the situation after the second blast warranted large scale and time bound mobilisation of resources capable of firefighting and pollution response. In order to effectively deal with the situation and augmenting firefighting efforts, additional ICG ships based on the East coast with external firefighting and pollution response equipment, were immediately dispatched. These included ICGS **Samudra Paheredar**, a specialized pollution response vessel fitted with an external firefighting system from Vishakapatnam, and multi-mission offshore patrol vessels **Sujay** and **Sarang** from Chennai. In addition, Fast Patrol Vessels ICGS **Ameya** and **Abheek** were deployed

from Karaikal and Chennai with the stock of Oil Spill Dispersant (OSD), Aqueous Film Forming Foam (AFFF), and Dry Chemical Powder (DCP) to supplement firefighting and pollution response efforts. Coast Guard Dornier aircraft was also pressed into action and it ferried 600 liters of oil spill dispersant and 700 kilograms of dry chemical powder. Another Coast Guard Dornier aircraft was positioned at Mattala airport in Sri Lanka as standby for carrying out pollution response operations, should the necessity arise. The Sri Lankan authorities also mobilized Tugs capable of firefighting, augmenting the efforts on the ground.



Analysis & Planning

ICGS **Shaurya** was the on scene Commander coordinating the firefighting operations with additional assets being mobilised. The Operations team at ICG Headquarters functioned under the overall guidance of Director General K Natarajan, who meticulously chalked out the plans for firefighting as well as preventing any oil spill from the VLCC. The Director General as the Chairman of the National Oil Spill Disaster Contingency Plan in India and also the Competent National Authority for India under SACEP for Oil & Chemical Spill Response assumed overall charge of the situation. The Director General advised the Captain of ICGS **Shaurya** to take the Master of MT New Diamond with all the know-how of the tanker onboard and seek his advice and inputs for the firefighting operations.

As the Master and other crew members had abandoned the vessel without carrying the vessel's details as also the General Arrangement drawings, ICG Headquarters

contacted the Greek owners, who then provided the drawings which enabled understanding of the layout and devising the firefighting plan. The local sea and weather conditions were also analyzed and arrangements for towing the vessel if not put in place, the vessel with its deep draught of 21 metres would get grounded and the threat of oil spill would become real. Considering the gravity of the situation, a plan was devised to depute an ICG team along with Master aboard the ablaze tanker for examining the feasibility of connecting the tow. The salvage team hired by the owner agreed with the ICG plan and approached for the firefighting operation.

The nature of Kuwait crude was also studied for its flash point and pour point and based on which, it was decided that boundary cooling had to be maintained continuously to keep the temperature of crude in the tanks below 28°C to avoid internal expansion of gas and explosion.



High Level planning at CGHQ

Execution of Plan

The firefighting efforts of ICG received a big boost with the arrival of Tugs **Ravana**, **Vishaba** and **ALP Winger** on 04 September 2020. Even as firefighting continued, the tanker started drifting towards the Sri Lanka coast due to the prevailing seasonal currents in the area. That posed an immediate threat of grounding and resultant oil spill once near depths of 20 metres. In a calculated high-risk operation, an ICG boarding team, braving the rough sea conditions, embarked on the ablaze tanker and successfully connected the tow of Sri Lankan Tug **TTT-1**. The Tug slowly pulled the tanker away from land and positioned the head of the tanker into the wind based on expert advise given by DGICG to prevent the fire from spreading towards the forward section of the ship. This move was a critical turning point of the

operation as it ensured that the fire remained confined to the crew accommodation.

For firefighting, ICG ships employed their sophisticated External Fire Fighting system to spray foam compounds for smothering the oil fire. This was supplemented by the dropping of dry chemical powder bags by Sri Lankan Air Force helicopter. Continuous boundary cooling by ICG ships and Tugs was maintained to keep the temperature down of 25 cargo tanks containing highly inflammable crude.



MT New Diamond under tow



ICG team preparing tow onboard MT New Diamond

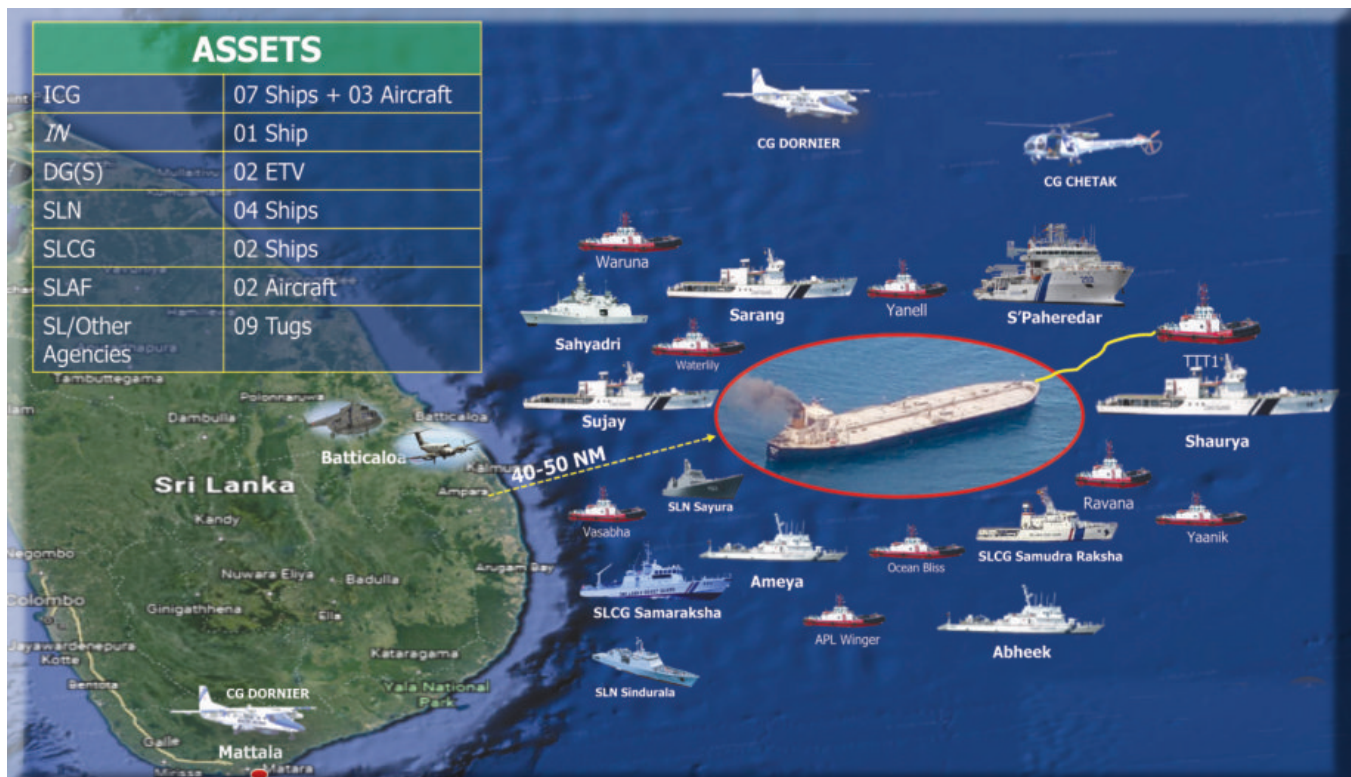
Multi-Agency Coordination

As the operation progressed, vessels from the Sri Lankan Navy, Sri Lanka Coast Guard, Sri Lanka Port Authority, Salvage Agency, Directorate General of Shipping (India), and the Indian Navy joined the operation along with the Sri Lankan Air Force. The ICG **On-Scene Commander** diligently coordinated operations of 17 ships including tugs and four aircraft including helicopters. The coordination was not an easy task and included the positioning of Tugs and ICG ships in close proximity around the tanker for effective and efficient firefighting and maintaining boundary cooling in rotation. As the operation continued uninterrupted through the night, navigational safety was ensured while manoeuvring the ships in

close proximity of the burning tanker. The vessels and Tugs engaged in firefighting and boundary cooling were regularly rotated considering crew fatigue and machinery limitations.

The collective firefighting efforts of ICG Ships and Sri Lankan Tugs were supplemented by the aerial dropping of Dry Chemical Powder by the Sri Lankan Airforce. The Sri Lankan Naval authorities requested ICG to provide five tons of DCP for fire-fighting. ICG immediately sourced the DCP from Chennai and airlifted it to Trincomalee.

As the Central Coordinating Agency for marine pollution response in India, ICG



requested the Directorate General of Shipping, India to augment the firefighting efforts. Accordingly, two emergency towing vessels – Ocean Bliss and Water Lily were deployed.

Under the framework of the MoU of SACEP and the bilateral MoU with Sri Lanka Coast

Guard, ICG advised Sri Lankan authorities to activate their National Oil Spill Disaster Contingency Plan and to issue notice to the Master and Owner of MT New Diamond for responding to the incident. The ICG simultaneously alerted the coastal population to prepare for any oil spill contingency.



DCP airlifted from Chennai



Firefighting & boundary cooling



Air & surface coordinated firefighting

Successful Culmination

After three days of intense and persistent firefighting efforts by ICG ships and Sri Lankan Tugs while dynamically maintaining within 50 meters distance from the burning tanker, resulted in the fire being doused in the morning of 06 September 2020. The ICG **On-Scene Commander** monitored the situation continuously, especially for any re-ignition of fire due to high temperatures while also undertaking boundary cooling of the tanker.

The worst fears of the firefighting team came true in the late evening of 06 September, as

a huge explosion occurred on the starboard diesel oil tank, jolting the vessel again. By midnight, huge flames reaching up to 60 metres from the deck were leaping up in the aftpart of the tanker. Consequently, four ICG Ships, two Sri Lankan Tugs, and three Tugs arranged by salvage agency, were deployed to sustain close-quarter firefighting. The efforts resulted in the fire being completely doused again in the evening of 08 September. Meanwhile, continuous boundary cooling continued to keep the temperature of the cargo tanks within acceptable limits.



Structural damage caused by fire

Environment Protection

Water and foam spraying continued to be sprayed on the tanker, even as the stability of the vessel was being closely monitored. Though there was an appreciable increase in the aft draught of the tanker, the stability of the vessel and the cargo tanks was not threatened.

The two explosions in fuel oil tanks ruptured the deck and hull on both port and starboard side. This led to an escape of oil and water emulsion from the engine room into the sea leading to the formation of minor oil sheen. On 09 September, ICG Dornier aircraft positioned at Mattala airport, was deployed for spraying Oil Spill Dispersant (OSD) to neutralize the sheen. Simultaneously, the

propellers of the ICG ships helped accelerate the disintegration of the oil sheen.

The salvage team boarded the vessel on 09 September and observed that there were no hot spots, flames, or smoke in any part of the vessel. There was no breach in the cargo tanks and the ship's stability remained within the safe zone. Indian Coast Guard continued to closely monitor the situation even after the salvage team took over control of the ship. Post declaration by the salvage team that the casualty vessel was safe and subsequent deliberations with Sri Lankan authorities, the ICG units were withdrawn from the scene of action on 10 September 2020.



OSD Spray by ICG Dornier aircraft

Passage of Casualty to Final Destination

Post extinguishing of fire by ICG ships in coordination with other agencies, the salvage agency on 13 September 20, boarded the vessel along with divers from the Sri Lankan Navy. A joint diving operation by Indian Coast Guard, Indian Navy and Sri Lanka Navy divers was undertaken to assess the status of the hull. Diving operations in aft section were undertaken by divers of Salvage Master. On 14 September 20, two underwater openings/holes, each on port and starboard side, were plugged and cemented.

The Salvors had assessed that ship-to-ship transfer of cargo was not feasible since no machinery was in operational condition onboard MT New Diamond. The Salvors intended to tow the vessel along with cargo to Fujairah. As the cargo onboard the tanker belonged to Indian Oil Corporation, a Special Empowered Inter-ministerial Committee was constituted and accepted the proposal

of the salvors for towing the casualty tanker to Fujairah.

The towing of the tanker commenced on 01 October 2020, by Tugs **Boka Expedition** and **Posh Commander** engaged by the Salvors. The ICG pollution response vessels and Sri Lankan Naval Ships escorted and oversaw the transition of the convoy through Sri Lankan waters, keeping in mind the concern of the fragile ocean environment, bio diversity and ecological sensitivity of all the islands and the coast of Sri Lanka, Maldives and India. The ICG Pollution Response Vessels **Samudra Prahari** & **Samudra Pavak** and multi-mission Offshore Patrol Vessel ICGS **Shaunak** continued to escort the convoy on entering the Indian EEZ. The ICG ships continued to escort the convoy from 04 October 2020 till it cleared Lakshadweep Islands on 12 October and further on towards the EEZ of India.



ICG ships escorting MT New Diamond

Surmounting the Challenges

The firefighting operation on Motor Tanker MT New Diamond was challenging as :

1. Kuwait crude is a Category-1 flammable liquid as per the Material Safety Data Sheet;
2. It is extremely flammable due to its physical and chemical properties, and;
3. **High risk of explosion** in the crude tanks due to the increase in pressure and heat generated by the sustained raging fire.

The Motor Tanker was fully loaded with a draught of 21 metres, which made it extremely difficult for the Tugs to hold the vessel in position.

The inclement weather further added to the difficulty in conducting the firefighting operation. The entire operation lasted six days, signifying the magnitude of the emergency.



Section 5. Fire-fighting measures

Specific hazards arising from the chemical	: Extremely flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
Hazardous thermal decomposition products	: Decomposition products may include the following materials: sulfur oxides Hydrogen sulphide

Section 9. Physical and chemical properties and safety characteristics

Vapor pressure	: 50 kPa (375.03 mm Hg) [room temperature]
Relative vapor density	: Not available.
Relative density	: 0.873
Solubility	: Very slightly soluble in the following materials: cold water and hot water.
Auto-ignition temperature	: >200°C (>392°F)

Source: MSDS

Kuwait Crude Properties

Averting a Potential Catastrophe

Since the 1960s, the Maritime World is witness to numerous marine environmental disasters caused by oil spills. **In the case of the recent oil spill from MV Wakashio in Mauritian waters in August 2020, only 1000 Tonnes of Bunker Oil had leaked into the sea which led the Government of Mauritius to declare a 'National Environmental Emergency'. Had the cargo tanks of MT New Diamond ruptured either due to explosion or grounding, the enormous oil spill would have been 270 times the quantity spilled in the Mauritian case.** Any resultant oil spill from

MT New Diamond would have caused havoc to the marine flora and fauna of the Indian Ocean Region on an unprecedented scale. The toxicity in the wake of the disaster would have cast its noxious spell over the aquatic habitat for years to come. Sri Lanka and the Maldives are islands nations, dependent upon the fishing & tourism industry which would have been adversely impacted along with the livelihood of the coastal populace. The incident had occurred only 230 Nautical Miles from Indian waters and could have also impacted Southern India.



In terms of enormity, an oil spill from MT New Diamond would have been the second-highest from a tanker after MT Atlantic Empress in 1979. A study of the top ten oil spills from tankers has revealed that post-explosion and fire, the hull could not withstand more than two days. In the case of MT New Diamond, the fire raged for

more than six days, but it was deftly contained to prevent any damage to the crude tanks. The decision of tow by ICG also prevented grounding which otherwise could have damaged the cargo tanks and result in long-term damage to the ocean environment as well as the livelihood of the coastal population of island nations.

SI	Ship Name	Year	Location	Spill size (MT)
1.	Atlantic Empress	1979	Off Tobago, West Indies	287,000
	New Diamond	2020	Off East Coast, Sri Lanka	270,000
2.	ABT Summer	1991	700 NM off Angola	260,000
3.	Castillo De Bellver	1983	Off Saldanha Bay, South Africa	252,000
4.	Amoco Cadiz	1978	Off Brittany, France	223,000
5.	Haven	1991	Genoa, Italy	144,000
6.	Odyssey	1988	700 NM off Nova Scotia, Canada	132,000
7.	Torrey Canyon	1967	Scilly Isles, UK	119,000
8.	Sea Star	1972	Gulf of Oman	115,000
9.	Sanchi	2018	Off Shanghai, China	113,000
10.	Irenes Serenade	1980	Navarino Bay, Greece	100,000



Lessons Learnt

An analysis of the incident revealed certain human-induced errors and bypassing of established safety protocols:-

1. Key crew members like the Master, Chief Officer, and Chief Engineer had embarked for their first voyage on the tanker.
2. The slop tank was also filled with Kuwait crude in gross violation of safety norms and created an added risk of explosion and fire.
3. The crew did not attempt to fight the fire initially which led to its conversion into a major fire.
4. While abandoning the tanker, the Master did not carry certain documents including the GA drawings of the vessel which proved an impediment initially till they were sourced from the owners in Greece.

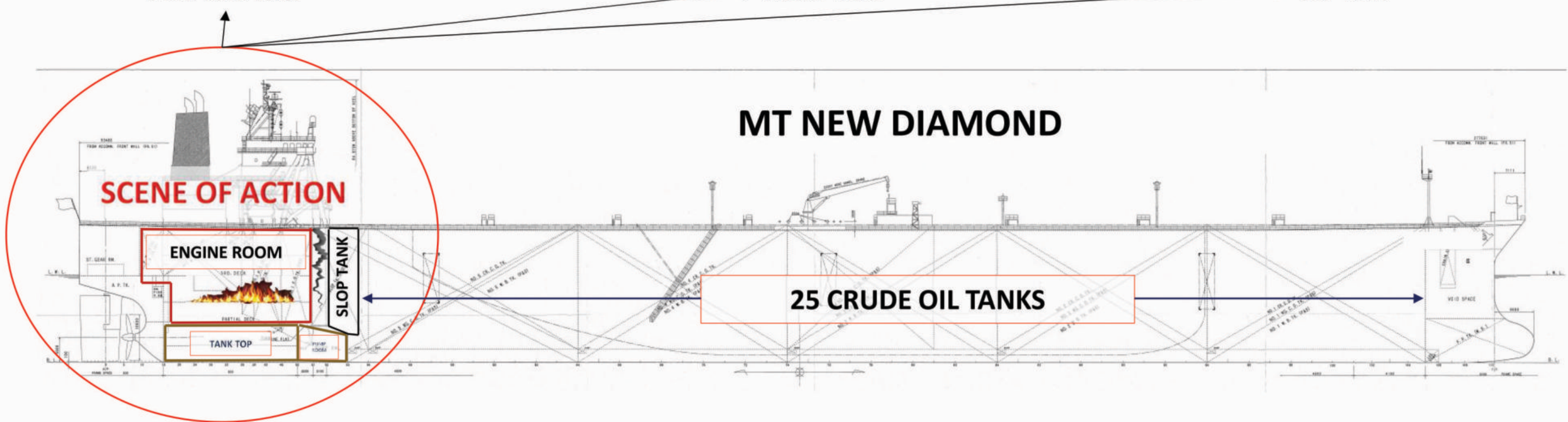
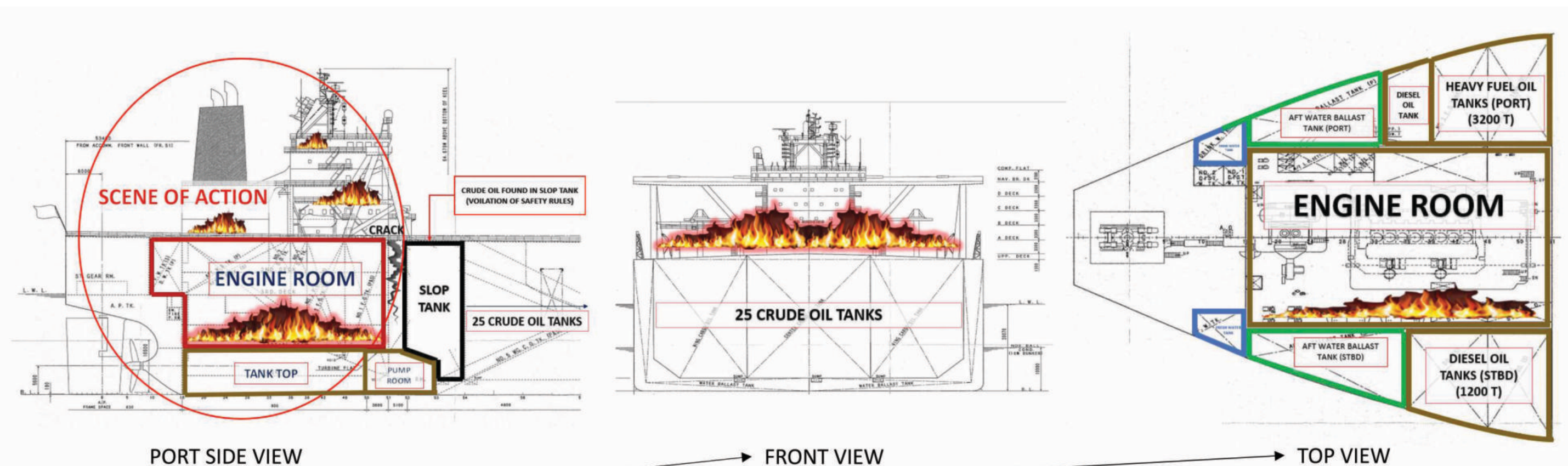
Despite these limitations, the potential catastrophe was successfully precluded due to the timely containment of fire within crew accommodation and engine room by ICGS **Shaurya** which was the first responder. Exceptional approaches like the dropping of DCP bags by the MI-17 helicopter

of the Sri Lankan Air Force also contributed towards successful culmination. Embarkation of the ICG team for connecting the tow despite the blazing fire and subsequent maintaining of tankers heading into the wind, prevented the fire from spreading towards the cargo tanks.

The incident also highlighted the efficacy and necessity of bilateral and regional cooperation in dealing with maritime emergencies. It underscored that one nation or organisation will not have the necessary wherewithal to deal with it singularly. The seamless administrative and logistical support extended to ICG units played an important role in maintaining the cadence of the operation. The incident necessitated :-


1. Establishment of institutionalized frameworks;
2. Exchanging points of contact;
3. Regular communication, and;
4. Conducting exercises as some of the important measures needed to be implemented.






MT NEW DIAMOND (GA DRAWING)

धर्मेन्द्र प्रधान
ଧର୍ମେନ୍ଦ୍ର ପ୍ରଧାନ
Dharmendra Pradhan



सत्यमेव जयते



150
YEARS OF
INDEPENDENCE
THE MAHATMA

मंत्री
पेट्रोलियम एवं प्राकृतिक गैस ;
इस्पात मंत्रालय
भारत सरकार, नई दिल्ली
Minister
Petroleum & Natural Gas ;
Steel
Government of India
New Delhi

D.O.No. MoPNG/2020/129793
Dated: 12.11.2020

Dear Mr. Natarajan,

It gives me immense pleasure to place on record my deep appreciation for the prompt and effective operation 'Sagar Aaraksha' launched by the Indian Coast Guard (ICG) onboard the distressed oil tanker, MT New Diamond, carrying over 2 million barrels of crude and other products.

2. ICG's timely response in coordination and also contributing sufficient assets, supplies, material and equipment has helped to douse a major fire in the vessel, and thus averting a major oil spill disaster, which would have been unparalleled in the recent history, in the Indian Ocean. The exemplary efforts by ICG, together with the Indian Navy as well as Sri Lankan maritime authorities, in the Indian Ocean Region earned a lot of goodwill for India from the Governments of Sri Lanka and Maldives.

3. I also commend the professionalism and expertise of ICG, and also recognize the deftness with which the whole operation was executed by the ICG.


4. We deeply value the service of ICG.

With regards,

Yours sincerely,

(Dharmendra Pradhan)

Director General Krishnaswamy Natarajan, PTM, TM
Chief of Indian Coast Guard.



सत्यमेव जयते

Ministry of Petroleum & Natural Gas : 201-A, Shastri Bhawan, New Delhi-110001 Tel. : +91-11-23386622 Fax : +91-11-23386118
Ministry of Steel : Room No. 192, 1st Floor, Udyog Bhawan, New Delhi-110011 Tel. : +91-11-23062345, Fax : +91-11-23061395

Messages and Letters of Appreciation

राज्य मंत्री
पोत परिवहन (स्वतंत्र प्रभार),
रसायन एवं उर्वरक
भारत सरकार



Minister of State
Shipping (Independent Charge),
Chemicals and Fertilizers
Government of India

मनसुख मांडविया
MANSUKH MANDAVIYA

21st October, 2020

Dear Natarajan ji

Let me extend my profound appreciation and heartfelt thanks for the valuable services rendered by the Indian Coast Guard for the successful conduct of firefighting Operation '**Sagar Aaraksha**'.

The operation yet again highlighted the stellar role played by the Indian Coast Guard (ICG) in averting a major environmental catastrophe in the Indian Ocean. The Operation highlighted India's capacity and capability as a regional maritime power in the Indian Ocean Region. ICG's prompt action as first responder and subsequent leading role ensured neutralising of the potential threat of an oil spill of gigantic proportions.

More importantly, let me commend the arduous and hard work of the officers and men who worked with a high degree of commitment to ensure our waters remain safe for mariners, living up to their motto "**Vayam Rakshamah**".

Regards,

Yours' Sincerely,

(Mansukh Mandaviya)

DG K Natarajan, PTM, TM
Director General Indian Coast Guard
Coast Guard Headquarters
New Delhi

Messages and Letters of Appreciation



Vice Admiral Nishantha Ulugetenne

RSP*, VSV, USP, ndc, psc, MPhil(D & SS), MA(DS), MMaritimePol, PGDip in SM
Commander of the Navy

Dear Sir,

28th September 2020

I'm deeply honoured and privileged to extend our heartfelt gratitude for the prompt action and excellent support rendered at a short notice by your esteemed organization in managing the fire onboard distressed vessel MT New Diamond.

Timely response by all supported parties paved the way to prevent a greater calamity. Specially, the ICG's efforts contributed substantially to douse the fire and contain potential damage to marine life and eco system through an oil spill. The professionalism displayed by ICG and dedication, commitment and determination towards achieving common goal is highly commendable, that cemented the success.

I too agree that the synergetic response, showcased the mutual ability to respond any such situation and the success of cooperative framework. It has also crafted the history with lot of lessons to learn.

On behalf of the Sri Lanka Navy, I take this opportunity in wishing you, and the Indian Coast Guard all the very best and successes in all future endeavours.

Yours sincerely

Director General K. Natarajan, PTM, TM
Indian Coast Guard
National Stadium Complex
New Delhi 110001

Naval Headquarters, PO Box 593, Colombo 01, Sri Lanka.
Tel: +94 11 2466236, +94 76 8330034, Fax: +94 11 2542530, E-mail: cofn@navy.lk, damsiri18@gmail.com



Rear Admiral Samantha Wimalathunge, RMP, VSV, USP,
MSc (DS) Mgt, MA(SSS), MSc(NC & WS)
Director General Sri Lanka Coast Guard

Dear Director General Sir,

21.09.2020

I pen this note on behalf of Sri Lanka Coast Guard with deep sense of gratitude to you and the Indian Coast Guard for the tremendous support and cooperation that have been extended during the distress of MT NEW DIAMOND.

Under your able leadership, Indian Coast Guard Ship ICGS Shaurya had been directed and reached the location of the stricken vessel 1730 hr on 3rd September as the first responder to douse the fire in swift response to the request made by Sri Lanka Coast Guard invoking clause 3(d) of the Memorandum of Understanding signed between Indian Coast Guard and Sri Lanka Coast Guard. Subsequently, five more ICG Ships, Dornier Aircraft and Fire Fighting tugs were also reached and remained distress location until around 1230 hr 16th September to assist firefighting and salvage effort.

The instantaneous support received from Indian Coast Guard was instrumental in completely dousing the fire on board and to ensure the stability and integrity of the stricken vessel, averting one of the biggest ecological disasters in our region. I personally witnessed the courage and dedication of the ICG ships' crew amid of adverse weather during firefighting and salvage operation. Thus, the effort of those who are involved for this noble cause is praiseworthy.

Further, Sri Lanka Coast Guard wishes to seek continuous cooperation and assistance from the Indian Coast Guard in the future as well.

Finally while thanking once again for all the assistance rendered, I on behalf of Sri Lanka Coast Guard wish you and Indian Coast guard all the very best and success in every future endeavors.

The Sri Lanka Coast Guard avails itself of this opportunity to renew to the good office of the Indian Coast Guard, the assurance of its highest consideration.

Yours sincerely

Director General Krishnaswamy Natarajan, PTM, TM
Director General of Indian Coast Guard
Indian Coast Guard Headquarters
National Stadium Complex,
New Delhi 110001,
India

Accolades (Through Whatsapp)

Dear Natarajan,

I was planning to call you after watching the news about the MT New Diamond and the sterling role being played by the Indian Coast Guard. I felt proud of having being part of this fine service in different capacities. I must say that the service has become a mature organisation equal to the best in the world. I also noticed the effectiveness of your firm hand on the tiller. Keep up the good work and best of luck as you continue to manage the crisis.

Warm regards.
Admiral Jacob
Ex-VCNS

There is no doubt that the professional manner in which this crisis has been handled by the ICG under your leadership has won the admiration of not just our country but the world community.

Warm regards.
Admiral HCS Bhist
Ex-DGICG

Great job to assist our neighbour. Kudos to ICG. Vayam Rakshamaha.

Cmde Vasan

Good evening DG sir !! I could see the sustained and excellent dousing operations by CG ships! A great job well executed!

DIG K Balasubramaniam

Saw the ICG in action yet again and was delighted at the sustained efforts of the Service. Good Show. Keep it up.

Admiral Thapliyal
Ex-DGICG

A very well and professionally conducted operation.

Dr. Prabhakaran Paleri
Ex-DGICG

Sir, Indian Coast Guard is achieving great heights under your guidance and leadership.

Regards.
IG Manish Pathak

What a great effort !! Unmatched in CG annals.. DG should be proud about the professionalism and the Valor of the force. Once again Coast Guard has excelled.

Best wishes and regards
DIG TS Balasubramanian

Sir, Salute to you and ICG team for the great job. Long live our ICG. These jobs by our ships make us proud.

DIG Raghuvanshi

I am no one to judge the efforts, however felt really proud for the job we have done and the deserving recognition we got... God bless our organisation. Assure you of our sincere efforts to contribute to achieve organisational goal...

Warm regards
IG Harbola

Sir, Feeling so happy for you... no surprise to me... for your genuine and straight forward nature this type of leadership is just an offshoot... talks volumes about the future of CG... your system correction will do many more good changes in the years to come... Wish you many more laurels and success in future.

Cdr Ramesh

Hats-off to you and our Team. Very effective and efficient way and whole cargo is intact, unbelievable. Amazing Operation. New benchmark. Now whole world came to know how you have completed the Hercules task Sir with no damage. Many many congratulations.

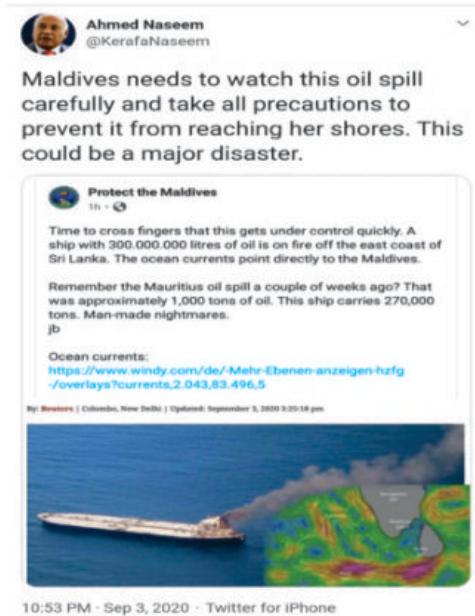
A well articulated interview and excellent job done with SLN on New Diamond incident. Congratulations to everyone involved.

Admiral Murlidharan
Ex- DGICG

Accolades

The immediate deployment of six ICG ships and three aircraft resulted in the successful culmination of Operation 'Sagar Aaraksha' thereby preventing a major environmental disaster in the Bay of Bengal and the wider Indian Ocean. The operation highlighted India's capacity and capability as a dependable regional

maritime partner in South Asia and the IOR. The prompt ICG response as the first responder served as a reassurance to other littoral countries in the region. The incident also brought to fore the reality of the threat of an oil and chemical spill that could threaten our surrounding seas & oceans.



Accolades

PM [#NarendraModi](#) calls [#India-#SriLanka](#) ties [#multifaceted](#). Says, "Under [#NeighbourhoodFirstPolicy](#), we give Sri Lanka highest [#priority](#). Sri Lankan PM thanks India for support during the [#MTNewDiamond](#) disaster."

[#IndiaSriLankaVirtualSummit](#) [#COVID-19](#) [#coronavirus](#)



1:13 PM · Sep 26, 2020 · Twitter Web App

[Raksha Mantri Shri @rajnathsingh](#) was given a detailed presentation on 'Operation Sagar Aaraksha' by the [@IndiaCoastGuard](#).

RM lauded their fire fighting efforts and congratulated the ICG personnel for preventive pollution response during the operation.



5:21 PM · Sep 30, 2020 · Twitter for iPhone

87 Retweets 1 Quote Tweet 691 Likes

Indian Coast Guard Retweeted [Dharmendra Pradhan @dpradhanbjp](#)
Met DG [@IndiaCoastGuard](#) K Natarajan and appreciated him and [#ICG](#) for their timely, innovative & brilliant efforts in dousing the fire on oil tanker [#MTNewDiamond](#) off the coast of Sri Lanka, and also for their commitment in ensuring safe, secure and clean seas in our neighbourhood.



3:50 PM · Sep 17, 2020 · Twitter for iPhone

56 Retweets 1 Quote Tweet 320 Likes

[Mansukh Mandaviya @mansukhmandviya](#)
Interacted with DG [@IndiaCoastGuard](#) on rescue operation of 'MT New Diamond'

2.7 lakh MT crude oil was on the way to [@ParadipPort](#) & fire broke out. ICG's timely action resulted in NO Oil Spill and minimal damage

Kudos to ICG for one of the world's biggest rescue operations!



5:34 PM · Sep 19, 2020 · Twitter Web App

215 Retweets 6 Quote Tweets 638 Likes

Defence.Capital



India coast guard averts major disaster off Sri Lanka, fights fire on Very Large Crude Carrier

[defence.capital](#)

3 weeks ago



Photo: Firefighting on board MT New Diamond by Indian Coast Guard (ICG) ships, alongside Sri Lankan ships, tugs and ETV Ocean Bliss.

New Delhi: An alert and sharply intuitive operation by India's coast guard has averted



The Sri Lanka Navy
[@srilanka_navy](#)

Second fire onboard MT New Diamond completely doused by collaborative efforts of Sri Lanka Navy, Sri Lanka Air Force, Indian Coast Guard, Indian Navy and other stakeholders. [#SL_Navy](#) [#SLAF](#) [#ICG](#) [#IN](#) [#MTNewDiamond](#)




Media Coverage (Digital)

THE WEEK

Indian Coast Guard, Navy help Sri Lanka douse oil tanker fire

The ship was carrying 2 million barrels of oil

Web Desk
September 06, 2020 18:00 IST



A Sri Lankan Navy boat sprays water on the New Diamond, a very large crude carrier (VLCC) chartered by Indian Oil Corp (IOC), that was carrying the equivalent of about 2 million barrels of oil, after a fire broke out off east coast of Sri Lanka September 6, 2020 | Sri Lankan Airforce media/Handout via

dailysabah.com

DAILY SABAH

Rescuers extinguish fire on oil tanker in Sri Lanka after 3 days



A Sri Lankan Navy boat sprays water on the New Diamond, a very large crude carrier (VLCC) chartered by Indian Oil Corp (IOC), that was carrying the equivalent of about 2 million barrels of oil, after a fire broke out off the east coast of Sri Lanka, Sept. 6, 2020. (Sri Lankan Airforce media Photo via Reuters)

BY ASSOCIATED PRESS SEP 06, 2020 5:10 PM

A fire on a large oil tanker drifting off Sri Lanka's coast was extinguished on Sunday after burning for three days, as a team

foxbusiness.com

OIL - Published September 08, 2020

Ships, aircraft fight new fire on oil tanker off Sri Lanka

High winds, extreme temperatures and sparks reignited the first fire, the navy said

Associated Press



Oil billionaire Harold Hamm: Energy industry is stabilizing

Continental Resources Executive Chairman Harold Hamm on the Republican National Convention, Hurricane Laura's impact on the energy sector and his outlook for the economy amid the coronavirus pandemic.

abcnews.go.com

abc NEWS

New fire extinguished on large oil tanker off Sri Lanka

Sri Lanka's navy says a new fire on a large oil tanker drifting off Sri Lanka's coast has been extinguished after burning for two days, as experts prepare to begin salvaging the vessel

By BHARATHA MALLAWARACHI Associated Press
September 9, 2020, 10:57 AM ET • 2 min read



This photo released by Sri Lankan Air Force shows ships fighting fire on the MT New Diamond, about 30 nautical miles off the coast of Sri Lanka, Tuesday, Sept. 8, 2020. Ships and aircraft from Sri Lanka and India intensified efforts to extinguish a new fire on an oil tanker off Sri Lanka's coast on Tuesday, two days after the previous three-day blaze was doused, the navy said. (AP)

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Business News > News > Defence

Sri Lankan oil tanker fire: One dead, one missing, informs DG Coast Guard

The Director General of the Indian Coast Guard, K Natarajan informed that there is one loss of life as of now. Unfortunately, one other person is still missing due to fire incident at Motor Tank (MT) New Diamond vessel. "The ship was carrying 23 crew




MT New Diamond fire incident: 'One dead, one missing, informs DG Coast Guard

BBC NEWS

Oil tanker towed from Sri Lanka shoreline amid spill fears

04 September 2020 Asia



Once the fire is put out, the vessel will be towed further away into deeper waters

A massive oil tanker on fire off the eastern coast of Sri Lanka is being towed out to sea amid fears of a major new oil spill in the Indian Ocean.

The Panamanian-registered vessel, which began burning on Thursday, is carrying about 270,000 tonnes of crude oil.

Ocean Peacekeeping by ICG

Indian Coast Guard help to combat oil spill in Lankan waters

Written by: Staff

Published: September 14 2006, 21:06 [IST]



Chennai, Sept 14 (UNI) The Indian Coast Guard assisted the Sri Lankan Government to neutralise an oil slick caused due to the sinking of a Bangladeshi merchant vessel off Galle harbour in the island nation.

Indian Coast Guard has been at the forefront of leading India's responsibility for ensuring safe, secure & clean seas upon receiving requests for assistance from maritime neighbours. ICG assisted the Sri Lankan Navy by undertaking Pollution Response Operation when a Bangladesh flagged vessel, MV Amanat Shah capsized in Galle Harbour in September 2006.



ICG team in Mauritius

Recently in August 2020, a ten-member ICG specialist team was deputed with 30 tons of pollution response equipment to assist Mauritius in dealing with the environmental disaster caused by the grounding of Japanese flagged vessel MV Wakashio.

Glimpses of Past Operations

- 1980 - Transferred the Indian Peace Keeping Force (IPKF) between India and Sri Lanka, apart from joint patrolling with the Sri Lankan Navy.
- Dec 1988 - The biggest contraband haul in the country was made by ICGS Varuna by apprehending dhow 'Al-Kjalidi' carrying gold worth ₹ 28.42 crores.
- 1993 - Major oil pollution response carried out to tackle spill of 40,000 tons from MV Maersk Navigator off Nicobar Island.
- **Nov 1999 - ICGS Tarabai apprehended pirated Japanese vessel 'MV Alondra Rainbow' in the Arabian Sea - A Maritime History.**
- 1999 - Longest ever towing of Mauritius warship from Port Louis to Mumbai covering a distance of 2600 nm.
- 22 Jan 2008 - Successfully recovered GSLV-IV experimental SRE Module launched by ISRO off Chennai.
- Aug 2010 - Coast Guard Ships and Aircraft undertook pollution response operations for oil spill from MV Chitra in Mumbai Port area.
- 06 Apr 2013 - ICGS Rajshree rescued 120 Sri Lankan refugees from adrift fishing boat which sailed from Velanganni for Australia approximately 09 nm South East of Nagapattinam due to water ingress.
- **17 Jun 2013 - ICG undertook firefighting operation onboard MV Mol Comfort and effected the rescue of all 26 crew members.**
- 20 Apr 2015 - ICGS Sangram apprehended one Pak fishing boat (Al-Yasir) with 08 crew including recovery of 232 packets of Narcotics worth upto ₹ 600 crores in the International market.
- 04 Jul 2015 - ICGS Samar and ICGS Abhinav apprehended Iranian fishing vessel MV Barooki with 12 crew off Alleppey.
- 16, 17 & 23 Nov 2015 - ICG rescued 3440 persons during Chennai Floods.
- 31 Aug 2016 - ACV H-190 deployed for 4th Island with search party of ICG, IB and Custom officials found 17.050 Kgs Ganja in total (each packet weighing around 02 Kgs) amounting of ₹ 1,70,000/-.
- 07-09 Dec 2016 - ICG ships Rescue 242 tourists stranded at Havelock Island view Severe Cyclonic Storm 'VARDAH'.
- **04-08 Apr 2017-ICGS Shoor undertook firefighting operation onboard MSC Daniela, 30 nm off Sri Lanka coast.**
- **27-30 Jul 2017 - ICG created Maritime History by apprehending MV Henry in the biggest ever drug haul of 1.5 Tons Heroin being smuggled through sea.**
- 30 Nov-31 Dec 2017 - ICG rescued 488 fishermen During Cyclonic Storm 'Ockhi' from Kerala coast.
- **17 Jan 2018 - ICGS Samudra Pavak provided firefighting to MT Genessa off Kandla Port.**
- **06-10 Mar 2018 - ICGS Shoor undertook firefighting operation onboard container ship Maersk Honam on the fringes of Indian AoR**
- **13 Jun 2018 - ICGS Rajkiran rescued 22 crew of MV SSL Kolkata off Sunderban.**
- 13 Jun 2018 - Evacuation of 77 Passengers including 03 female and 05 children from Diglipur jetty to Gandhinagar Island by ICGS C-145 at North Andaman.
- **11-25 Aug 2018 - Assistance to Civil Authority during Kerala Flood. 3521 persons evacuated safely.**
- 15 Dec 2018 - Evacuation of 707 Stranded Passengers from Neil and Havelock Islands at A&N Islands by ICG Ship ICGS Rajshree, Aruna Asaf Ali, C-412, C-415 and C-423.
- 21 May 2019 - ICGS Arinjay apprehended Pakistani Fishing boat 'Al Madina' with 217 Kgs of Brown Sugar worth ₹ 1000 Crores.
- **04-15 Aug 2019 - ICG efforts during Disaster Relief Operation at Maharashtra, Karnataka and Kerala resulted in evacuation of 4418 persons to safer locations.**
- 18-22 Sep 2019 - ICGS Rajveer Interception of Myanmar Boat with 1160 Kgs "Ketamine" was recovered worth ₹ 300 Crores.
- 05 Oct 2019 - ICG in a joint operation facilitated apprehension of Pakistani fishing boat with 50 Kgs Heroin by MNDF (CG) off Maldives.
- 20 Dec 2019 - ICGS Aruna Asaf Ali apprehended Myanmar boat with 371.6 Kgs of Methaqualone (Narcotics) worth ₹ 185 Crores in A&N Island.
- 06 Jan 2020 - ICGS C-408 & C-437 apprehended Pakistani boat with 35Kgs of Heroin worth ₹ 175 Crores off Indo-Pak IMBL.
- **28 Sep 20 - ICGS Varad undertook firefighting operation onboard container vessel MV X-press Godavari, 34 nm off Sagar Islands (WB).**



MV MOL COMFORT



MSC DANIELLA



MT GENESSA



MAERSK HONAM



SSL KOLKATA



MV X-PRESS GODAVARI

Epilogue

Oceans, seas, and coastal areas form an integral part of the earth's ecosystem. They are a repository of minerals and resources which are critical for sustainable development. A significant proportion of the world's population, close to 3 billion people, resides in the coastal areas, and is dependent on the marine resources for their livelihood. There is a need for conservation and sustainable use of marine resources as it is a significant determinant factor for the growth and future of mankind. The ICG has a benign

charter of duty which includes preservation and protection of the maritime environment and prevention and control of marine pollution. Since its inception in 1978, the ICG has relentlessly pursued the objective of safe, secure, and clean seas through bilateral and multilateral cooperative frameworks. The successful completion of operation 'SAGAR AARAKSHA' has vindicated the ICG approach and will to continue to lead India's efforts in ocean peacekeeping in the IOR and beyond.



MT NEW DIAMOND



BEFORE - 03 Sep 2020



AFTER - 10 Sep 2020



WE PROTECT

ICG : Ready, Relevant and Responsive

