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WORLD MARITIME UNIVERSITY

Malmö, Sweden

**Analysis on the roles and responsibilities of
Maritime Administration to facilitate crew change
and repatriation of seafarers during the COVID-19
pandemic from an Indian perspective**

by

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India

A dissertation submitted to the World Maritime University in partial
fulfilment of the requirements for the reward of the degree of

MASTER OF SCIENCE
in
MARITIME AFFAIRS

MARITIME EDUCATION AND TRAINING

2021

Declaration

I certify that all the material in this dissertation that is not my own work has been identified, and that no material is included for which a degree has previously been conferred on me.

The contents of this dissertation reflect my own personal views, and are not necessarily endorsed by the University.

(Signature): 
.....

(Date): 21st September 2021
.....

Supervised by: Dr. Kitada, Momoko

Supervisor's affiliation: Associate Professor, MET specialization

Acknowledgements

“Let the wise listen and add to their learning, and let the discerning get guidance.”

- Proverbs 1:5

First and foremost, I would like to express my deepest praise and thank the Almighty, who has blessed me with numerous blessings, knowledge and opportunities, allowing me to study at World Maritime University (WMU) and finally complete the research.

To that end, I'd like to express my heartfelt gratitude to the whole faculty of WMU for their contribution to this greater achievement as this would not have been possible without them. I express my gratitude to Prof. Dr. Momoko Kitada, my supervisor, for her professional guidance, support and encouragement throughout my research as I was able to turn my ideas into a practical and pragmatic solutions. I also extend my sincere thanks to all the other support staffs, the real pillars of the WMU working behind the scene to facilitate and ensuring our comfortable stay at Malmo and making the experience worthwhile and memorable.

I owe a special debt of gratitude to Shri Amitabh Kumar, Director General of shipping, Government of India, Shri Sanjay Kumar Bariar, Addl. Director General of shipping to the Government of India and Capt. K.P Jayakumar, Nautical Adviser to the Government of India, who all supported my applications and made it possible for me to join this course at WMU.

I'd also like to express my deepest gratitude to my donors 'ITF Seafarers' Trust' for sponsoring me out of over a large number of students and for their faith on me, which has allowed me to pursue my MSc degree at the WMU.

I convey my sincerest and deepest appreciation to all the seafarers, Recruitment and Placement Services Licence (RPSL) companies, seafarer unions and administration respondents as without their participation, the dissertation would not have been possible.

Without naming each and every one, I would like to convey my special greetings and thanks to all my well-wishers for standing by my side in the collective effort to attain this success and continuous encouragement during stay at WMU and at Pandemic situation.

I have been blessed to have a family for being my pillar of strength throughout this journey and numerous sacrifices made by them. My heartfelt thanks and sincere gratitude go out to my father Mr. Vincent Arulanthu, my mother Mrs. Maria Theresa, my wife Mrs. Suguna Karthikeyan, Daughter Ms. Risha and son Mstr. Mehaan for giving me love, motivation, support and prayers throughout my journey of continual struggle over here.

Last but not the least, I would also like to convey my love to my MET family and WMU friends as I would treasure their friendship and togetherness for my entire life.

Abstract

Title of Dissertation : **Analysis on the roles and responsibilities of Maritime Administration to facilitate crew change and repatriation of seafarers during the COVID-19 pandemic from an Indian perspective**

Degree : **Master of Science**

It has been 15 years since Maritime Labour Convention (MLC) 2006 has been adopted, and supporting the cause of seafarers' rights but the COVID-19 global pandemic has effectively reversed these gains due to widespread compromise of the seafarer's right to timely repatriation. None of the various international instruments in force effectively dealt with the protection of seafarers' rights during a pandemic, which was found to be lacking.

While the use of sea-routes for global trade has become the focal point for development, but the shore-based complexity, governance, poor coordination among seafarers themselves, seafarers' limits to jurisdictional reach, uncertainties and legal complexity have left them vulnerable to rights violations and hence, the commercial interests of shipowners, managers and charterers continue to trump the obligatory rights and welfare of seafarers.

This dissertation is a study of the analysis on the roles and responsibilities of Maritime Administration to facilitate crew change and repatriation of seafarers during the COVID-19 pandemic from an Indian perspective. Moreover, the effectiveness and efficiency of maritime administration considering all the factors including health and safety to address the global crisis issue of repatriation of seafarers during the COVID-19 pandemic is analysed and discussed.

The research results help us to understand the challenges and hinderances facing during current crew change and this research can form as a base recommendatory template document to maritime administration's for references and preparation of taking such specific steps in case of pandemic outbreak to facilitate timely and efficient crew repatriation, fulfil the international instrument for crew welfare i.e., MLC obligations and as well as ensure that the maritime trade continues serving the humanity by non-stop trading of essential needs.

KEYWORDS: COVID-19, seafarer rights, human rights, crew change, crew repatriation, shore leave, MLC, public policy

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List of Abbreviations

CBA	-	Collective Bargaining Agreement
COVID-19	-	Coronavirus Disease 2019
DGS	-	Directorate General of Shipping
FOSMA	-	Foreign Owner and Ship-Managers Association
GoI	-	Government of India
ICAO	-	International Civil Aviation Organization
ICS	-	International Chamber of Shipping
IHR	-	International Health Regulations
INSA	-	Indian National Ship-owners Association
ILO	-	International Labour Organization
IMO	-	International Maritime Organisation
IOM	-	International Organization for Migration
ISF	-	International Shipping Federation
ISM	-	International Safety Management
ITF	-	International Transport Workers' Federation
MASSA	-	Maritime Association of Shipowners, Shipmanagers & Agents
MERS - CoV	-	Middle East Respiratory Syndrome
METI	-	Maritime Education & Training Institutions
MLC	-	Maritime Labour Convention, 2006
MoHFW	-	Ministry of Health & Family Welfare
MoPSW	-	Ministry of Ports, Shipping & Waterways
MSC	-	Maritime Safety Committee
MUI	-	Maritime Union of India
NGO	-	Non-Governmental Organisation
NHP	-	National Health Policy
NSB	-	National Shipping Board
NUSI	-	National Union of Seafarers in India
PPE	-	Personal Protective Equipment
PSC	-	Port State Control

REC	-	Research Ethics Committee
RPSL	-	Recruitment and Placement Services Licence
SARS - CoV	-	Severe Acute Respiratory Syndrome
SEA	-	Seafarers Employment Agreements
SID	-	Seafarers Identification Document
SOLAS	-	International Convention for the Safety of Life at Sea, 1974
SOP	-	Standard Operating Procedure (SOP)
STCW	-	International Convention on Standards of Training, Certification and Watchkeeping, 1978
UN	-	United Nations
UNCLOS	-	United Nations Convention on the Law of the Sea, 1982
WMU	-	World Maritime University
WHO	-	World Health Organisation

Chapter 1: Introduction

1.1 Background: COVID-19 pandemic

The World Health Organization's (WHO) China country office informed on 31, December 2019, that the instances of pneumonia of unknown cause have been discovered in Wuhan City, Hubei Province, China. According to reports, authorities discovered a new type of coronavirus with a new strain that had never been seen in humans before. This “novel” coronavirus was named Coronavirus Disease 2019 (COVID-19) because it belongs to the family of viruses that cause illnesses ranging from the common cold to more serious illnesses like Middle East Respiratory Syndrome (MERS - CoV) and Severe Acute Respiratory Syndrome (SARS - CoV). COVID-19 cases were confirmed in a large number of countries, prompting WHO to declare COVID-19 a pandemic on March 11, 2020.

In response to the COVID-19 pandemic, several countries went into lockdown and imposed unprecedented containment measures such as border closures, complete lockdowns, quarantines, curfews, unprecedented confinement measures, ranging from bans to travel and social gatherings, to the closure of many commercial activities and disinfections of public spaces such as markets etc (Deb et al., 2020).

1.2 COVID-19 impact in maritime sectors

The global economy is heading for an impending economic crisis and recession as a result of the COVID-19 outbreak and restrictions. New social distancing norms, self-isolation, and travel limitations have resulted in workforce cutbacks across all economic sectors, and the demand for commodities and manufactured goods has declined due to the closure of educational institutions. Many seaports were blocked, limiting cruise traffic, in attempt to limit and slow the spread of the infection. Due to national and local municipal restrictions on ship operations, crew embarking and disembarking, cargo discharge and loading, quarantine and eventually refusal of port admission and bunkering were all restricted. The closure of cruise ports has severely affected the maritime tourism industry (Deb et al., 2020).

The COVID-19 pandemic resulted in the closure of borders and closure of ports for cruise ships and severely affected the crew change and repatriation for seafarers, including seafarers on cruise ships and this has impacted in seafarers' sea period on board ship being prolonged for several months on board beyond the contractual limits and are seriously unjustifiable for the safety and well-being of seafarers' and the safe operation of maritime trade (Doumbia-Henry, 2020).

The biggest casualty in COVID-19 has been the seafarers' entrapment in onboard ships and the question to ponder is as why is it so difficult for seafarers to go back to their respective homes after their completion of contractual tenures. The various compounding reasons are enlisted below as following:

1. To fight and control the spread of the COVID-19 virus, Governments around the world have halted international flights, closed borders, ports, airports and imposed travel restrictions (UNCTAD, 2020) and these restrictions had a direct impact on seafarers' ability to travel between the ships that serve as their workplace and their home country.
2. The nature of international shipping necessitates large numbers of seafarers flying to and from ships on a regular basis from ports of departure and arrival far away from their homes (ICS et al., 2021). Seafarers need to fly to their departure ports in order to board ships on which they will stay and work for several months as per contractual agreements and they frequently require repatriation through flights once they arrive at their destination (ITF et al., 2020).
3. This frequent pan international travel processes have been hampered by COVID-related restrictions and border closures (UNCTAD, 2020). The seafarers' travel options have been severely limited due to the lack of commercial flights and border closures.
4. Lockdown with curfews were imposed by Government to contain the spread of COVID-19 as people were restricted and not allowed to leave their homes except for transportation of essential goods, fire, police, emergency services including the

closure and suspensions of all modes of transportation i.e., road, air and rail services (ITF et al., 2020) which further compounded the seafarers' travel as many countries have not declared seafarers as key workers and hence necessary travel exemptions were not granted to seafarers to travel during lockdown curfew.

5. The closure of passport offices and consulates added to the seafarers' troubles, as they were unable to renew their passports and had difficulty getting visas or travel permits to transit countries or even to enter their own countries of residence due to the lockdown curfew (ITF et al., 2020).
6. Governments also introduced various requirements in their respective border check-points for travellers entering their countries through borders (UNCTAD, 2020). These COVID-19 testing protocols and strict quarantines of seven to 14 days depending upon the health protocol requirements of country further complicated seafarers travel and they were not able to join or relieve seafarers on particular ship on particular time as these quarantine requirements caused considerable time delay (ICS et al., 2021).

A large number of seafarers are estimated to have been unable to return home due to the aforementioned reasons, as their relievers were unable to replace them onboard ships due to travel limitations, making crew transfers impossible (IMO, n.d). As a result, seafarer report that they had to extend their onboard contract beyond the contractual limits against their will and wish for months (Pauksztat et al., 2020) and thereby forcing them to stay on board for longer tenures and depriving them to get reunited with their families (ILO, 2021).

1.3 Problem statement

COVID-19 pandemic as had substantial impact on the mental health and welfare of seafarers and the prolonged stays onboard could have aggravated and worsen the problems further such as in suicides of seafarers and endangering safe ship operations and further leading to major casualty incidents (Klein, 2020).

1.4 Motivation

International Maritime Organization (IMO) have identified difficulties surrounding repatriation and crew change as a priority issue and is concerned with its impacts on the shipping industry and have been urging concerned stakeholders, other organizations and governments to intervene and declare seafarers as key workers and take appropriate steps.

As a former seafarer myself being at sea for more than 15 years, presently at WMU with the sponsors “the voice of seafarers” that is the International Transport Workers Federation (ITF) and being currently part of the Indian maritime administration, it has been my long-time desire and also my duty to get a research degree along with its significant benefits. The research would chiefly concentrate on the challenges faced by not only the seafarers but also the other stakeholders such as Recruitment and Placement Services Licence (RPSL) companies, seafarer unions and maritime administration in solving the unresolved hitches i.e., the concern over actual practical difficulties as this would give me joy of doing something creative and a cherished service to my fellow maritime community at large and attain respectability in the eyes of seafarers and fellow maritime community.

1.5 Research aims / objectives

The aim of this research is to identify specific steps may to be taken by the maritime administration’s in ensuring, facilitating and providing timely relief to seafarers during pandemic outbreak such as COVID-19 pandemic or any other pandemic outbreak.

1.6 Research question

The key and central research question is as to what are the challenges and hindrances did maritime administration faced during facilitating crew change of seafarers during the COVID-19 pandemic times.

1.7 Research significance

Seafarers' professionalism on the front lines of the global pandemic has ensured that essential goods are transported safely and delivered to us with minimal environmental impact. These seafarers too have a family and are usually far away from home and their families for longer period of duration and hence their health and welfare are vitally important.

1.8 Research implications

The research would help us understand the challenges and hinderances facing currently during crew change and this may possibly inspire other maritime administrations for preparation of such specific steps to facilitate crew change.

Chapter 2: Literature review

2.1 COVID-19 related mental health issues

Literatures reviewed on the impacts of the COVID-19 pandemic and related controlled measures (Shi et al., 2020) have stated that much psychological distress will prevail across the world as the after-effects of the pandemic and overwhelmingly research studies have revealed that the seafarers are suffering from associated issues of mental ill-health and psychological problems.

In recent reports, several researchers (Pesel et al., 2020; Slišković et al., 2020; Pauksztat et al., 2020; and Hebbar & Mukesh et al., 2020) have reported that the present uncertain conditions have caused seafarers to stay onboard for longer periods of time, resulting in symptoms of unhappiness, anxiety and depression. Researchers (Pesel et al., 2020; Pauksztat et al., 2020; Radic et al., 2020) have also discovered that seafarers have reported signs of exhaustion, sleeplessness, feelings of meaninglessness and thoughts of suicide (Slišković et al., 2020) when onboard their contracts are stretched beyond the contractual limits (Quinlan et al., 2021).

The aforesaid research findings indicate that the COVID-19 pandemic has had a significant impact on the mental health and welfare of seafarers and that further lengthening their stay onboard could exaggerate the problems and may lead to serious consequences as such as irreparable mental depression, suicide and jeopardizing healthy ship operations.

2.2 Challenges impacting seafarers' mental health

Researchers have identified the social and economic challenges due to the pandemic for the mental health issues of seafarers. Researchers (Pesel et al., 2020; Slišković et al., 2020; Pauksztat et al., 2020; and Hebbar & Mukesh et al., 2020) have identified the lack of shore leave, long contractual contracts, (Radic et al., 2020) negative psychological impacts due to isolation and social distancing measures and (Divari et

al., 2020) lack of communication with family, friends and social environment due to limited shore connectivity are the key factors affecting mental health and well-being.

The mission has also identified that seafarer's current increased workload as a result of enhanced cleaning and disinfecting health protocol requirements and future unpredictable economic prospects are sources of psychological stress (Mission to Seafarers, 2020; Pauksztat et al., 2020). Further, researchers have identified that the impacts of global economic recession, unemployment and uncertain future of their families are key factors of anxiety and mental health exhaustions (Stannard et al., 2020; Radic et al., 2020). Researchers have validated these claims by reporting that over 40 % of the respondents i.e., 269 out of 671 respondents have experienced depression symptoms several times, almost every day or in the previous seven days, and more than half have experienced anxiety symptoms (Pauksztat et al., 2020).

2.3 Support for Seafarers during COVID-19

The international community's such as International Maritime Organization (IMO), International Labour Organization (ILO), World Health Organization (WHO) and International Civil Aviation Organization (ICAO) and the other stakeholders in the maritime industry, including the International Chamber of Shipping (ICS) and the International Transport Workers' Federation (ITF) in response to the pandemic and its implications on the predicament of seafarers stranded on ships for lengthier contractual periods due to closure of borders, supported by joining forces to address the issues falling within their respective mandates to ensure that effective and holistic guidance has been provided to governments and all concerned with the industry (Doumbia-Henry, 2020).

The literature also reveals that the seafarer has found support lacking from statutory agencies and shipping companies (Mission to Seafarers, 2020; Pesel et al., 2020). The research findings so far show that shipping companies and government agencies are less conscious of the importance and are non-supportive (Mission to Seafarers, 2020;

Pesel et al., 2020) and the seafarer has discovered a lack of support from government agencies and shipping companies, leading to mental health issues and that there is an urgent need to recognize seafarers as key workers in order to facilitate crew change, shore leave and access to shore-based services (Pauksztat et al., 2020).

2.4 Other associated issues

(Shi et al., 2020) confirms that the term quarantine or forced confinement, is well known in the maritime sector with 40 days of isolations and is being currently followed as per health protocols and the negative psychological impacts due to isolation and social distancing measures (Radic et al., 2020) and lack of communication with family, friends and social environment due to limited shore connectivity are the key factors affecting mental health and well-being (Divari et al., 2020) and as a result, researchers have recommended that shipping companies, flag and port states and other maritime welfare service providers to maintain close relationships in order to protect seafarers' health and the general public (Battineni et al., 2021).

Similarly, researcher have identified that lesser ship-shore interactions, lack of shore leave, difficulties in getting supplies and the situation on board (Pauksztat et al., 2020) e.g., increased workload as a result of enhanced cleaning and disinfecting health protocol requirements resulting in fatigue, tensions due to lack of information and support from the shipping companies have been key sources of psychological stress (Mission to Seafarers, 2020; Pauksztat et al., 2020).

These aforesaid discussed literatures review findings, discusses themes and concludes that further research is needed to examine the challenges and difficulties faced by seafarers, stakeholder and steps taken by the maritime administrations in ensuring timely relief to seafarers.

2.5 Public policies and crisis

The broad area of government laws, regulations, decisions, set of rules including mandatory guidelines with Standard Operating Procedures (SOPs) that govern issues or problem oriented towards a goal, made on behalf of the public is known as public policy. Moreover, the government policies have an impact on all aspects of lives, so everyone has a stake in the policies that governments enact (Anderson, 2000).

Individuals and organizations try and use political process to influence public policies by endorsing individuals and political parties, which are transitory in the sense that they may come and go, and their positions on issues can shift due to changing circumstances (Mehta, 2011). Also, public policies are influenced by a variety of factors including public opinion, lobbying, interest group, economic conditions, health conditions, new discoveries and technological advancements (Marume, 2016).

The global economic crisis requires the policy makers and stakeholders to remain vigilant, possess strong leadership qualities with desire to make bold and decisive decisions to do the right things at the right times with the primary goal of safeguarding the most vulnerable while also addressing the macroeconomic, fiscal and trade policy related issues (Griffith-Jones et al., 2009).

The evolution of public policy has been marked by expansion of people's and government's power, which has the ability to alter the future of almost anything, including major wars. The United States of America's involvement in world wars reflected a significant shift in its public policy, as well as an expansion of its policy influence (Bruce et al., 2013). In Europe, since 1948, the growth of international organizations has propelled the implementation of public policies to the extent to which public prerogatives have been made common, ranging from inter-governmental cooperation to policies that are heavily federalized with three social models of policies such as market-oriented, neoliberal trend and societal (Laurent, 2020).

In comparison, India developed a number of policies aimed at socioeconomic transformation after gaining independence in 1947. A planning commission was established with subsequent five-year plans with special policies on agricultural development, industrial growth, poverty eradication, rural development and other topics were formulated, assisting the country in its nation-building mission. With its political utility, public policy has ensured that the country adopts the best policies to achieve the best results (Bidyut, 2012).

Research related to public policies in Indian context states that the approach to “participatory decision-making” is at the core of political democracy. It promotes the involvement of ordinary citizens who will be influenced by the decisions. When a large group of people, all from diverse walks of life, come together to make a decision that affects all, participatory decision-making is most successful (Bidyut, 2012). The desire to participate and an understanding of others' roles in public policy making are important because they serve as the foundation for public deliberation (Putnam, 2020).

States parties to relevant international agreements are required to consciously develop exchange and coordination mechanisms for knowledge sharing platforms and all efforts are made to expedite the domestication of laws and regulations concerning seafarers' interests, as well as to develop related policies for timely relief of seafarers (Ruqing et al., 2020).

The methods adopted for ordinary citizens and stakeholders inputs on public policies may have the following: circulating the draft public policies for stakeholders inputs by notices and giving wide publicity by all possible means such as medias, news, print and website etc., establishing a method for obtaining public opinion by polling, collecting opinions in various forms and from all available sources, arranging for public debate and discussions as well as making the purpose and specific procedures for these meetings clear in advance (Cheema, 2003).

The other methods available for ordinary citizens and stakeholders for interaction with Government related to public policies are through a citizen complaint or feedback system by way of online means, e-mail and phone numbers; online surveys; interviews with government officials and by right to information applications for accessing government information (UNDESA, 2008).

Public policies such as environmental related policies, health care related policy decisions etc. are examples of such policies where government officials, subject experts, NGOs, donors and members of the public participate in policy making (Bidyut, 2012). However, it may be noted that no research in public policies by maritime administration's related to seafarers' relief during COVID-19 pandemic have been explored.

2.6 Literature review summary

The current and growing study on the effects of COVID-19 on crew adjustments and repatriation of seafarers has impacted seafarers mentally, primarily by surveys and feedback (questionnaires) from seafarers trapped aboard ships due to travel restrictions enforced due to worldwide border closures. Also, it may be noted that the researchers have primarily focused on understanding the negative psychological effects of the COVID-19 pandemic on seafarers, linking mental health concerns to a variety of problems resulting from pandemic prevention efforts and evaluating mental health-related assistance provided by various maritime stakeholders.

The COVID-19 pandemic will remain to affect the seafarers and their repatriations and the identified psychological impacts would have a lasting impact on seafarers even after their repatriation. These research findings indicated in above paragraphs establish that the COVID-19 pandemic has had a significant impact on the mental health and welfare of seafarers and that further lengthening their stay onboard could exaggerate the problems and may lead to serious consequences as such as irreparable mental depression cases, suicide cases and endangering safe ship operations.

Further, researcher have identified that negative appeal effects seafarer's safety behaviour directly resulting in accident and the positive appeal, on the other hand, has a direct impact on seafarers' safety behaviour through self-efficacy and outcome expectations (Yuen et al., 2020). It may be noted that the seafarers' have emphasised the support received from shipping companies in the reviewed studies. However, the gaps, challenges and hinderances faced in by seafarers, by shipowners and maritime administration's during crew change and the type of policy approaches adopted by maritime administration's for facilitating such crew change are yet to be explored.

Now further research is needed to explore the type of support the seafarers expected, challenges faced during crew change, steps taken by the Indian maritime administration in ensuring timely relief to seafarers including the public policy approaches adopted including the quick formulation of new SOPs and best practices adopted etc. to ensure seafarer's rights are safeguarded onboard as mandated by MLC, 2006 and also thereby ensuring vessels' continue to trade with full safety by complying with international laws and statutory regulations (Pauksztat et al., 2020).

Chapter 3: Research Methodology

3.1 Research Methodology

The research strategy used on the four research questions to find solutions and to explore further on the type of support the seafarers expected, challenges faced during crew change, steps taken by the maritime administration in ensuring timely relief to seafarers including the policy approaches adopted by maritime administrations for ensuring vessels' to continue to trade with full safety by complying with international laws and statutory regulations is described in the following chapter. It is important to note that "the thesis is problem-driven, not methodologically driven," in the sense that it uses the methods that will help you answer the research question the best way possible (Flyvbjerg, 2006).

Qualitative research is the systematic investigation of social phenomena in natural settings (Bogdan et al., 2006). These social phenomena include as to how people perceive various aspects of their lives, how organizations function, how individuals and or groups behave and how interactions shape relationships (Bogdan et al., 2006). In this type of study, the researcher is the primary data collector and investigates why things happen, what happens and what those events mean to the people being studied (Corbin et al., 2008).

Considering the importance of the research questions (listed in appendix) and to reach the desired research objectives, the researcher feels that "qualitative" research methodology is the most appropriate method for this research as the adopted qualitative research would be suitable for understanding concepts, thoughts and experiences, as well as provide an in-depth insight (Howell, 2013) into contemporary maritime issue which needs solutions.

3.1.1 Phenomenology

The purpose of three commonly used approaches to frame qualitative research are mentioned in the table below. An example of a research question is provided that could be used to guide the study and what outcomes might be gained by using that approach for each frame.

Approach	Purpose	Illustrative question	Illustrative outcome
Phenomenology	To describe the essence of a phenomenon by looking at it through the eyes of those who have experienced it in order to comprehend the meaning that participants assign to it.	What challenges and issues the seafarers and other stakeholders faced while crew changes during COVID-19 pandemic	Results would contribute to our understanding of phenomenon of learning context. Interviews would be used to understand about seafarers & stakeholders' experiences, including what they learnt and how they learnt.

Methodology overview - Table 1

3.1.2 Case study: Indian maritime public policy perspective

The region's unique idiosyncratic characteristics make it a "critical case" scenario (Goldthorpe, 1968), which is why this dissertation focuses on the Indian maritime context. The authors set the stage for their investigation into whether empirical evidence could support the emergence of the concept of embourgeoisement. They also claimed that if embourgeoisement did not occur under ideal conditions, it was safe to assume that it would be unlikely to occur under less ideal conditions. "If it happens here, it will happen anywhere," or "if it doesn't happen here, it won't happen anywhere," to put it another way (Patton, 2015).

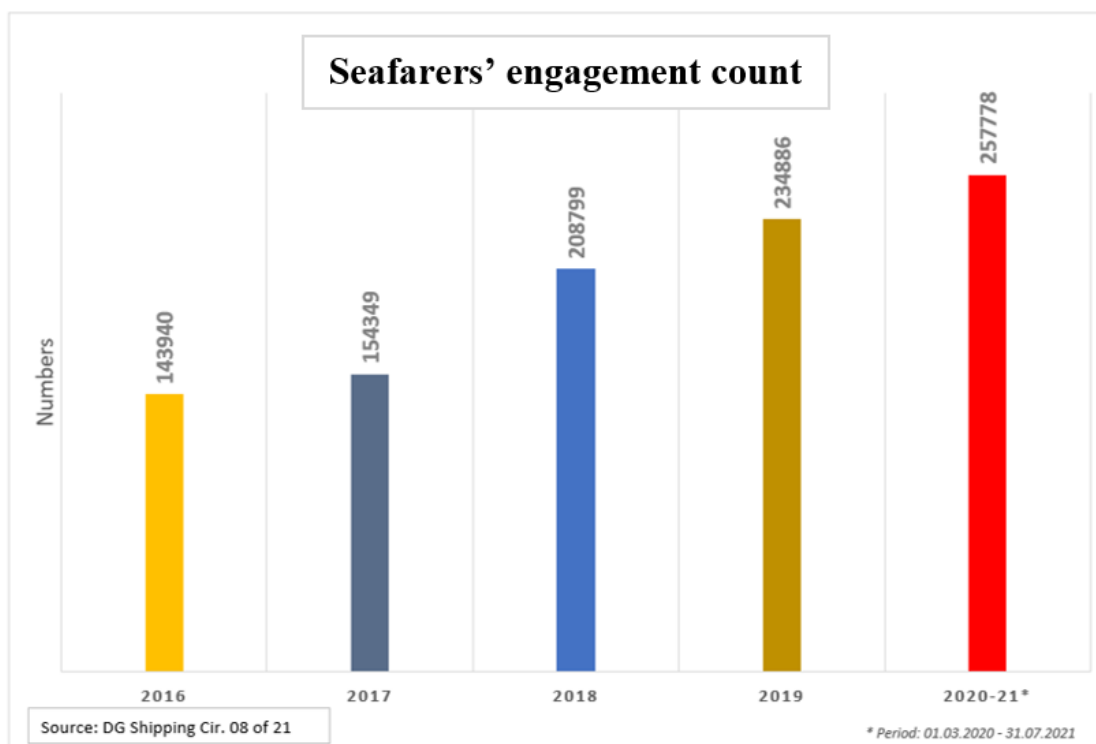


Figure 1 - Indian seafarers engagement count

An analysis of figure 1 reveals that the pandemic situation has not adversely affected the crew change of Indian seafarers in comparison to the figures of past four years as the “Indian seafarers engagement count” i.e., the seafarers employed onboard through RPSL companies reflects that a large number of seafarers (257778 seafarers) have been employed and engaged onboard during the pandemic period between 01.03.2020 to 31.07.2021 which is noted to be significantly higher than the previous years.

Similarly, the figure 2 reveals that Indian trainee seafarers employed and engaged onboard during the pandemic period between 01.03.2020 to 31.07.2021 are significantly higher than the previous years.

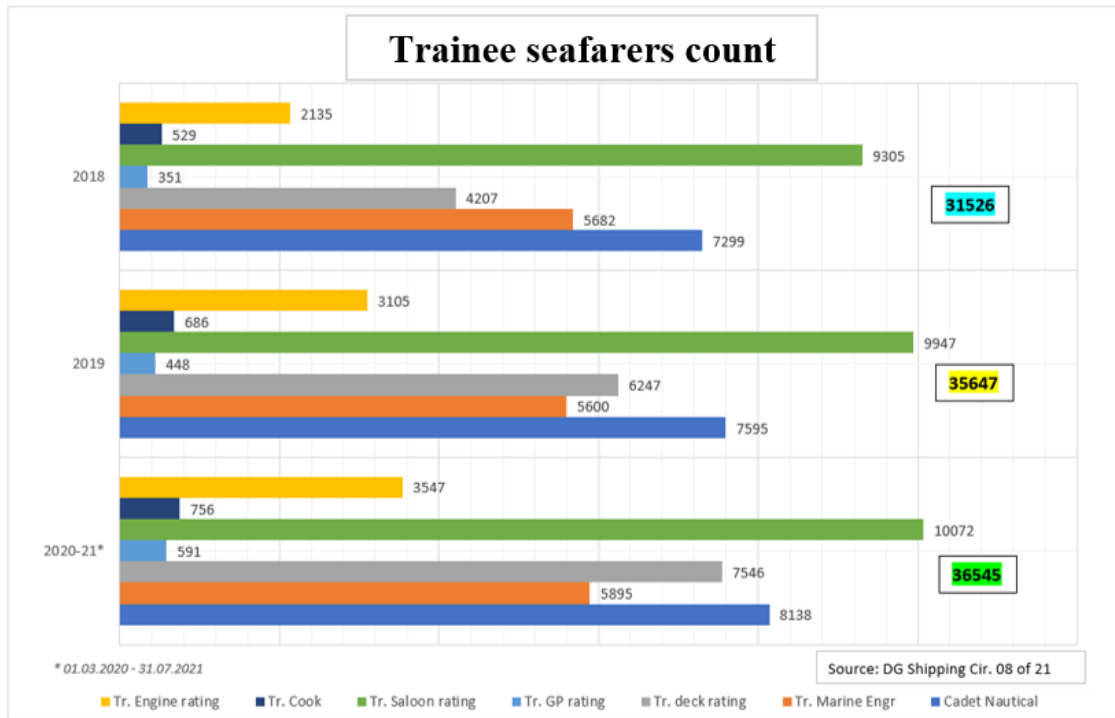


Figure 2 - Indian trainee seafarers engagement count

India being one of the major seafarers supplying nation for the global maritime industry and it seems that the model approach adopted by India has been quite successful in crew change as evident from the publicly available statistics (DGS Circ, 2021) as depicted in above figures and hence it would be more appropriate to concentrate the research with a case study specifically from an Indian perspective to gain insight and achieve the research objectives.

The Indian case study approach has been adopted in the research to add value and provide additional support to the qualitative research methodology to obtain the desired research objectives. The case study approach being an exhaustive study of a social unit, enables the researcher to fully comprehend the concerned unit's behaviour pattern, as it deepens the perception and gives a clearer insight to get at behaviour directly rather than through an indirect and abstract approach (Cooley, 1962).

The case study approach ensured to obtain a true and enlightened record of personal experiences, revealing inner strivings, tensions and motivations that drive people to act, as well as the forces that direct them to follow a specific pattern of behaviour (Flyvbjerg, 2006) and allowing for more in-depth research that is generally not possible with other data collection methods (Gerring, 2006).

Furthermore, case studies are useful for diagnosing, treating and solving other practical problems (Yin, 2009), helps in suggesting measures for improvement in the context of the current environment of the social units in question (Bennett et. al., 2010) and broadens the researcher's experience by improving the ability and skill in analysis to be considered both as beginning and the end of abstract knowledge (Merriam, 2009).



Figure 3 - Qualitative research design illustration

For the reasons highlighted above, it can be assumed that if the approach and steps adopted by Indian maritime stakeholders are successful, then they are more likely to be successful in other maritime regions too with less homogeneous political settings.

3.1.3 Qualitative research

Qualitative data is a type of information that is gathered through questionnaires, interviews, or observation and is usually presented as a narrative (Myers, 2020). Qualitative data collected allows researchers to conduct in-depth analyses of subject matters as researcher can probe participants to gather extra information by asking the right follow up questions. The information gathered is used to draw conclusions based on a series of questions and responses (Lacity et al., 1994).

The collected qualitative data is normally rich in context if the interviews are with open-ended questions as this allows the respondents to freely express their opinions, leading to more additional collection of information data. These collected data can be utilised for future conduct of research (Given, 2008).

3.2 Methods

The process of methods employed in this dissertation is depicted in the Figure 6. The methods used for obtaining the research objectives are the interviews, open-ended questionnaire and public policy analysis.

The research is conducted based on interviews (in person or online) with open-ended questions having objective and brief questions are listed in appendices below. Different interview questionnaires were prepared for stakeholders and Indian maritime administration. Stakeholders' questionnaire is to deal with challenges and hinderances faced while maritime administration deals with challenges, hinderances faced, actions and steps i.e., policy approaches towards facilitating crew change.

3.2.1 Interviews

The interviews, case study and research of resources from available data are most reliable and valid method for this research. This research would investigate the event by describing and interpreting participants' lived experiences. Selection of participants on experience on types and trade of the vessel that is handling crew change, concerned official or authority handling such port-folios, designation, experience and gender will be the key important factors to deal with this research.

A face-to-face structured interview is most suitable approach to answering the research questions as oral interviews would be most appropriate mode with sample size (around 25 respondents) and it will enable to gather more in-depth information on people's opinions, views and preferences, which is required for concluding the results of the proposed research questions (Hammarberg et al., 2016).

The advantages of interview approach for data gathering were chosen as the recommended option as it helps in suitable inclusion of the desired respondent in the sample in advance as per the research scope and requirements as the researcher has full personal contact details of respondents and researcher can clarify respondents' responses by asking for follow-up questions or information as required.

The case study method is a popular type of qualitative analysis that involves closely observing a social unit, whether it's a person, a family, a cultural group, or even an entire community. It's a research method that prioritizes depth over breadth. The focus of the case study is on a close examination of a small number of events or conditions, as well as their interrelationships. As a result, a case study is essentially an in-depth investigation of the unit in question.

3.2.2 Open ended questionnaire

A set of questionnaires were prepared and used to obtain the views, opinions and preferences from the identified stakeholders. The questionnaires as enclosed in

appendix, were divided into 5 themes which represent the framework of this research. The main objective was to obtain the possible solutions adopted and available for crew change during pandemic and also to have thematic categories for making the respondents comfortable in responding to the questions.

The 5 themes are listed below with the number of questions against each theme being displayed in the brackets against each theme:

1. Challenges, issues and problems (4)
2. Initiating and innovativeness (6)
3. Improvise and enhanced services (3)
4. Supportiveness and helpfulness (6)
5. Approaches and theories (1)

3.2.3 Data collections

A small pilot study was carried out to identify a list of all key stakeholders, key personnel's who were actually involved in the crew change activities and seafarers actually got signed on or signed off from ship during pandemic times. Further a quick check was done via telephone call or email etc. to check the availability and willingness of the respondents to participate in the research and share their experiences. Once all the participants were finalised, then the further steps of data collection were initiated.

The next step of data process involved was in collection of data and information from the respondent through interviews by direct contact in accordance with the analysis background and pre-prepared questions. The questionnaires were shared to participants via emails earlier for better preparedness and response. The extent of the interview was around 15-20 minutes under organized and semi-structured patterns.

In order to ensure that high-quality data is collected in a systematic manner, the systematic practice of usage of recording device or video communication application

of zoom recording software were used as per the respondent's convenience for the interviews and the recorded material was backed up safely in hard drive in mp3 / wav formats.

3.2.4 Selecting the participants and participants details

As the research is evolving and looking at issues about the Indian seafarers, associated seafarers' unions, ship-owners and the Government of India context, hence the personnel involved in crew change during covid pandemic were carefully chosen and selected so that they can provide the best, honest and requisite information's as they were keenly involved in processes, activities and decision making.

It was attempted to keep the sample size higher by selecting as many as participants possible for the interviews considering their availability, the breadth of the issue to be investigated and the amount of time which would be required for transcribing interviews and to conduct further data analysis within the available time limit. The goal was to collect data from all the associated and concerned maritime stakeholders in order to find more meaningful answers to the raised research questions.

For selecting the stakeholders for interview, it was decided to basis the most appropriate, concerned and influential people in the Government and the associated maritime industry and is it possible to gain access to them for honest responses. The selection criteria adopted for the associated stakeholders were basis their impact, experience and knowledge of seafarer's wellbeing and involvement in crew change during the pandemic. Basis this, the researcher was able to gain access seafarer's union, RPSL companies, ships owners associations, international trade shipowner's association etc. who were involved in working on seafarer wellbeing and crew change. The researcher was also able to interview active sailing seafarer's who had the first-hand experience in crew change during this pandemic period and could provide healthier on the ground level inputs.

The following table provides the details of people interviewed:

SNo	Organization	Interviewees	
1	Ministry of Ports, Shipping & Waterways (MoPSW) Government of India	Senior Manager (Decision maker)	Senior Manager (Decision maker)
2	Ministry of Family, Health & Welfare (MoHFW) Government of India	Senior Manager (Decision maker)	Senior Manager (Decision maker)
3	Indian and Foreign Ship-owners Association	Senior Representative, FOSMA (Decision maker)	Senior Representative, INSA (Decision maker)
		Senior Representative, MASSA (Decision maker)	
4	Seafarer's Union	Senior Representative, NUSI (Decision maker)	Senior Representative, FSUI (Decision maker)
5	Sailing Seafarers (including 3 women seafarers)	Master Mariner 1 (FG)	Master Mariner 2 (FG)
		Master Mariner 3 (FG)	Master Mariner 4 (FG)
		Chief Engineer Officer	Bosun 1
		Bosun 2	Chief cook
		Messman	Electro Techn. Officer
		Tr. Nautical Officer	2 nd Engineer Officer
		2 nd Officer	3 rd Officer
		3 rd Engineer	4 th Engineer

Interviewed participants - Table 2

The figures 4 and 5, depict the breakup of 25 respondents which includes a 12% of female respondents ranging of wide array of personnel were chosen for interviews who were directly involved or effected from COVID-19 pandemic.

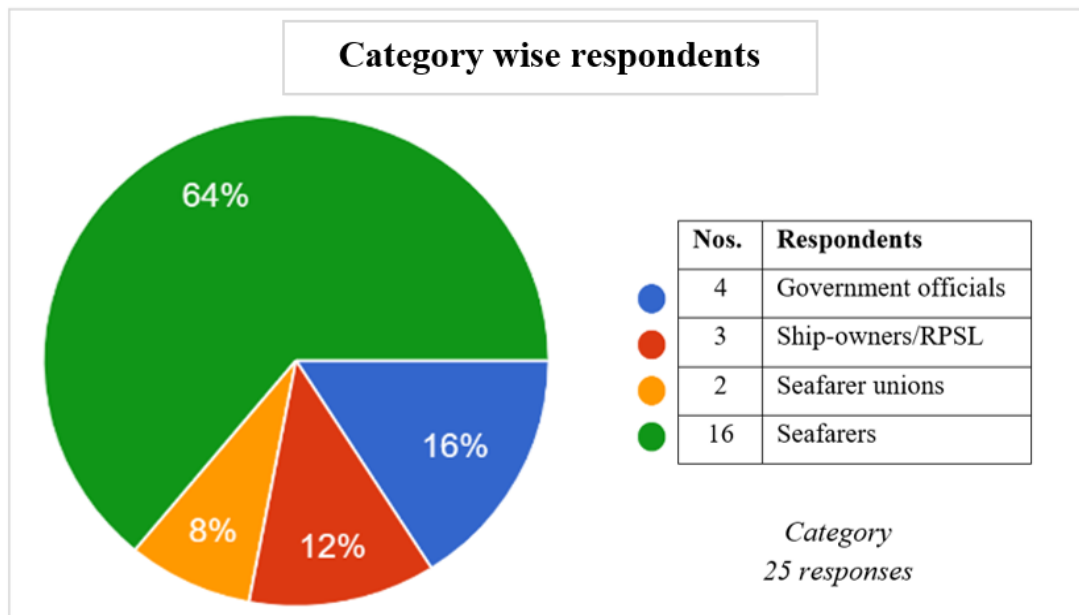


Figure 4 - Category wise respondents

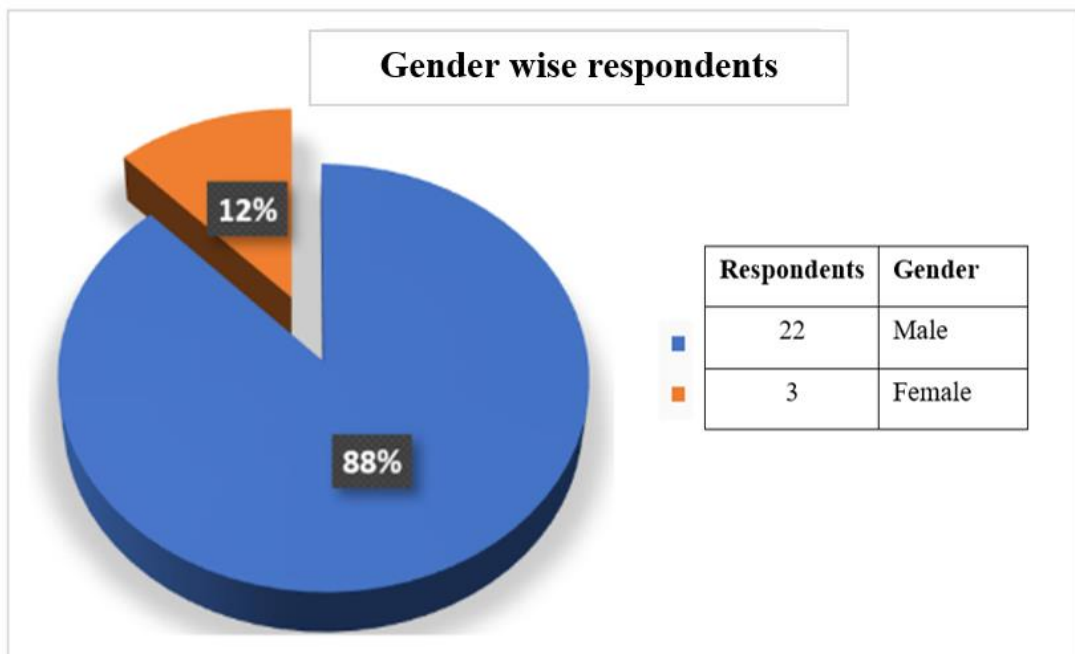


Figure 5 - Gender wise respondents

3.3 Content processing

The transcription of 25 recorded interviews were commenced after the completion of interviews. There are two options available for creating transcriptions such as the usage of online automated transcription (paid or free) and manual transcription services (paid services or by self) respectively. As accuracy was considered as the most critical decision factor in this research, hence the researcher adopted the method of manual transcription self-mode for transcribing the recorded audios by listening audios one by one and writing down (typing down) as to what is said and making corrections as required. A considerable and large number of manhours were spent on correctly converting the recording audios into transcription texts for further analysis.

3.4 Analysis

The qualitative data analysis process necessitates the collection of a large amount of data in the form of recordings, notes and transcripts, among other things. The methodology employed is rich in context, but it makes determining the most efficient path for analysis difficult (Bryman, 2015). As a result, the researcher examined all of the available analysis methods and determined that "thematic analysis" is the most appropriate because it is similar to the applied methodology of attempting to learn something about people's knowledge, experiences, values, views and opinions from a set of qualitative data derived from interview transcripts. In other words, through a process of coding and finding themes, the answers to the research questions would emerge from the data (Charmaz & Bryant, 2010).

The research process used in this study is depicted in Figure 6. The thematic analysis approach would involve step 1 as "familiarization" where the researcher would familiarize to have a complete overall picture of all the data gathered before attempting to analyze individual items, which would require transcribing audios, reading through the text, and collecting first notes, among other things. The step 2 would be "coding" where the researcher creates the abbreviated labels or "codes" that describe the substance of parts of transcribed texts, usually phrases or sentences. Every interview

transcript is read through and everything that strikes out as significant or possibly interesting is marked, including phrases and sentences that match certain codes. These codes provide a quick summary of the data's main points and common meanings.

The third step would be “generating themes” by further closely analysing the developed codes to see if there are any common patterns noted and to start or begin to develop the new “themes”. The fourth step is to review that the created themes are useful and accurate representations of the data by comparing the themes to see if something is missed or the generated themes are really present in the data, or if any changes can be made to make the themes work better, or reviewing and splitting, discarding, or combining the themes if issues arise.

The fifth step is to finalize the list of defined themes and name them based on exactly what each theme means and how it aids in understanding the data, whereas naming themes entails coming up with a short and easy to remember name for each theme. The final step is to summarize all data and write a report that explains the main takeaways and demonstrates how the analysis addressed the research questions.

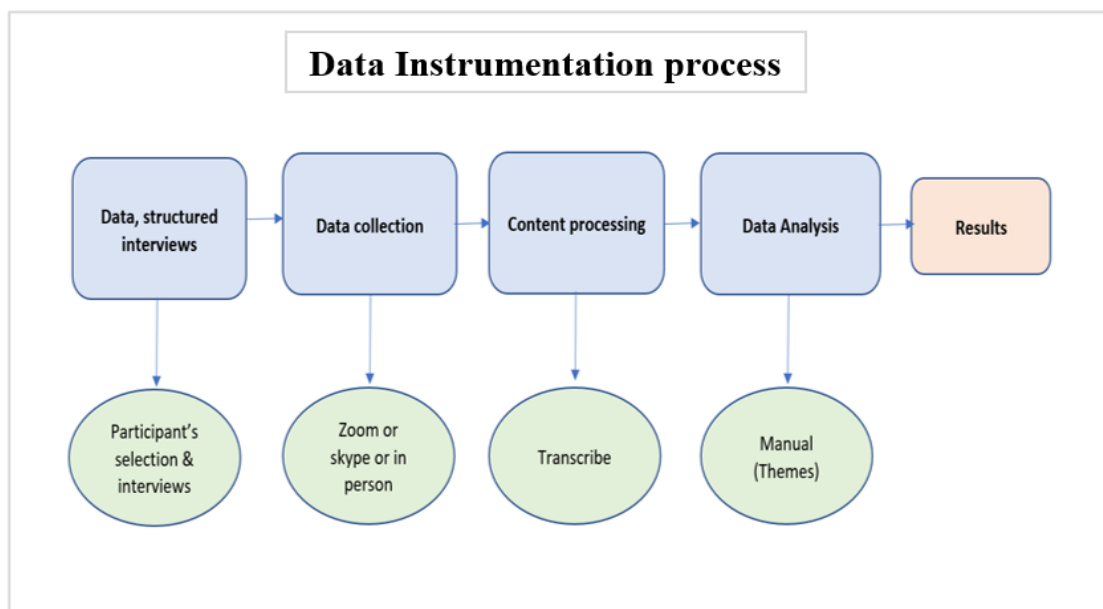


Figure 6 - Data instrumentation process

3.5 Validity and consistency

The accuracy or precision of the measurement in the research is referred to as validity and it represents the integrity of applied methodology (Long & Johnson, 2000). The term validity can also be referred as truth value (Noble & Smith, 2015). According to constructivism's applied ontological perspective, the validity of the study's final conclusions is largely dependent on the participants' experiences and, as a result, the researcher's ability to understand knowledge and truth.

To understand the human experience, the researchers used the constructive paradigm to collect data and analysed it in the said paradigm, whereby all individual viewpoints were considered and human behaviour, which is complicated, contextual, varied, and has various causes, has been accorded due weightage (Kivunja & Kuyini, 2017). The research study is based on the experience and efforts of seafarer, ship-owners, RPSL companies, unions and the maritime administration. The four criteria's namely, credibility, transferability, confirmability and dependability were chosen in this research for a constructive approach, the data and analysis obtained must be reliable in order to meet the credibility criterion (Guba, 1981).

All possible efforts were made to minimise the research bias due to sample size and researcher himself by ensuring a large variety of sample of all possible stakeholders to ensure results are close to reality. Researcher being an ex-seafarer and being part of maritime administration is aware on the researcher bias basis on pre-conceived notions depending on element of inclination and preconception aspect of bias about the research's outcome (Smith & Noble, 2014) and hence analysed the data as a neutral and open-minded researcher with no bias in mind.

3.6 Ethical issue

Ethical considerations were present throughout the research work especially during data collections when interviews were conducted. The study was carried out in a responsible and ethical manner to reduce the danger of harm to humans, and no

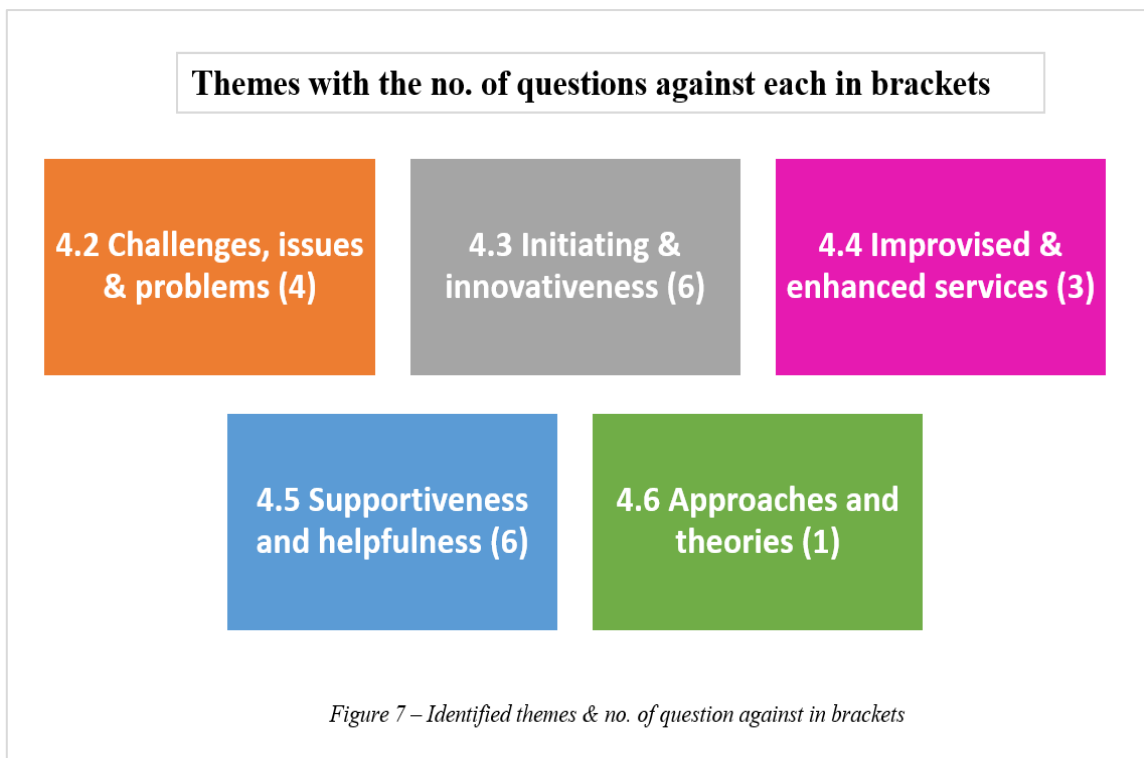
animals were used in any way. Research participants safety, dignity and rights was not comprised as interviews were conducted with prior clear acceptance of the participants that their views and responses would be kept anonymous and full confidentiality of the responses were guaranteed while asking them the research questions during interviewing.

The required permissions were obtained from World Maritime University - Research Ethical Committee (WMU - REC) prior proceeding with the research work and the REC ethical code of conduct was complied with throughout the research in totality. The data collected was only accessible to the researcher as it was saved in the personal drive of the researcher and was password protected and strict confidentiality was maintained throughout the study. Participant's name and identity are kept anonymous and their details have not been reflected in the report.

Chapter 4: Results and data analysis

4.1 Introduction

This research study has benefited from a demographic of seafarers, RPSL companies, seafarer union and maritime administration. The research results are analysed under the below sections with the corresponding identified themes.



4.2 Repatriation - Challenges, issues and problems

This theme encapsulates each of the participants' experience at work which includes a combination of feelings encompassing challenges faced and ultimate satisfaction.

The participants were able to identify the challenges and issues they faced during crew change which are enlisted as following: restriction of movement, lockdown, no identified SOP, expiry of crew certificates, reliever's unavailability, border closures, imposing tighter travel restrictions, consulates shut, increase in crew change cost, multiple COVID testing, quarantine requirements, airports shut, seafarers travelled

great distances, each state had different protocols, pre-employment medicals, clinics could not be opened and frequent change of regulations.

The remarks by a senior Government official from health ministry, succinctly illustrates below the challenges faced by stakeholders due to COVID-19:

“As the Covid 19 was a new virus and because of its spread and to contain the spread, countries all over the world imposed strict restrictions and lockdown by closing borders between countries and imposing tighter travel restrictions. Port activities/ operation were severely restricted in initial months. Ships were allowed to berth only after completing compulsory 14 days quarantine if they had visited Chinese ports or coming from Covid affected countries.”. (Respondent 4: Sr. Government health ministry official)

The following statement by a senior ship-owner’s association representative briefly illustrates the problems and issues faced by stakeholders such as seafarers, RPSL companies etc. due to COVID-19 pandemic effects when carrying out crew change:

“Following are the problem faced by seafarers: Ban on international flights caused major relief issues globally, ban on domestic travel meant no crew change in India, consulates shut meant no visas for seafarers, multiple COVID test needed to be carried out prior embarkation and major increase in crew change cost.” (Respondent 5: Sr. ship-owners association rep.)

The two foregoing statements from a Government official and representative ship-owners association illustrate the challenges and problems faced by stakeholders. Moreover, these problems and issues were faced by seafarers globally and hence the IMO had issued a series of circulars and statements regarding the growing issue of seafarer’s repatriations and urged member States to address this issue, whereby

maritime States issued SOPs and circulars detailing instructions to stakeholders for compliance.

The survey results as indicated in the below graph opines that the major challenge and problems faced by seafarers during crew change were due to the new requirements of quarantine, multiple COVID-19 testing requirements, restriction of movement due to lockdown and border closures. 20% of respondents (13 responses) reported the “quarantine requirements” as the major challenge followed up by 15% (10 responses) reporting “multiple COVID-19 testing requirements” and another 15% (10 responses) suggesting the restriction of movement due to lockdown and border closures also as primary associated problems. The other associated challenges and issues are also depicted percentage wise in the graph.

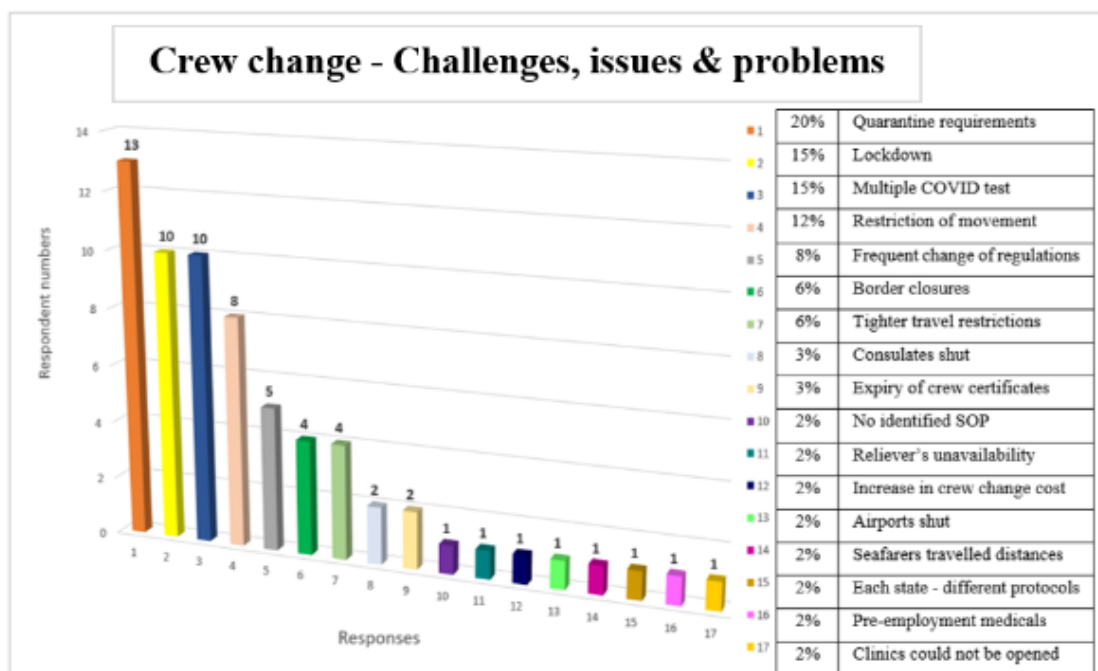


Figure 8 - Bar chart of challenges, problem & issues faced by respondents

Overall, the survey results reflects that the challenges and issues faced by stakeholders pertaining to restriction of movement due to lockdown and border closures, additional new associated requirements of quarantine and COVID-19 testing etc. have remained as chief concerns of all stakeholder during COVID-19 pandemic to overcome for efficient handling of repatriation and crew change.

The review of results identifies the following challenges and issues for the maritime administrations to be aware and face these amicably with solutions for ensuring smooth crew change:

1. Quarantine requirements: Many Governments have imposed strict quarantine norms at border check points even if the travellers possess negative COVID-19 test reports and the quarantine stay requirement varies from 7 – 14 days depending upon the country's health protocol requirements.
2. Lockdown: Shutdown, curfews and restriction in gathering in public places being imposed by Government to contain the spread of COVID-19 except the permissions for movement of essential goods including the closure and suspensions of all modes of transportation viz. road, air and rail services.
3. Multiple COVID test: Governments have imposed that the travellers are in possession of negative coronavirus test report before they board flights to arrive in their countries. Also, the travellers are tested again on arrival and few ship-owners require that the seafarers are tested prior boarding ships.
4. Restriction of movement: Free passage and movement of seafarers being restricted to curfew and probably not being granted with travel exemptions to have unrestricted travel during lockdowns.
5. Frequent change of regulations: As the situation has been very fluid and has been changing dynamically, hence the Governments have been forced to bring frequent

changes to the requirements having different protocols at different times having different severity and this has caused problems during crew change.

6. Border closures: Government have imposed closed have their own entry requirements and the conditions changes at very short notice. The seafarers' travel options have been severely limited due to the lack of commercial flights, border closures and changing entry requirements at very short notice.
7. Imposing tighter travel restrictions: The Government has tightened restrictions, banning most international travel, and new rules are frequently introduced, such as a negative coronavirus test before departure for the majority of people arriving, as well as a period of quarantine.
8. Consulates shut: Lockdown and closedown of passport offices and consulates, have directly affected the seafarer's as they are were not able to renew their passports and obtaining visas or travel permits to transit countries, join a ship in port in a country, or even enter their own countries of residence is difficult.
9. Expiry of crew statutory certificates: Shutdown and restrictions being imposed by Government to contain the spread of COVID-19 has resulted in closure of Maritime Education & Training Institutions (METI) and thereby depriving seafarers to do their Standards of Training, Certification and Watchkeeping, 1978 (STCW) convention mandated refresher, revalidation and upgradation courses to renew the certificates and licenses to sail.
10. No identified SOP: SOP is a set of procedures which is devised based on experiences, which would be able to describe the operations that occur on a regular basis in order to ensure that they are carried out correctly and consistently. The after effects of the COVID-19 pandemic has been unprecedented and human kind on a whole as probably had not seen a such kind of devastation in ages to come. The entire world is grappling and still trying their best for finding concrete fool proof solutions to overcome this deadly virus. The situation has been very fluid and has

been changing dynamically, hence the human kind is not equipped with ready-made SOPs to deal with such situations and so is the maritime industry which is not an exception and doesn't have any identified SOP to deal with crew change during such fluid changing situations globally.

11. Reliever's unavailability: Seafarer's unavailability to relieve the onboard seafarers is due to multiple factors such as expiry of crew certificates due to closure of METI's, non-conduct of assessments and examinations by maritime administrations due to closure of assessment and examination centres, closure of medical clinics for doing pre joining medicals and fear factor among seafarers to join back in such chaos situations prevailing globally.
12. Increase in crew change cost: Crew change cost has increased many folds during pandemic due to extra expenses being incurred due to quarantine requirements, hotel stay, travel with chartered flights, multiple COVID-19 testing and deviation of ships to convenient ports / anchorages etc.
13. Airports shut and airlines banned: Commercial airlines were banned from operations and airports were shut for a brief during the initial outbreak of the pandemic and this severely affected the crew change as the seafarers frequently travel internationally for effecting crew change.
14. Seafarers travelled great distances by road: RPSL companies were forced to move their seafarers by road by individual cars or taxis from their place of residence to the ports where their ships or airports for boarding chartered flights as commercial airlines were banned as due to lockdown public transport such as rail, public buses etc. were stopped. The seafarers had to travel great distances crossing various districts and states with special permission passes to transit borders.
15. Each State having different protocols: Each State have their own entry requirements such as social distancing, wearing Personal Protective Equipment's

(PPEs) as overalls, suits and facial masks etc., and seafarers transiting such different State borders did require a certain set of protocols to be followed and each State had different protocols at different times having different severity.

16. Pre-employment medicals and closure of medical clinics: STCW chapter I - Regulation I/9 mandates that every seafarer who is serving at sea is required to hold a valid medical certificate issued in accordance with the provisions and section A-I/9 of the STCW Code. Lockdown and closedown of medical clinics have directly affected the seafarer's as they are not able to do their pre-employment medical and are not in possession of medical certificates to board ships.

4.3 Repatriation - Initiating and innovativeness

This theme captures the participants' experiences the steps and processes encompassing the challenges faced during pandemic for attaining satisfactions.

The participants were able to clearly identify the steps and processes initiated by Government for facilitating crew change and are enlisted below in priority order as: Creation of COVID-19 cell & 24 x7 assistance, issuing e-passes to seafarers to travel, issued large number of advisories, issued SOP for crew change, meetings with stakeholder to formulate circulars, anchorage permissions for crew change, arranged chartered flights, liaison with various other Government agencies, declaring seafarers as essential service, devises air bubble pacts, anchorage permissions for crew change, COVID-19 vaccination for crew members, extended validity of seafarer COCs/COPs.

The below two statements made by Government officials from DG Shipping and health ministry respectively do illustrate the steps taken by Indian maritime administration to avert the global humanitarian crisis of crew change.

Following statement by a senior Government official from DG Shipping, concisely illustrates the steps and processes initiated by Government of India for crew change:

“Well, if this has to be summed up in 2 phrases, it would be coordination with Government Departments and involvement of stakeholders: 1. DG Shipping took intensive inputs & consultations from stakeholder to provide SOPs in an advent to fight against COVID-19. 2. DG Shipping received communications via emails, tweets / letters of more than 2000 Maritime Stakeholders and took swift responsive action to facilitate their needs by conducting online meetings with those concerned and also issuing several orders, circulars & notices for smooth crew change. Simultaneously launching an e-pass utility enabling interstate smooth transition of seafarers from shores to ships.”. (Respondent 2: Sr. Government official)

Similarly, the following statement by a senior health ministry official, do highlights the steps and processes initiated by Government of India for crew change considering the health policies put in place:

“Government of India and DG Shipping Mumbai was able to come to the assistance of stranded crew members by issuing necessary advisories, SOPs in accordance with MoHFW and MHA directives and guidelines. The DG shipping facilitated in crew change in various ports in India. DG shipping also assisted in ensuring e-pass to enable crew members to cross state borders. DG shipping also assisted in the Covid 19 vaccination for crew members to join ships by including them as key workers providing essential services.” (Respondent 4: Sr. Government health ministry official)

The series of initiating steps, innovativeness and efficient co-ordination by Indian maritime administration with all applicable agencies as depicted in the figure 9 were instrumental in providing relief to a large number of seafarers as this was noticed by the positive responses received from respondents and also the same is endorsed by the statistics provided vide DG Shipping circular (DGS Circ, 2021), where it is statistically evident that a very large number of seafarers are engaged and repatriated during pandemic times.

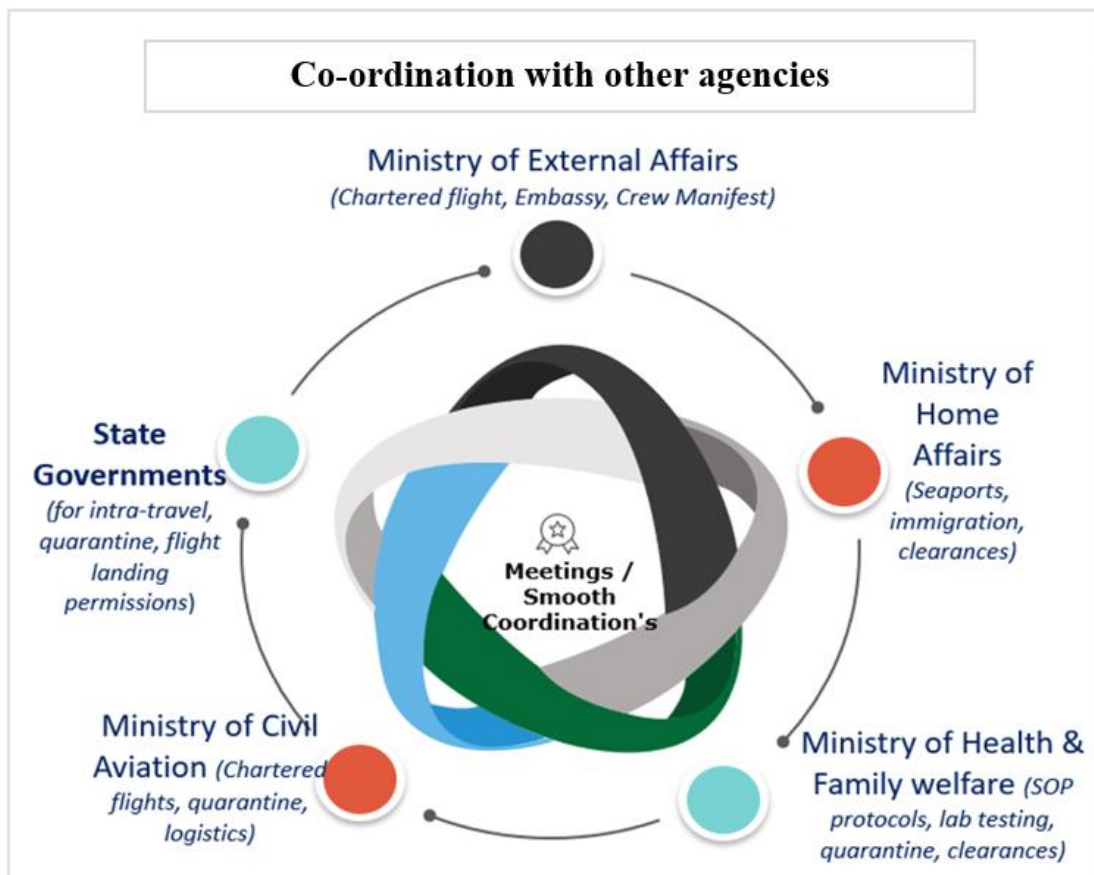


Figure 9 - DG Shipping co-ordination with other agencies

One of the important aspects of the Indian government's public administration has been public health policy formulation and implementation through the National Health Policy (NHP) with focus on the “Health in All” approach. India's health, healthcare system and human security have all been severely impacted by the ongoing COVID-19 pandemic and hence the Indian government has taken several combating steps on a war-footing level in order to prevent the pandemic from spreading further and to prepare the country for future health emergency-like situations (Gauttam et al., 2021).

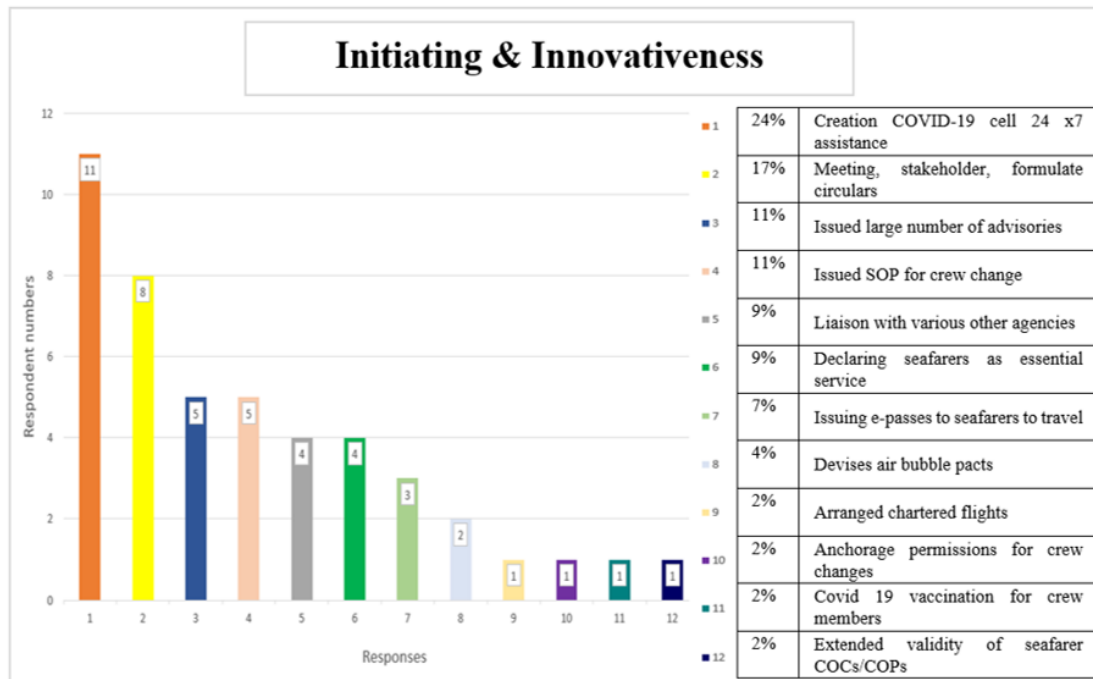


Figure 10 - Bar chart representing initiating & innovativeness

As indicated in above figure, a 24 % of respondents (11 responses) have indicated that the “creation of dedicated COVID-19 cell” and 24 x 7 round the clock assistance provided by the COVID-19 cell as the key step by the Government of India which facilitated crew change smooth. 17% of respondents (8 responses) endorsed that the “issuing of e-passes for seafarers” to travel unrestrictedly, 11% of respondents (5 responses) indicated the “issuing a large number of advisories”, 11 % of respondents (5 responses) indicated issuance of “SOP for crew change” and 9 % (4 responses) also endorsed the “meetings with stakeholder to formulate circulars” as chief steps taken by Government of India for ensuring efficient and smooth crew change. The other associated challenges and issues are also depicted percentage wise above in the graphical chart.

4.4 Repatriation - Improvising and enhancing services

This theme captures the participants' experiences which were visible to them and actually did enhance their experiences during pandemic period.

The participants were able to identify and were able to precisely highlight where they noticed that the Government was ready and expecting changes, improvising and enhancing as per situation demands for facilitation of crew change and these are enlisted in priority order as following: dynamic SOPs for crew change, systematic SOPs for crew change, e-pass module, seafarers-chartered flights, readiness to deal with unexpected challenges, stranded seafarer's data module, inputs from stakeholders and roll out of COVID-19 vaccination module.

The statement stated below by a senior Government official from DG Shipping, concisely illustrates the improvisation and enhancing steps taken by Government of India for facilitating crew change:

“The experience of DG Shipping, Ministry of Ports, Shipping & Waterways since the past one and half year has given a great deal of experience in dealing with the unexpected challenges. With this experience I am confident that we will take every step for ensuring smooth crew change be it orders / circulars / or be it handling requests from seafarers, stakeholders or framing regulations etc.” (Respondent 2: Sr. Government official)

The following statement by a senior ship-owner's association representative highlighted below, states the experience of stakeholders were improvisation and enhancing steps by Government of India were noticed during crew change:

“The SOPs for crew change promulgated by DG Shipping were top class and were spot on. They identified the difficult areas, they pointed out / stated out as what was to be done, when it has to be done, who will do it and didn't not leave anything to chance or interpretation. They gave enough leeway for the crew managers and the

seafarers to adapt to those SOPs. The SOPs were so good that we have found that some of the countries have adopted our crew change SOP to suit their own needs but we could very well identify that those adopted SOPs were inspired by our Indian SOPs.” (Respondent 7: Sr. ship-owners association rep.)

The aforesaid two statements made by Government official from DG Shipping and ship-owners association representative respectively do illustrate that the Government of India was ready to face the unexpected and on the same time steps were taken to improvise and enhance the applicable processes and procedures for crew change. The series of orders and amended SOPs issued by the DG Shipping is testament to the improvisation and improvements done by the Government to enhance the crew change experiences for the seafarers during pandemic times.

The below graph indicates that 92 % of respondents (25 responses) have identified as SOPs issued by the DG Shipping was dynamic in nature as was appropriately improved and amended as per the changing needs of the stakeholders. The dynamic nature of SOP means that in a manner characterized by constant change, activity or progress due to frequent changes in border control requirements of countries due to pandemic. 36% of respondents (9 responses) have endorsed that the SOPs were also systematic that it is methodical and prepared according to a fixed plan or system for usage by stakeholders.

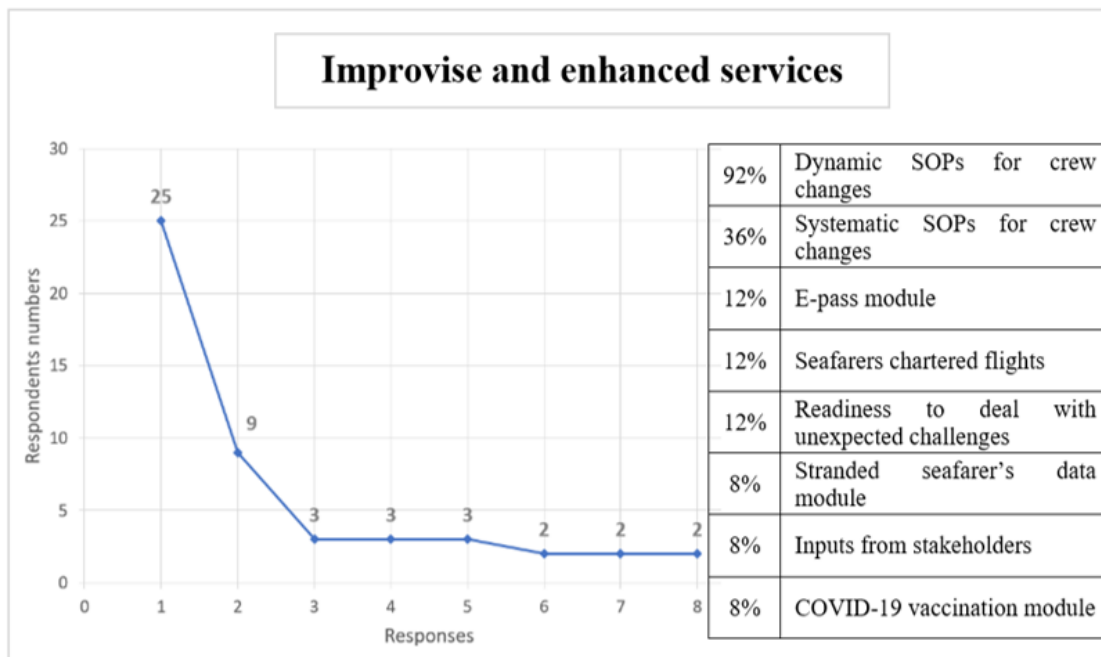


Figure 11 - Graph representing improvisation and enhancement of services

The Indian maritime administration developed a user-friendly e-pass module i.e., the electronic travel pass module for quick and easy online issuance of e-passes for seafarers to travel unrestrictedly during lockdown via road for signing-on ship from seafarers' residence or while signing-off from port / airport to reach seafarers' residence. The said module was available for RPSL companies and shipowners to apply and obtain e-passes online for seafarers and the procedures and guidelines for applying for such e-passes were detailed in DG Shipping SOP for crew change.

A 12% of respondents (3 responses) concurred that the entire seafarers-chartered flights processes were improved and enhanced to serve the seafarers travel need and also a 12% of respondents (3 responses) agreed that the Government was in state of readiness to deal with unexpected challenges. The other associated factors endorsing the Government improvisation and enhancing capabilities are also depicted percentage wise in the graphical chart above.

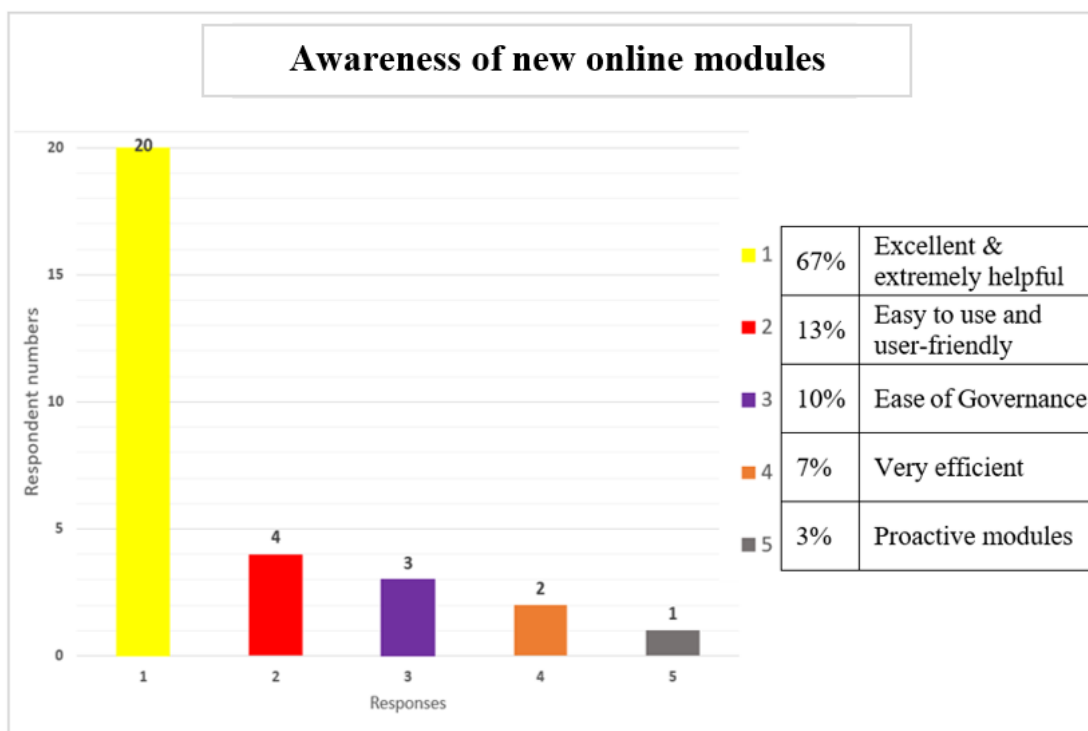


Figure 12 - Graph representing awareness of online modules among stakeholders

The research survey results as indicated in the aforesaid chart indicates that the stakeholders such as RPSL companies, seafarer unions and seafarers were all aware about the new online modules created by Government of India to facilitate crew change during the pandemic as all the concerned stakeholders as 100% of respondents are happy with modules whereby out of which a 67% of respondents (20 responses) have rated these new modules as excellent and extremely helpful, 13 % of respondents (4 responses) endorsing these modules as easy to use and user-friendly, 10 % of respondents (3 responses) emphasised that these modules did helped for ease of governance, with 7 % of respondents (2 responses) rating the Government introduced modules as efficient and 3% of respondents (1 response) stating these modules as proactive measures.

4.5 Repatriation - Supportiveness and helpfulness

This theme captures the participants' views on the supportiveness and helping hand they received from Government of India, RPSL companies and seafarer unions with each other, while experiencing the crew change during pandemic period.

The participants were able to identify and report their satisfaction level by expressing excellent support, very good support and satisfactory support to the supportiveness and helping hand provided by Government of India. Similarly, the participants were able to grade RPSL companies support as excellent support, morale support only and satisfactory support. Also, the participants graded the performance of seafarer unions as excellent support, morale support only, satisfactory support and not aware of any support provided.

The below mentioned three statements made by rating seafarer, senior master and ship-owners association representative respectively do illustrate that the support provided by all stakeholders viz. the Government of India, RPSL companies and seafarer unions have been above par and this resulted in a large number of Indian seafarers being able to sign-on and sign-off from ships during pandemic times.

The statement stated below by an active sailing rating seafarer, concisely illustrates the support and appreciation of Government of India for facilitating crew change:

“Yes, it was highly appreciated and we are all very thankful because Government of India and DG Shipping started chartered flights as you know that commercial flights were banned, so DG Shipping with the help of Ministry of Civil Aviation started the chartered flights exclusively for seafarers to transfer and relive the onboard crew. It was very good gesture by Government of India, I went through charter flights from Delhi to Brazil and relived ship's crew, it was very appreciated.”
(Respondent 16: Seafarer - Bosun)

The following narratives by an active seafarer cum senior Master mariner does clearly highlights the support and help provided by RPSL companies for facilitating and

ensuring smooth crew change during pandemic times when the ground realities were very fluid and unexpected changes were expected anytime:

“Support provided by my RPSL company was very good, very effective & with full transparency. While I was signing off, I was fully aware about the requirement which I need to comply during my sign off from the vessel, during my transit flights & also coming back to the country. In addition to the same office always provided us with the contact details of the travel agents, booked our flights, so that we use their services in case of any emergencies for rescheduling of the flights after advising appropriate. As I signed off from USA, which was open for crew change & also the local regulations supported signing on & off of seafarers, the formalities of the crew change by carried out without any difficulties. As for the safety of the travellers & the crew office arranged a rapid RTPCR test prior to travel so that it can be confirmed the staff are safe & can travel without any difficulties during their travel.”
(Respondent 10: Seafarer - Master Mariner.)

The statement stated below by a senior ship-owners association representative aptly describes the morale support and services provided seafarer unions for facilitating crew change during the pandemic period:

“The seafarer unions during this time tried their best in trying to resolve the crew change crises by appealing to various governments and authorities to permit crew change. They also went to the extent to pacify on board seafarers to continue sailing despite their contracts being completed.” (Respondent 5: Sr. ship-owners association rep.)

The survey results as indicated below chart, indicates that the Government of India did exemplary work during the pandemic to facilitate the crew change by providing good support to all concerned stakeholders as 100% of respondents are happy with support whereby out of which a 28% of respondents (7 responses) have rated these services as

excellent support, 48 % of respondents (12 responses) as very good support and 24% of respondents (6 responses) as satisfactory support.

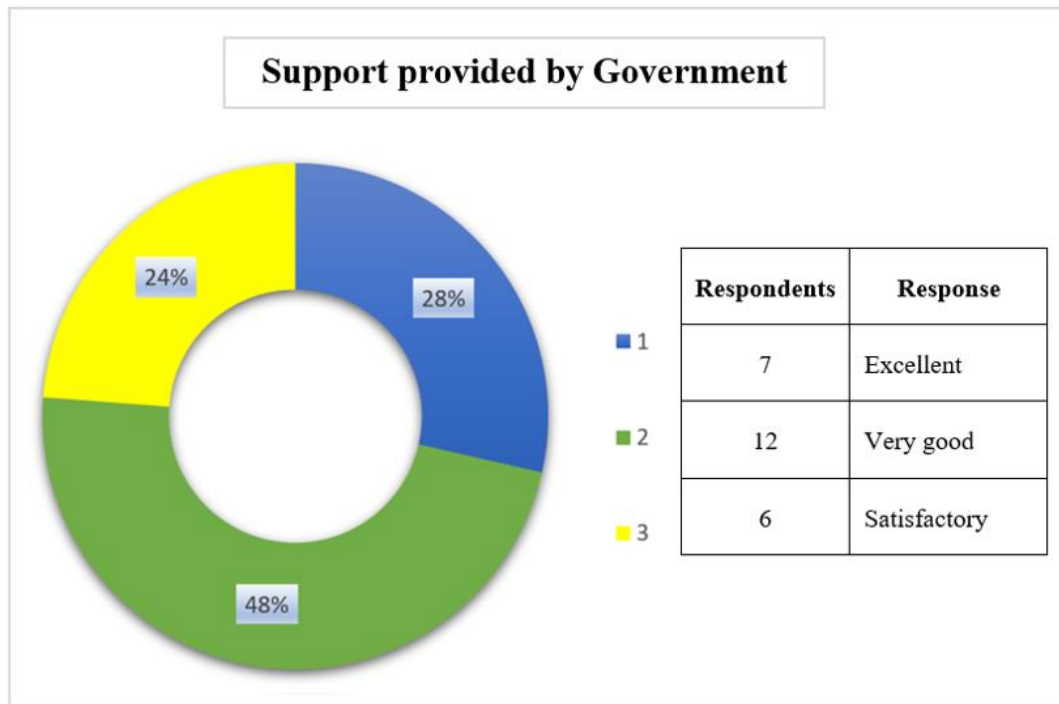


Figure 13 - Pie chart representing support provided by Government

As indicated in the below pie-chart, the survey results indicate that the RPSL companies did exemplary work during the pandemic to facilitate the crew change by providing good support as a 56% of respondents (14 responses) have rated these services as excellent support, 12 % of respondents (3 responses) as morale support and 32% of respondents (8 responses) as satisfactory support.

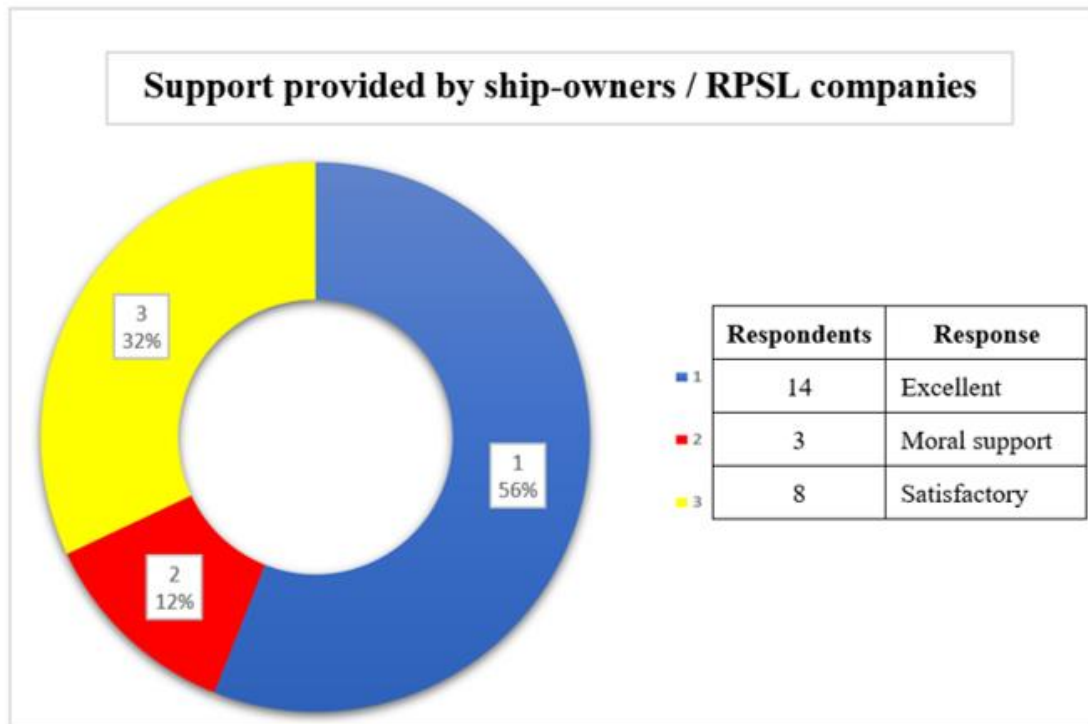


Figure 14 - Chart representing support provided by ship-owners / RPSL companies

As depicted in the below pie-chart, the survey results indicate that the seafarer unions did their part during the pandemic to facilitate the crew change by providing support as a 16% of respondents (4 responses) agreed that they did appeal to various agencies to facilitate crew change, 20% of respondents (5 responses) stated as only morale support provided, 40% of respondents (10 responses) have stated as satisfactory support and whereas a significant 24% of respondents (6 responses) have reported to be not aware or not have approached to seafarer unions for support as they were supported by their RPSL companies.

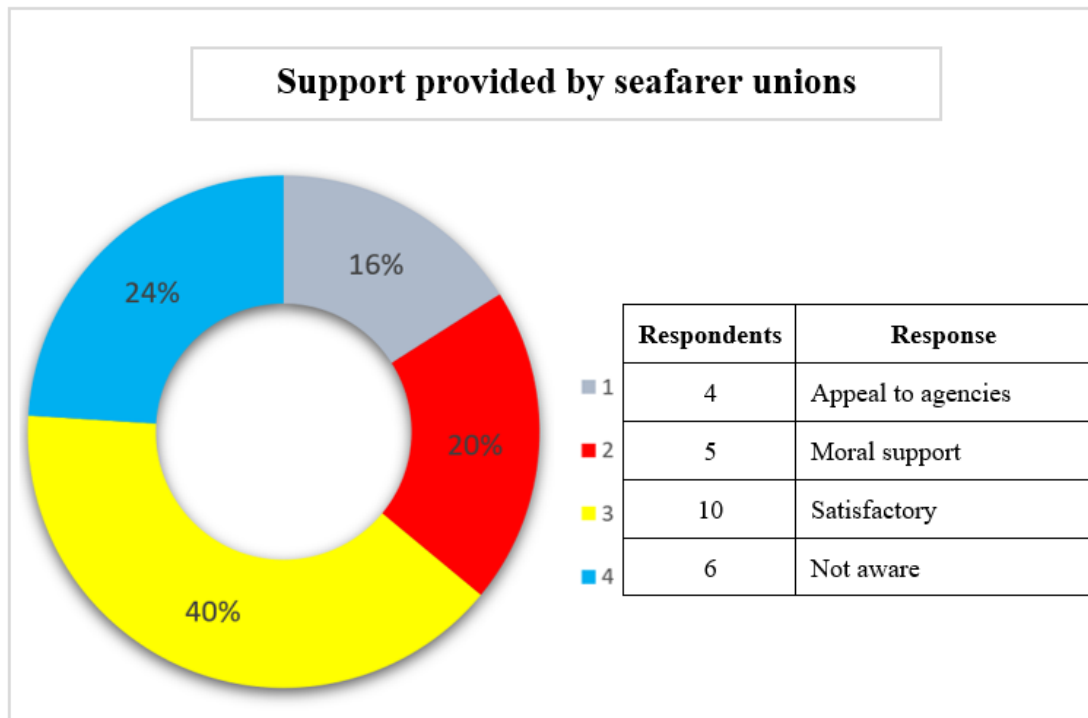


Figure 15 - Pie chart representing support provided by seafarer unions

4.6 Repatriation - Approaches and theories

This theme expresses the participants' essential features encompassing the approaches and theories succinctly adopted by the Government while adopted the policies to facilitate the crew change during pandemic.

The participants from Government were able to identify the approaches and theories as the consultation of policies with all the stakeholders, all brought together in a table discussed, deliberated and with inputs / feedbacks, public policies such as SOPs were adopted by Government for facilitating crew change. The main aim and approach while preparing such public policies was always considering the "welfare" as top priority for the crew members on board the ship.

The statements made by a senior Government official from DG Shipping as highlighted below, concisely illustrates the approaches and theories adopted by Government of India for crew change:

“I am not aware about the approaches, theories etc. which were adopted for creating the public policies such as DGS orders with relevant SOPs. But I can tell you as to what we did was whatever policies we created was always with the consultation of all the stakeholders. First was to identify all the concerned stakeholders i.e., the Governmental agencies, non-Governmental agencies, seafarer unions, RPSL, shipowner’s association, port terminal operators, shipping agents, medical doctors etc. and they were all brought together in a table and these issues were discussed, deliberated and with inputs / feedbacks, these public policies such as SOPs were devised for the benefit of the seafarers.” (Respondent 2: Sr. Government official)

The following statement by a senior health ministry official stated below, also do highlights the approaches and theories adopted by Government of India for crew change considering the health protocols put in place:

“The main approach while preparing DG shipping orders was the welfare of the crew members on board the ship as they were not allowed to disembark for many months due to Covid 19 restrictions. As soon as the restrictions were eased, DG shipping authorities allowed sign on/sign off of crew members from ports. Keeping the ship and crew members healthy while seeking inputs from all stakeholders following all Covid 19 protocol was relevant while making orders for crew change. Cochin Port specific SOP and Public Health Emergency Contingency plans were strictly implemented in Cochin Port.” (Respondent 4: Sr. Government health ministry official)

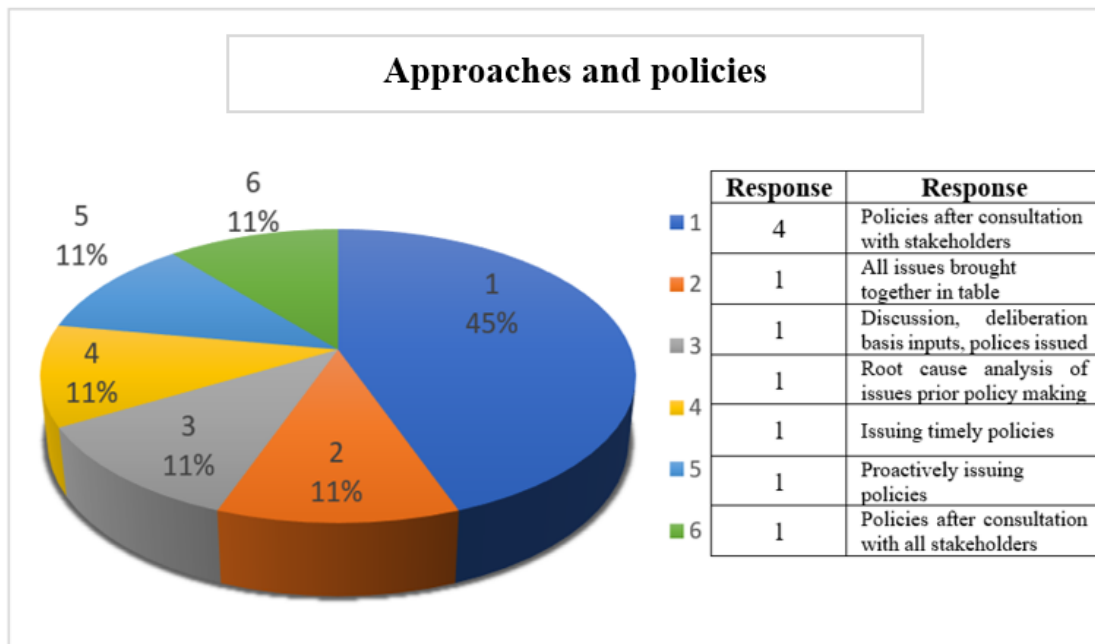


Figure 16 - Pie chart representing approaches and theories adopted

As indicated in the aforesaid pie-chart, the survey results indicate that the approaches and theories applicable for adoption of public policies remains as 45% of respondents (4 responses) responding that public policies were devised after consultation with all stakeholders, while 11% of respondents (1 response) stated as all issues brought together in consultation table prior policy issuance, 11% of respondents (1 response) have stated as discussion, deliberation basis inputs and feedback on issues and then issuance of policies, 11% of respondents (1 response) have stated regarding root cause analysis of issues prior policy making, 11% of respondents (1 response) have stated regarding timely issuance of policies and whereas 11% of respondents (1 response) have reported about proactive approach of issuance of public policies.

4.7 Pandemic effect in shipping

The global economy is heading for an impending economic crisis and recession as a result of the outbreak of COVID-19. Which has resulted in restrictions and leading to new norms such as social distancing norms, wearing masks, self-isolation, travel

restrictions and vaccination protocols etc. This has resulted in workforce reductions across all economic sectors and closure or partial closure of many industries including the associated maritime industries.

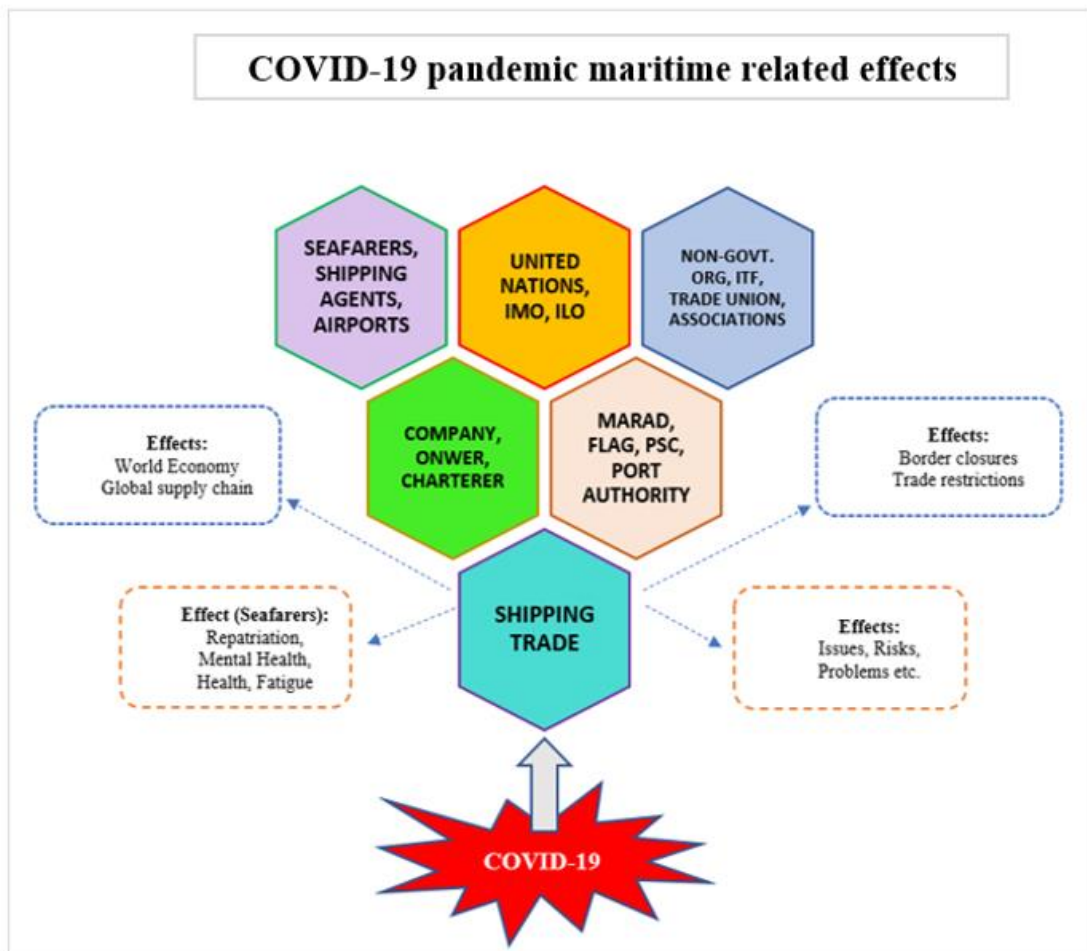


Figure 17 - Illustration of COVID-19 effects on shipping trade

Figure 17 depicts an illustration the COVID-19 pandemic catastrophic effects to the world including the maritime sector as such.

In order to limit and slow the spread of the infections, countries went into lockdown and closed their borders barring few essential services. The global shipping trade consists primarily of the export or import of essential commodities such as medical

supplies, vital foods, energy, and raw materials, among others., hence essentials were continued to maintain the supply chain through shipping regardless of the circumstances. But COVID-19 did result in partial closure of airports and seaports with limitations in air and maritime traffic. The smooth flow of maritime traffic was disrupted and effected the cargo loading, unloading, crew embarking and disembarking, imposition of stringent quarantine requirements and in some ports even refusal of port entry and bunkering due to national and local restrictions concerning ship operations.

As ships were continuously trans bordering between countries for trade and for delivery of vital commodities, hence the ports were acting as linkages between ships and countries as there were bound to interact with port personnel's, thereby posing serious risk of contracting COVID-19 to not only seafarers onboard but to port related personnel's such as pilots, shipping agents, stevedores, ship chandlers, ship surveyors, port authorities, audit surveyors, Port State Control inspectors, Flag State inspectors, health, customs and immigration officials etc.

In order to ensure smooth running of trade, it is imperative that seafarers' take every precaution during the pandemic to avoid spread of infections and continue performing their duty. The seafarers can't continue to perform their duties for unlimited period onboard without being relieved after completion of their contractual or else fatigue would set in and which may adversely affect the safe operations of ships. Seafarers' do work under different and extreme conditions and ILO under MLC 2006 has stipulated requirements in Seafarers Employment Agreements (SEA) and Collective Bargaining Agreement (CBA) regulating the repatriations of seafarers upon completion of contract which is agreed as 11 months as the maximum length of seafarers' contracts.

IMO and other organizations have urged governments to intervene and support crew change because the challenges of repatriation and crew change have a significant

impact on the shipping industry. The UN Secretary-General has taken up the issue and reiterated this in the message during World Maritime Day on 24.09. 2020 while emphasizing the gravity of the situation and the growing humanitarian and safety crisis facing seafarers around the world, and urging all countries to formally designate seafarers and other marine personnel as "key workers" and ensure crew changeovers.

To ensure the timely and smooth repatriation of seafarers a close synergy is required between all the concerned parties - seafarers, manning companies, agents, maritime administration, flag State, port authority, local government, health authorities, immigration, customs and airports etc. Moreover, other international agencies like IMO, ILO, WHO, ITF etc. must support by issuing necessary circulars with best practices based on experiences for the maritime administrations to improve and facilitate crew change.

Considering the above, it is imperative that the repatriation of seafarers should be continued to avert the humanitarian crisis and thereby the world logistical trade would continue to flourish. The research outcome highlighting the challenges, issues and innovative methods adopted by agencies for facilitation of crew change would be analysed in detail in the subsequent sections as themes.

4.8 Chapter summary

Finding effective and efficient solutions with viable recommendations for ensuring smooth repatriation of seafarers globally to continue and ensure the smooth operation of trade as it is critical that seafarers take all necessary precautions during the pandemic to prevent infection spread and continue performing their duties. Seafarers cannot continue to perform their duties onboard for an indefinite period of time without being relieved after completing their contractual obligations, or else fatigue will set in, posing a risk to ship safety and environment at large.

Therefore, the research study by way of interviews from stakeholders provided challenges, issues and problems faced by stakeholders during crew repatriations and the subsequent solutions in way of approaches and theories adopted for public policies, the steps and innovativeness initiated by Government agencies to improvise and enhance the crew change experience to seafarers by providing necessary support and helping hand have been analysed and explored.

Chapter 5: Conclusions and recommendations

5.1 Overview

COVID-19 disrupted human activity on a very large scale and seafarers were no exception. The pandemic's impact on seafarers is a serious concern globally as the pandemic-related travel bans and restrictions imposed by almost every country has had a significant impact on seafarers. As the situation deteriorated, a very large number of seafarers got struck and stranded on ships and were barred from returning to ships to earn a living or return home.

The biggest casualty in COVID-19 so far have been the seafarers' as they have been entrapped in ships due to compounding reasons as Governments around the world have banned international flights, closed borders, ports, airports, imposed travel restrictions, with lockdown and curfews including closure of passport offices and consulates, strict border control measures such as rigorous multiple COVID-19 testing protocols and strict institutional quarantines as per health protocol requirements and also seafarers' not being granted travel exemptions to have unrestricted travel during lockdowns as many countries have not yet declared seafarers as key workers which has further complicated seafarers movement.

A large number of seafarers have been unable to return home as their relievers were unable to replace them onboard ships due to travel restrictions has made crew change difficult because of the various aforesaid reasons. As a result, seafarer report that they had to extend their onboard contract beyond the contractual limits against their will and wish for months and thereby forcing them to stay on board for longer tenures and depriving them to get reunited with their families.

COVID-19 has altered present efforts and will continue to evolve as it will provide newer means of preserving seafarer rights. These extreme catastrophic events such as COVID-19, do often provide a window of opportunity and acts as a blessing in disguise and it leads into identifying and understanding right dynamics that otherwise

goes usually unnoticed in normal times. Hence, this study reveals the scale of the challenges and solutions provided for crew repatriation during COVID-19 pandemic times for ensuring seafarer rights.

5.2 Conclusions

The study revealed that the repatriation crisis handled by Indian maritime administration seems to be on right track as the participant seafarers have expressed their experiences and satisfaction towards the relief work carried out by the Government of India, their RPSL company and seafarer unions.

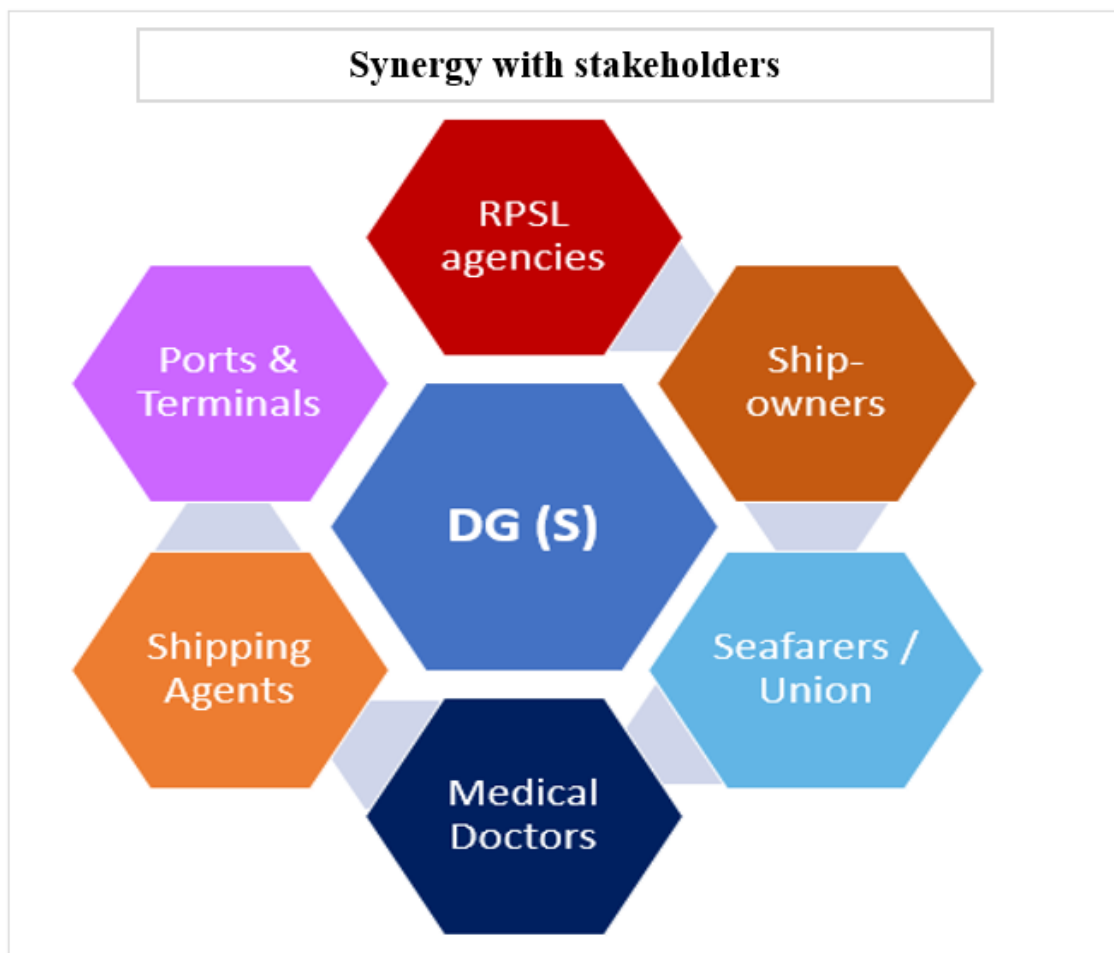


Figure 18 - Maritime administration synergy with stakeholders

As depicted in the figure above, the Indian maritime administration had a good synergy with all stakeholders such as ship-owners, RPSL agencies, seafarer unions, medical doctors, shipping agents and ports to facilitate the crew change.

Basis the participants sharing of their experiences of challenges, issues and problems faced for crew change are co-related and enlisted against the steps and assistances provided by Government of India, ship-owners, seafarer unions and RPSL companies in a tabular representation below as “provided solutions” to facilitate crew change:

SN	Challenges and issues	Provided solutions
1	Quarantine requirements (Governments imposing strict quarantine norms at border check points with quarantine stay requirement varying)	<ul style="list-style-type: none"> - Dedicated COVID-19 cell for 24 x7 assistance - Regular meetings with stakeholder to issue necessary advisories and circulars - Issuance of dynamic SOPs for crew change detailing quarantine requirements - Readiness to deal with unexpected challenges
2	Lockdown (Shutdown and closures imposed by Government to contain the spread of COVID-19 except the permissions for movement of essential goods)	<ul style="list-style-type: none"> - Designate seafarers as key workers in order to get necessary exemption from specific COVID-19 related travel restrictions and thereby allowing them for unrestricted travel during lockdown to join or signoff from ship - Deployment of user-friendly e-pass modules for quick and timely issuance of e-passes to seafarers for unrestricted travel during lockdowns - Deployment of stranded seafarer’s data module so to enable seafarers to upload their details and air their grievances with location as to where being struck as this would enable authorities to identify seafarers struck and their locations to take necessary further actions such as to devise strategies for chartered flights for such locations, diplomacy channel discussion with counterpart countries for assistance on repatriation through grant of necessary exemptions etc.
3	Multiple COVID tests (Governments and shipowners imposing multiple negative coronavirus test report for seafarers prior boarding ships)	<ul style="list-style-type: none"> - Dedicated COVID-19 cell for 24 x7 assistance - Regular meetings with stakeholder to issue necessary advisories and circulars

		<ul style="list-style-type: none"> - Issuance of dynamic SOPs for crew change detailing quarantine requirements and COVID testing requirements for various countries and ports
4	Restriction of movement (Free passage and movement of seafarers being restricted due to lockdown and curfews)	<ul style="list-style-type: none"> - Designate seafarers as key workers in order to get necessary exemption from specific COVID-19 related travel restrictions and thereby allowing them for unrestricted travel during lockdown to join or signoff from ship - Deployment of user-friendly e-pass modules for quick and timely issuance of e-passes to seafarers for unrestricted travel during lockdowns
5	Frequent change of regulations (Situations being fluid and changing dynamically has forced Governments to bring frequent change to the requirements having different protocols at different times having different severity)	<ul style="list-style-type: none"> - Dedicated COVID-19 cell for 24 x7 assistance - Readiness to deal with unexpected challenges - Close liaison with various other Government agencies - Regular meetings with stakeholder to issue necessary advisories and circulars - Issuance of dynamic SOPs for crew change detailing quarantine requirements and COVID testing requirements for various countries and ports
6	Border closures: (Governments closing their borders to restrict the traveller's entry into their country and changing entry requirements at very short notice)	<ul style="list-style-type: none"> - Dedicated COVID-19 cell for 24 x7 assistance - Close liaison with various other Government agencies - Government through diplomatic channels should discuss with other countries for acceptance of Seafarers Identification Document (SID) as a valid travel document for seafarers signing-on and signing-off ships and give special exemptions for unrestricted travel even during lockdown and border closures
7	Tighter travel restrictions: (Governments imposing tighter travel restrictions while banning most international travel while new rules are introduced often in short notice such as negative coronavirus test, quarantine etc.)	<ul style="list-style-type: none"> - Dedicated COVID-19 cell for 24 x7 assistance - Readiness to deal with unexpected challenges - Close liaison with various other Government agencies - Regular meetings with stakeholder to issue necessary advisories and circulars - Issuance of dynamic SOPs for crew change detailing quarantine requirements and COVID testing requirements for various countries and ports - Government through diplomatic channels should discuss with other countries for acceptance of SID as a valid travel document for seafarers signing-on and signing-off ships and give special exemptions

		for unrestricted travel even during lockdown and border closures
8	Consulates shut: (Lockdown resulting in closure of consulates have created hurdles for seafarers in obtaining visas or travel permits to transit countries or join a ship in port in a country or even to enter their own home countries)	- Government through diplomatic channels should discuss with other countries for acceptance of SID as a valid travel document for seafarers signing-on and signing-off ships and give special exemptions for unrestricted travel even during lockdown and border closures
9	Expiry of crew certificates: (Shutdown and restrictions resulting in closure of METIs and hence depriving seafarers STCW convention mandated refresher, revalidation and upgradation courses to renew the certificates)	- Regular meetings with stakeholder to issue necessary advisories and circulars - Issuance of dynamic SOPs for METIs to operate and conduct training courses through physical mode, blended learning mode or through online mode teaching - Adopt practical and pragmatic approaches and extend validity of seafarer COCs / COPs as applicable and possible
10	No identified SOP: (No standardised SOP being available for crew change during the pandemic as the situations have been very fluid and basis experience the SOPs are evolved)	- Regular meetings with stakeholder to issue necessary advisories and circulars - Issuance of dynamic and systematic SOPs for crew change detailing specific requirements during COVID-19 pandemic
11	Reliever's unavailability: (Seafarer's unavailability to relieve the onboard seafarers is due to multiple factors such as expiry of crew certificates, closure of METI's, non-conduct of assessments and examinations, closure of medical clinics etc.)	- Regular meetings with stakeholder to issue necessary advisories and circulars - Issuance of dynamic SOPs for METIs to operate and conduct training courses through physical mode, blended learning mode or through online mode teaching - Issuance of dynamic SOPs for assessment and exam centres to operate and conduct assessments and examinations courses in controlled physical mode or through online mode - Adopt practical and pragmatic approaches and extend validity of seafarer COCs / COPs as applicable and possible
12	Increase in crew change cost: (Crew change cost has increased many folds during pandemic due to extra expenses being incurred due to quarantine requirements, hotel stay, travel with chartered flights, multiple COVID-19 testing and	- Regular meetings with stakeholder to issue necessary advisories and circulars - Issuance of dynamic and systematic SOPs for crew change detailing specific requirements during COVID-19 pandemic so as to allow shipowners to make necessary preparations in advance to reduce

	deviation of ships to convenient ports/anchorages etc)	cost and encourage ship-owners to deviate ships for crew change - Allow crew change in convenient close by anchorages by issuing necessary SOPs for the same
13	Airports shut: (The banning of commercial airlines operations and airports closure for a brief during the initial outbreak of the pandemic, affected crew change as the seafarers couldn't travel)	- Government through diplomatic channels discuss with other countries for acceptance of special air bubbles pacts between countries for flights with strict SOPs - Arrange special seafarer special chartered flights between countries having air bubble pacts
14	Seafarers travelled great distances: (RPSL companies were forced to move their seafarers by road by individual cars or taxis from their place of residence to the ports where their ships or airports for boarding chartered flights as domestic commercial airlines were banned due to lockdown including public transport such as rail, public buses etc. were stopped)	- Designate seafarers as key workers in order to get necessary exemption from specific COVID-19 related travel restrictions and thereby allowing them for unrestricted travel during lockdown to join or signoff from ship - Regular meetings with stakeholder to issue necessary advisories, circulars & SOPs including the detailed mode of travel by roads - Deployment of user-friendly e-pass modules for quick and timely issuance of e-passes to seafarers for unrestricted travel during lockdowns
15	States having different protocols: (States having their own entry requirements such as social distancing, wearing PPEs as overalls, suits and facial masks etc., and seafarers transiting such different State borders did require a certain set of protocols to be followed)	- Regular meetings with stakeholder to issue necessary advisories, circulars & SOPs including the detailed mode of travel by roads - Issuance of dynamic and systematic SOPs for crew change detailing specific requirements during COVID-19 pandemic so as to allow shipowners to make necessary preparations in advance and be prepared with alternatives
16	Pre-employment medicals: (STCW mandates seafarers serving at sea to hold valid medical certificate and lockdown have affected the closure of medical clinics which has directly affected the seafarer's as they are not able to do their pre-employment medical and are not in possession of medical certificates to board ships)	- Designate seafarers as key workers in order to get necessary exemption from specific COVID-19 related travel restrictions and thereby allowing them for unrestricted travel during lockdown for doing pre-joining medicals - Deployment of user-friendly e-pass modules for quick and timely issuance of e-passes to seafarers for unrestricted travel during lockdowns
17	Closure of medical clinics (Lockdowns have reflected in closedown of medical clinics, which have directly affected the seafarer's	- Designate seafarers as key workers in order to get necessary exemption from specific COVID-19 related travel restrictions and thereby allowing

	as they are not able to do their pre joining employment medicals)	them for unrestricted travel during lockdown for doing pre-joining medicals - Deployment of user-friendly e-pass modules for quick and timely issuance of e-passes to seafarers for unrestricted travel during lockdowns - Grant special exemptions for permitting medical clinic staffs to open clinics during lockdowns to carry out pre-joining medicals for seafarers - Allow and facilitate maritime administration approved medical examiners to vaccinate seafarers in their approved medical clinics - Deployment of vaccination online module facilities for quick and easy issuance of vaccination digital certificates for seafarer's post vaccinations
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COVID-19 related challenges and possible corresponding solutions for ensuring smooth crew change - Table 3

5.3 Limitations in research

The COVID-19 pandemic travel restrictions have been a significant factor in the research process and data collection. There may be some possible limitations in this research as limited access to data and time constraints. As the research involve interviewing key stakeholders such as Government officials, RPSL companies directors, seafarer union representatives and seafarers who are generally very busy with their unpredictable work schedule and are always occupied with their respective functions and duties during the pandemic times and hence it was very difficult to get their opportune time for interviews and for getting proper responses, hence the research may have limited response from these respondents.

The researcher had limited access to the participants due to the COVID-19 travel restrictions and had to rely on the online mode for interviews such as zoom, skype etc. to get information from participants without visiting and physically meeting them. As a result, the body languages of the participants cannot be ascertained from close

quarters and hence it cannot be ascertained that the response were the actual depiction of the ground level scenes by the respondents.

The COVID-19 pandemic influence and time constraints have impacted the proposed research study and scope restricting it to Indian context only, hence the participants were chosen only from Indian geographical origin perspectives such as Indian maritime administration officials, Indian government officials, Indian ship-owners association representatives, Foreign ship-owners having Indian representatives in Indian offices, Indian seafarer union representatives and Indian seafarers only.

5.4 Recommendations

Prior to addressing any of the study's recommendations, the researcher would like to strongly emphasize the UN agencies, IMO's, ILO's, ITF's and other maritime industry bodies' pleas to States to recognize and designate seafarers as essential key workers in order to be exempted from specific COVID-19 related travel restrictions and also ensure that the seafarers have priority access to safe and early COVID vaccinations so that the crew change repatriation continues without hinderances.

The recommendations that follow are outlined on the basis of interviews of 25 participants containing all the stakeholders involved in the crew change during successful repatriation of a large number of seafarers during pandemic period as a successful model may be adopted by other maritime and seafarer supplying nations:

1. Creation of dedicated COVID-19 cell as “nodal agency” for matter pertaining to crew change and empowering the cell with necessary powers to coordinate and give necessary directives to the various agencies such as central Government agencies, State Government agencies and non-Governmental agencies for matters related to crew change to facilitate quick decision support system.

2. The COVID-19 cell should be equipped with necessary infrastructure and resources to monitor the situations for providing continuous 24 x7 support and necessary assistance as required, be ready and equipped to deal with the unexpected challenges which may prevail due to the ever-unpredictable COVID-19.

3. States to recognize and designate seafarers as essential key workers in order to be exempted from specific COVID-19 related travel restrictions. Seafarers as key workers to be allowed to have access to the user-friendly online e-pass module deployed specifically for seafarers for quick and timely issuance of special e-passes to seafarers for unrestricted travel during lockdowns with the possession of e-passes.

4. The approach to “participatory decision-making” is at the core of political democracy related to public polices in India (Bidyut, 2012) as it promotes the involvement of ordinary seafarers who will be influenced by the decisions. Hence, the public polices such as issuance of DGS orders, SOPs, circulars and advisories for crew change by maritime administration during COVID-19 pandemic has to be based on “participatory decision-making” where regular meetings with stakeholder needs to be carried out to get the ground level challenges and issues as feedback from stakeholders to issue necessary orders, advisories and circulars.

5. Regularly issue systematic and dynamic SOPs considering all relevant factors and inputs basis the “participatory decision-making” approach and issue SOPs for stakeholders’ compliance and benefit by including the COVID-19 testing, travel, quarantine requirements for ports and countries, METIs to operate and conduct training courses through physical mode, blended learning mode or through online mode teaching, assessment and exam centres to operate and conduct assessments and examinations courses in controlled physical mode or through online mode etc.

6. To deploy user-friendly online “stranded seafarer’s data collection” module so to enable seafarers to upload their grievance details with location as to where being

struck. This will enable the concerned authorities to identify seafarers struck and their locations so as to take necessary actions such as make necessary diplomacy channel talks with such countries where seafarers are struck to provide assistance on repatriation through grant of necessary exemptions and by arranging special chartered flights to such locations for necessary repatriations.

7. Governments should use all available diplomatic channels to discuss with other countries for acceptance as seafarers as “key workers” and accept the SID as a “valid travel document” for their respective seafarers for signing-on and signing-off ships by giving special exemptions for unrestricted travel for transit or entry / exit in countries borders even during lockdown and border closures.

8. Maritime administrations are encouraged to take a pragmatic and practical approach by extending crew certificates, including medical certificates and endorsements as applicable, and notifying ships, seafarers, and relevant maritime administrations accordingly, as emphasized by IMO in circular letter No.4204/Add.5/Rev.1 (IMO Cir, 2020).

9. Governments to identify strategic key “outer anchorage” locations along the traditional shipping route where ship-owners would be encouraged to deviate and divert ships just for carrying out crew change at the strategic key outer anchorage locations as the deviation would be minimum and ship-owners can cut on cost and time.

10. Governments to allow, promote and facilitate crew change in the said convenient outer anchorages by having ease of governance policies in place by issuing necessary quick and easy permissions by streamlining all the processes involved in the crew change operations by issuance of necessary dynamic SOPs for the same.

11. Governments to initiate talks and through diplomatic channels discuss with other key destination countries for seafarers to travel, entry / exit and transit by accepting special air bubbles pacts between countries for special flights and or chartered flights with strict travel measured with SOPs. Also, take all necessary steps to facilitate and grant quick approvals for special seafarer-chartered flights between countries with having air bubble pacts.

12. Governments should grant special exemptions, permissions and facilitate maritime administration approved medical examiners and their associated medical clinic staffs to open and operate clinics during lockdowns so that they can carry out pre-joining medicals for seafarers uninterruptedly.

13. Governments to deploy and roll out special vaccination online module facilities for seafarers to be vaccinated. The vaccination online module should be deployed with quick and easy processes for issuance of vaccination digital certificates for seafarer's post vaccinations. Additionally, maritime administrations approved medical examiners may be also allowed to vaccinate seafarers in their approved medical clinics and issue necessary digital certificates to seafarers.

5.5 Scope for further research

COVID-19 is a unique global threat and ever evolving. Various international agencies such as IMO, WHO, ILO, ITF, ICS along with the maritime industry have been advocating the best practice plans to be adopted as protocols for crew change. However, it may be noted that the said set of protocols lays out only recommendatory general measures and procedures that Governments and all stakeholders should adopt as far as possible, in order to facilitate safe ship crew-change during the COVID-19 pandemic.

Each country is unique with its own diversities, issues and challenges and hence the said best practices plans and protocols in totality may not be applicable to many

countries. Government's world over has realised this and are making every endeavour to facilitate crew change and adopt best practices but yet the vulnerabilities still remain as still a large chunk of countries are grappling with their own set of challenges and problems as after effects of pandemic and the seafarer's relief and crew change issues are not on priority.

The full and long-term impact on the maritime industry, including seafarer rights, can be precisely determined and quantified once the pandemic subsides and the situation returns to normal. It is expected that many rules and regulations would need to be formulated and adopted by Governments once the COVID-19 reaches its logical conclusion.

India being one of the major seafarers supplying nation for the global maritime industry and the model approach adopted by India has been successful in crew change of a very large number of seafarers sailing on different ships worldwide as evident from the publicly available statistics (DGS Circ, 2021) and hence this research was concentrated specifically from an Indian perspective.

Further research study can be explored on the other major seafarers supplying nations such as Philippines, China, Indonesia, Russia, Ukraine etc. and the model crew change protocols approach adopted by the said countries in carrying out crew change during the pandemic period be studied and compared with each other.

There have been numerous developments and many more developments are expected to happen. The results and impacts of such developments on human beings in general and seafarers in particular is required to be gathered and further explored. Further research can be explored on such new developments to find better, safer and smarter ways of dealing with such crew change situations.

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Appendices

Appendix-1



Dear Participant,

Thank you for agreeing to participate in this research survey, which is carried out in connection with a Dissertation which will be written by the interviewer, in partial fulfilment of the requirements for the degree of Master of Science in Maritime Affairs at the World Maritime University in Malmö, Sweden.

The topic of the Dissertation is **“Analysis on the roles and responsibilities of Indian Maritime Administration to facilitate crew changes and repatriation of Indian seafarers during the COVID-19 pandemic”**

The information provided by you in this interview will be used for research purposes and the results will form part of a dissertation, which will be published online and made available to the public. Your personal information will not be published. You may withdraw from the research at any time, and your personal data will be immediately deleted.

Anonymised research data will be archived on a secure virtual drive linked to a World Maritime University email address. All the data will be deleted as soon as the degree is awarded.

Your participation in the interview is highly appreciated.

Student's name	<u>Arulanthu, Daniel John Joseph</u>
Specialization	<u>Maritime Education and Training (MET)</u>
Email address	<u>w2005515@wmu.se</u>

I consent to my personal data, as outlined above, being used for this study. I understand that all personal data relating to participants is held and processed in the strictest confidence, and will be deleted at the end of the researcher's enrolment.

Name: _____

Signature: _____

Date: _____



INFORMATION SHEET FOR PARTICIPANTS

Dear Participant,

1. Thank you for agreeing to participate in this research survey, which is carried out in connection with a Dissertation which will be written by the interviewer, in partial fulfilment of the requirements for the degree of Master of Science in Maritime Affairs at the World Maritime University in Malmo, Sweden.
2. The topic of the Dissertation is **“Analysis on the roles and responsibilities of Indian Maritime Administration to facilitate crew changes and repatriation of Indian seafarers during the COVID-19 pandemic”**
3. Please find the following information's:
 - a. Researcher details:

a. Student's name	Arulanthu, Daniel John Joseph
b. Specialization	Maritime Education and Training (MET)
c. Email address	w2005515@wmu.se
d. University's name	World Maritime University, Malmo
 - b. The information provided by you in this interview will be used for research purposes and the results will form part of a dissertation, which will be published online and made available to the public.
 - c. The interview would be one to one online interview and would last around 15-20 minutes.
 - d. Please ensure that the interview is as quiet and free from distractions as possible. Turn off any nearby sounds (ex. television, speakers, etc.) and make sure your phone is silenced.
 - e. The interview would be conducted online through zoom or Microsoft team or through telephonic mode and would be recorded for research purposes.
 - f. When you receive the virtual interview invitation, please check to see if programs such as zoom or Microsoft team need to be downloaded beforehand. If possible, do a test run with your equipment to ensure the audio, visual, camera settings and internet connection are all working properly.
 - g. The set of interview questions would be shared in advance via email and you may get prepared accordingly.
 - h. Your personal information will not be published. You may withdraw from the research at any time, and your personal data will be immediately deleted.
 - i. Anonymised research data will be archived on a secure virtual drive linked to a World Maritime University email address. All the data will be deleted as soon as the degree is awarded.
 - j. Your participation in the interview is highly appreciated.

Appendix-3

Four main research questions

1. Statutory Government Agencies (Ministry of Port, Shipping & Waterways – MoPSW, Government of India; & Ministry of Health & Family Welfare - MoHFW, Government of India): What challenges and hindrances were faced when facilitating crew change?
2. Stakeholders 1 (Indian and Foreign ship-owners associations): What challenges and hindrances were faced when signing-on / off from vessel?
3. Stakeholders 2 (Seafarers unions such as NUSI & FSUI): What challenges and hindrances were faced when signing-on / off from vessel?
4. Stakeholders 3 (Active sailing seafarers’): What challenges and hindrances were faced when signing-on / off from vessel?

A. Questionnaire for maritime administration / Government of India:

1. Can you elaborate on the challenges you faced for ensuring crew change during covid pandemic period?
2. Can you elaborate on the steps taken by “Government of India / DG Shipping” ensuring smooth crew change during covid pandemic period?
3. What further extra steps would be taken, if any by the “Government of India / DG Shipping” for further enhancing and streamlining the crew change?
4. What kind of approaches, theories etc. were looked into and applied while preparing public policies such as DGS Orders and relevant SOPs for crew change during covid pandemic periods?

B. Questionnaire for Indian & Foreign ship-owners Associations:

1. Can you elaborate on the problems that your seafarers faced for sign-off / on during covid pandemic period?
2. Is the support provided by “Seafarers Union” for ensuring signing-off during covid pandemic was satisfactory? If no, what further extra support and steps could have been provided by the “Seafarers Union” for ensuring smooth crew change?

3. Is the support provided by “Government of India / DG Shipping” for signing-off during covid pandemic was satisfactory? If no, what further extra support and steps could have been provided by the “Government of India / DG Shipping” for ensuring smooth crew change?
4. What do you think about the SOPs for crew change prepared by DG Shipping for streamlining crew change during covid pandemic periods?
5. What do you think about the various online initiatives such as e-pass module, stranded seafarers’ module, chartered flights module etc. created by DG Shipping for ensuring smooth crew change during covid pandemic periods?

C. Questionnaire for Seafarers Associations such as FSUI & NUSI:

1. Can you elaborate on the problems that your seafarers faced for sign-off / on during covid pandemic period?
2. Is the support provided by “RPSL company’s” for ensuring signing-off during covid pandemic was satisfactory? If no, what further extra support and steps could have been provided by the “RPSL company’s” for ensuring smooth crew change?
3. Is the support provided by “Government of India / DG Shipping” for signing-off during covid pandemic was satisfactory? If no, what further extra support and steps could have been provided by the “Government of India / DG Shipping” for ensuring smooth crew change?
4. What do you think about the SOPs for crew change prepared by DG Shipping for streamlining crew change during covid pandemic periods?
5. What do you think about the various online initiatives such as e-pass module, stranded seafarers’ module, chartered flights module etc. created by DG Shipping for ensuring smooth crew change during covid pandemic periods?

D. Questionnaire for seafarers:

1. Can you elaborate on the problems such as delays, if any, logistical problems, Government new requirements due to covid, any other issues etc. you faced on your last ship sign-off?

2. Is the support provided by your “RPSL company” for signing-off during covid pandemic was satisfactory? If no, what further extra support and steps could have been provided by the “RPSL company” for ensuring smooth crew change?
3. Is the support provided by your “Seafarers Union” for signing-off during covid pandemic was satisfactory? If no, what further extra support and steps could have been provided by the “Seafarers Union” for ensuring smooth crew change?
4. Is the support provided by your “Government of India / DG Shipping” for signing-off during covid pandemic was satisfactory? If no, what further extra support and steps could have been provided by the “Government of India / DG Shipping” for ensuring smooth crew change?
5. What do you think about the various SOPs for crew change prepared by DG Shipping for streamlining crew change during covid pandemic periods?
6. What do you think about the various online initiatives such as e-pass module, stranded seafarers’ module, chartered flights module etc. created by DG Shipping for ensuring smooth crew change during covid pandemic periods?