WMU Sasakawa Fellows' Network Meeting in the East European, Middle Eastern, and North African Regions

January 28th - February 1st, 2018
Novotel London West Hotel,
London, United Kingdom

Hosted and Organized by "Friends of WMU, Japan" Secretariat
in Cooperation with The Nippon Foundation and U.K. Sasakawa Fellows

Contents

Resolution

WMU Sasakawa Fellows' Network Meeting
in the East European, Middle Eastern, and North African Regions

Resolution

We, the participants of the WMU Sasakawa Fellows' Network Meeting of the East European, Middle Eastern, and North African Regions held in London 2018.

Whereas WMU Sasakawa Fellows who based in the East European, Middle Eastern, and North African Regions have been dormant with minimal communication and interaction, RECOGNISING the need to create WMU Sasakawa Fellows' Network in the East European, Middle Eastern, and North African Regions for the purpose of establishing and maintaining a constant link among Country and Regional Fellows for mutual cooperation and exchange of beneficial information and CONSIDERING the availability of resources and the maximum utilization of current information and communication technologies and tools.

Do hereby ADOPT an ACTION PLAN to fulfill the objectives of the WMU Sasakawa Fellows' Network and its future expansion as follows.

- To enhance the Friends of WMU, Japan Website by making more effective meaning of communication among fellows and for the promotion of Sasakawa Network to benefit the maritime sector;
- To regularly update the Fellows' List to keep the directory alive and relevant (beneficial),
- To improve the Newsletter of Friends of WMU Japan by regularly contributing articles touching on current maritime knowledge, expertise and experience, individually as well as collectively, for the development of maritime sector;
- To establish Country Focal Points who shall form the executive to administer a Regional Secretariat to monitor, communicate and sustain future activities for expansion of the Sasakawa Fellows' Network;
- To make active use of this network as an effective tool for solving various issues or for promoting sustainable development of maritime societies and ocean; and

RESOLVE to cooperate actively in the implementation of this Action Plan within the Respective Regions as undersigned;

Name	Signature
Ermal XHELILAJ (Albania)	
Mohamed TAALBI (Algeria)	
Aynur MAHARRAMOVA (Azerbaijan)	
Ehab Ibrahim OTHMAN (Egypt)	
Amr Moneer IBRAHIM (Egypt)	
Mohamed Nabil Elnabawi A. BAHRIZ (Egypt)	
Hossameldin bakr MOHAMED (Egypt)	
Mohamed Shawki Mohamed EL KHADRAWI (Egypt)	
Mohab. Mohamoud ABOU-ELKAWAM(Egypt)	
Anete LOGINA (Latvia)	
Robertinas TARASEVICIUS (Lithuania)	
Andrius DAUJOTAS (Lithuania)	
Nadezda KOVTUNOVA(Lithuania)	
Mark Philip CASSAR (Malta)	
Nabil ANWARI (Morocco)	
Fatima Zahra EL MARZOUKI (Morocco)	
Chihebeddine BADIR (Tunisia)	
Ozlem MULUN AKPINAR (Turkey)	
Anna RABOTNOVA (Ukraine)	
Igor PISHENIN (Ukraine)	

Various Photos

WMU Sasakawa Fellows' Network Meeting
in the East European, Middle Eastern, and North African Regions

◆ Scenery of Pre-Meeting

◆ Various Photos from the Welcome Reception

◆ Various Photos from the Network Meeting

Opening Remarks by Mr. Tsutomu Akita of SPF

Welcome Speech by Ms. Sandra Allnutt


East European, Middle Eastern, and North African Regions
Novotel London West


Middle Eastern, and North African Regions


WMU Sasakawa Fellows' Network Meeting in the East European, Middle Eastern, and North Africa
January 28 – 31, 2018 / Novotel London West

◆ IMO Visit

With the IMO Secretary General, Mr. Ki-tack LIM

◆ Various Photos from the Farewell Reception

Words of Appreciation by Mr. Robertinas Tarasevicius

Program Schedule

WMU Sasakawa Fellows' Network Meeting
in the East European, Middle Eastern, and North African Regions

Program Schedule

January 28th (Sun) - DAY1 (Arrival)

Time	Schedule	Venue/ Note
Morning/ Afternoon	Arrival	Novotel London West Hotel
17:30 - 18:30	Pre-Meeting for the Network Meeting	Bordeaux Suite, Novotel London West Hotel
18:30 - 20:00	Welcome Reception	Cognac Suite, Novotel London West Hotel

January 29th (Mon) - DAY2 (Discussion on the WMU Sasakawa Fellows Network)

Time	Schedule	Venue/ Note
9:00 - 9:10	Welcome Speech by U.K. Residential Fellow, Sandra Rita ALLNUTT (Brazil, 1999) (Head, Marine Technology and GBS, Maritime Safety Division, IMO)	Bordeaux Suite, Novotel London West Hotel
9:10 - 9:20	Opening Remarks by Tsutomu AKITA (Senior Specialist, Ocean Policy Research Institute, the Sasakawa Peace Foundation)	
9:20 - 9:30	Instruction on Agendas by Facilitator (Categorized by Agendas)	
9:30 - 9:40	Group Photo Session	
9:40 - 10:00	Presentation on the Secretariat of SPF (Enhancement of WMU Sasakawa Fellows' Network)	Presented by Atsushi KATO (Ocean Research and Development Department, The Sasakawa Peace Foundation)
10:00 - 11:00	**Sasakawa Fellows Network (Agenda-1)** Procedure to become a candidate/ Benefit of being Sasakawa Fellow	
11:00 - 11:15	Short Break	
11:15 - 12:15	**Sasakawa Fellows Network (Agenda-2)** Mutual Communication by Internet/ Website Utilization	
12:15 - 13:30	Lunch Break	
13:30 - 14:30	**Sasakawa Fellows Network (Agenda-3)** Friends of WMU, Japan Newsletter	
14:30 - 15:30	**Sasakawa Fellows Network (Agenda-4)** Expansion of the Network	
15:30 - 15:45	Short Break	
15:45 - 17:00	Working on the Group Reports	

January 30th (Tue) - DAY3 (Exchange of Maritime Information)

Time	Schedule	Venue/ Note
9:00 - 9:10	Opening Remarks by Facilitator	Bordeaux Suite, Novotel London West Hotel
9:10 - 9:30	Update on WMU, Presented by Ms. Susan Jackson (Registrar, World Maritime University)	
9:30 - 10:45	1) Egypt: Amr Moneer IBRAHIM (Onboard Training) 2) Azerbaijan: Aynur MAHARRAMOVA (Research Internship) 3) Ukraine: Igor PISHENIN (Maritime Education & Training in Ukraine) 4) Egypt: Hossameldin bakr MOHAMED (Ports and Emission Reduction) 5) Malta: Mark Philip CASSAR (Shipping Emission Reduction and Energy Efficient Technology)	15 mins./person (inc. Q&A)
10:45 - 11:00	Short Break	
11:00 - 12:15	6) Algeria: Mohamed TAALBI (Maritime Accident Investigation in Algeria) 7) Lithuania: Robertinas TARASEVICIUS (Structual Changes In Maritime Governance) 8) Tunisia: Chihebeddine BADIR (Problematics and Development Strategy of Maritime Sector in Tunisia) 9) Ukraine: Anna RABOTNOVA (Current Development Strategy of Maritime and Inland Waterway Transport Sector of Ukraine) 10) Egypt: Mohamed Nabil Elnabawi A. BAHRIZ (Barriers and bottlenecks of applying the multimodal transportation system in Egypt)	15 mins./person (inc. Q&A)
12:15 - 13:45	Lunch Break	
13:45 - 15:00	11) Lithuania: Andrius DAUJOTAS (LNG Terminal: Gateway for the Baltic Gas Market) 12) Turkey: Ozlem MULUN AKPINAR (THE SIGNIFICANCE OF THE TURKISH STRAITS AND ITS REGIME) 13) Egypt: Ehab Ibrahim OTHMAN (Present and Future Challenges to Suez Canal) 14) Morocco: Nabil ANWARI (Is there a success formula for community-based fisheries management?) 15) Morocco: Fatima Zahra EL MARZOUKI (“The Marine Aquaculture in Morocco: Thinking Outside the Box at the Legal and Technical Levels For Building a New Sector and Industries.”)	15 mins./person (inc. Q&A)
15:00 - 15:15	Short Break	
15:15 - 16:00	16) Albania: Ermal XHELILAJ (Legal Concerns VIS-À-VIS Maritime Boundaries Delimination) 17) Egypt: Mohamed Shawki EL KHADRAWI (Maritime arbitration between Present and Future) 18) Latvia: Anete LOGINA (Historical insight into the issue of unfair treatment of seafarers after maritime accidents)	15 mins./person (inc. Q&A)
16:00 - 17:00	Debriefing Reports in Each Agenda Group	
17:00 - 17:15	Signing the Resolution	
17:15 - 17:30	Conclusion by Facilitator	

January 31st (Wed) - DAY4 (IMO Visit)

Time	Schedule	Venue/ Note
9:15 - 10:30	Transfer to IMO Building	by Coach
10:30 - 10:45	To be met by Mr. Berty Nayna (External Relations Officer, External Relations Office), and visit to the Main Hall	International Maritime Organization 4 Albert Embankment, London SE1 7SR
10:45 - 11:00	Welcoming by Mr. Frederick Kenney (Director, Legal Affairs and External Relations Division)	
11:00 - 11:15	Presentation of DVD on IMO Safe, Secure and Efficient Shipping on Clean Oceans, CR 11/12/13, 2nd floor	
11:15 - 12:00	Presentation by Ms. Natasha Brown (Media and communication Officer, Public Information Services)	
12:00 - 12:15	Visit to the Maritime Knowledge Centre	
12:15 - 13:30	Private Lunch	IMO Cafeteria on the 4th floor
13:45 - 14:20	Walking down to the Westminster Pier for the City Cruises	on foot
14:40 - 16:00	**City Cruises:** 14:40 Westminster Pier - 15:20 Tower Pier 15:55 Tower Pier - 16:35 London Eye Pier	City Cruises Boat
16:35 - 18:20	**Free Time:** Imperial War Museum, Big Ben, London Eye, Parliament	
18:20	Assembling at Tattershall Castle (Farewell Reception)	
18:30 - 20:30	Farewell Reception	Tattershall Castle Victoria Embankment, Whitehall, London SW1A 2HR
21:00 - 22:00	Transfer back to Novotel Hotel	by Coach

February 1st (Thu) - DAY5 (Departure)

Time	Schedule	Venue/ Note
Morning/ Afternoon	Departure	

Opening Session

WMU Sasakawa Fellows' Network Meeting
in the East European, Middle Eastern, and North African Regions

Welcome Speech

Sandra Rita ALLNUTT
(Brazil, 1999)

Distinguished authorities, ladies and gentlemen,

Good morning!

It is a great pleasure and honour for me to be here, in London, welcoming you to this WMU Sasakawa Fellows' Network Meeting for the East European, Middle Eastern and North African Regions. First of all, on behalf of the Representatives, I would like to thank the Sasakawa Peace Foundation, in particular the Ocean Policy Research Institute, for hosting this Netwok Meeting for WMU Sasakawa Fellows that are present here today representing different countries in these regions.

For the Sasakawa Peace Foundation, everyone has an important role to play: citizens, corporations, non-profitable organizations, governments, and international bodies. We are here in order to strength the network among the WMU Fellows. The Foundation serves as a hub for the world's wisdom, experience, and human resources, giving us the capacity to change society through our work in the maritime field.

In this context, I should stress the fact that WMU is undoubtedly a highpoint of IMO's capacity-building programme and particularly of its maritime education and training programme, and the largest and most valuable technical cooperation project of the Organization. WMU has come a long way since its establishment in 1983. Today, it can be regarded as the foremost global maritime training institution, educating and fostering the future leaders and decision makers of the maritime world.

Therefore, to be part of this Network is quite a unique opportunity, thanks to the ideas and efforts of many people from the Ocean Policy Research Institute, the Sasakawa Peace Foundation and Mr. Sasakawa himself. Through them many of our dreams became true. We acquired so much knowledge and experience during the time we were studying at WMU that we are forever grateful to the Foundation that sponsored us all as well as to our families who supported and encouraged us throughout our lives.

We have received so much, not only a high level maritime education, but the possibility to use our knowledge and expertise to create a better future, aiming to further develop an International Maritime Community – our own community. Bearing this in mind, it is wonderful to see here, in London, this week so many people from different countries working together with the same ideal.

I hope that this Network Meeting will be successful and helpful for all participants.

Thank you very much for your attention! Minasama domo arigato gozaimashita!

Opening Remarks

Tsutomu AKITA
(Senior Specialist, Ocean Policy Research Institute, the Sasakawa Peace Foundation)

Good morning, WMU Sasakawa Fellows. I'm Tsutomu Akita, Senior Specialist of the Sasakawa Peace Foundation.

I would like to begin by extending a warm welcome to the WMU Sasakawa Fellows from the respective countries, who have taken time out of your busy schedule to attend this WMU Sasakawa Fellows' Network Meeting in the East European, Middle Eastern, and North African Regions. My gratitude also goes out to your work supervisors and colleagues, who have given you permission to come to this meeting.

We still have maritime safety and environment protection problems.

This month, the oil tanker Sanchi has collided off the coast of China and seafarers are still missing. Even now, fishermen onboard is one of the most dangerous professions in the world.

We also have wide range of maritime related issues such as climate change, air pollution, protection of biological diversity and so on.

Last June, in the ocean conference at United Nations, Mr. Sasakawa highlighted ocean crisis and proposed action toward international better ocean governance.

These are issues that cannot be easily resolved through separate efforts by individual countries. Resolving these issues requires human resources with leadership and capacity to address matters from a broad perspective, as well as a system of collaboration among the countries concerned.

Fortunately, during your time at WMU, you have gained the precious experience of studying with people of different countries, cultural and religious backgrounds, and have become part of a valuable human network as a result.

The human network, the "WMU Sasakawa Fellows Network," currently has over 600 members from 72 countries. I hope you value your connection with other Sasakawa Fellows not only within these participating countries but also across the rest of the world, and make active use of this network as an effective tool for solving various issues.

This network meeting will include the exchange of information on maritime issues of the participating countries, and discussions on how the network should evolve into the future. I hope that during the course of the meeting, you will engage in active debates regarding these issues to further reinforce the WMU Sasakawa Fellows Network in the East European, Middle Eastern, and North African Regions.

I'm very much expecting you all to have fruitful discussions for the sustainable development of maritime community and the future of WMU Sasakawa Fellows.

In closing, let me wish you all on behalf of The Nippon Foundation and the Sasakawa Peace Foundation the very best of health and a life filled with happiness.

Thank you for your attention.

Discussion on the WMU Sasakawa Fellows' Network

WMU Sasakawa Fellows' Network Meeting
in the East European, Middle Eastern, and North African Regions

Agenda 1 : Procedure to become a candidate and benefit of being Sasakawa fellow.

Agenda 2 : Mutual Communication.

Agenda 3 : NEWSLETTER

Agenda 4 : Expansion of the Network

Agenda 1 Procedure to become a candidate and benefit of being Sasakawa fellow.

Participating members:

1. Mr Robertinas TARASEVICIUS, Lithuania, 1999
2. Mr Ehab Ibrahim OTHMAN, Egypt, 2004
3. Mr Yasuhiro URANO, Japan, 2012
4. Ms Fatima Zahra ELMARZOUKI, Morocco, 2016
5. Mr Mohamed Shawki Mohamed EL KHADRAWI, Egypt, 2017

The fellows considered the following questions to cover the agenda topic

1. What are the benefits of being Sasakawa fellow?

The following benefits were raised from the participants.

Learning in depth the international maritime instruments and getting in touch with a wide variety of maritime specialists from all over the world. Personal as well as professional benefits, with value added to maritime industries by increasing the number of experts in different maritime fields.

The fellows also gained many skills while studying at WMU such as how to live and interact with others positively in an international environment and the improvement of their skills in English language.

2. Do you recommend younger people to join WMU?

Generally the participants agreed that they would encourage younger students to join WMU programmes, having noted the difficulty of funding and getting scholarship. The participant also agreed on the need to support future applicants by sharing experience and tips on various matters such as writing the application form.

3. Do you face any challenges after graduation?

Some participants had difficulty in maintaining their jobs during the study, whilst others managed to keep their jobs and in certain cases were promoted after graduation from WMU. The participants noted that in some countries there are a lot of job opportunities in the private sector after graduation from WMU.

4. Have you attended international maritime conferences and events?

The majority of the participants have attended international maritime conferences and events, some participants have represented their respected countries at IMO meetings and have often met together in such meetings.

5. Are the academic degrees offered by WMU recognized in your countries?

Some particpants have raised an important issue with regard to the recognition of degrees offered by WMU in certain countries. In this relation Ms Susan Jackson of WMU reported that the university has been addressing this issue over many years and is currently working towards accreditation by the Swedish government, which will facilitate recognition by other countries.

Finally, the following suggestions were raised from the participants:

- Enhancing the Sasakawa fellows' network by sharing information on their careers to provide a point of reference for the fellows and future applicants to seek a certain expertise and experience in the network.
- Establish an association to carry out missions related to different maritime issues and social activities.

Agenda 2

Mutual Communication.

Participating members:

1. Ms. Sandra Rita ALLNUTT, Brazil, 1999
2. Mr. Andrius DAUJOTAS, Lithuania, 2005
3. Ms. Ozlem MULUN AKPINAR, Turkey, 2007
4. Mr. Hossameldin bakr MOHAMED, Egypt, 2016
5. Mr. Mark Philip CASSAR, Malta, 2017

Introduction

In preparation for the discussion, it was noted that the questions provided for the discussion are a standard equipment for everybody today. Nowadays, everyone in this region, East European, Middle Eastern and North Africans has an internet connection, computer and smart phones.

Points emerging during discussion:

- Having a separate platform dedicated to Sasakawa fellows is an extra cost, time and resource for the SPF;
- Linkedin, Facebook and other social media can be used by creating private groups as the platform for discussion and knowledge sharing, concerning maritime issues raised up by the members;
- The WMU Fellows directory can be linked to Linkedin or other social media to provide further information about the fellows, in terms of latest updates and expertise, through timeline, CV updates. Having What's App number is also essential;
- The WMU Sasakawa Fellows website should include pages with available information such as technical projects where fellows are taking part, research paper abstracts (work of fellows), WMU dissertations, any other case study which can benefit other fellows through information provided;
- Having a regular conference every 2/3 years, to discuss and argue maritime issues and share knowledge between Sasakawa fellows, and active maritime personnel. This can serve as a Sasakawa fellow gathering and networking event, while being a business related effective tool;
- Updating the Sasakawa Fellows data on the website itself and dividing the members according to their area of interest and experience, by introducing keywords for every fellow, and creating a search field with the ability of allowing the single member to be joined in different areas of experience;
- Having a page on the website which consolidates updates from the fellows through notifications can provide latest updates. This can be made available by designing a smartphone/desktop application to give pop-up notifications of fellow updates. This app could be able to collect and pass the notification from the social media website, to the members of WMU Sasakawa fellows.
- For the personal updates of Sasakawa fellows, this can be posted on the private groups through social media, which provides interaction through a chatting platform. This provides live and instant support to fellows.

Conclusion:

The Idea of having an improved Sasakawa Fellows' website platform is seen as an extra burden for the Foundation and a deterrent to fellows who would have to access another platform regularly. This has put forward the improved communication through private groups on social media such as Linkedin, Facebook or Twitter. Such social media can be linked to the Sasakawa WMU Fellows website providing the links to fellow members' updates. A method of notification of such updates should be created through a smartphone/desktop application to allow fellows to notice updates instantly. A comment and communication tool should be made available in the social media group.

Agenda 3

NEWSLETTER

Participating Fellows:

1. Mr Nabil Anwari, Morocco, 2005
2. Mr Ermal Xhelilaj, Albania, 2008
3. Mr Igor Pishenin, Ukraine, 2013
4. Mr Mohamed Nabil Elnabawi A Bahriz, Egypt, 2015
5. Ms Aynur Maharramova, Azerbaijan, 2017

1. Are you taking the Friends of WMU Japan Newsletter?

Every representative of the participating countries in the Sasakawa Fellows Network Meeting is receiving the Newsletter either by email or as a hard copy.

2. Do you need Newsletter by post? Downloading from the website is just fine with you?

More senior Sasakawa fellows prefer to receive the newsletter by post, and other fellows suggest that the newsletter should be received by email. Also, there were concerns about the environmental impact of using hard copy, so these fellows prefer to receive the newsletter digitally. There was other support for the cost-effectiveness of the electronic version. Another opinion was that in countries where there are a considerable number of fellows the SPF could send one hard copy which can be used by all the fellows. In conclusion, there were different suggestions and opinions on the question of hard versus soft copy version. So, we can not draw a definitive conclusion regarding this issue, and recommend that consideration is made of the number of fellows who want to have an electronic version of the newsletter and the number who prefer to receive hard copies.

3. Any suggestion or comments on the Friends of WMU Japan Newsletter?

There are opinions which encourage that each fellow has to send periodically an article or summary of a project to be published in the newsletter. Also, there were suggestions that the newsletter should be more scientifically oriented and allow fellows to publish their scientific work or project in the context of an open invitation. There was a suggestion that fellows who have written a dissertation may be able to provide interesting sccntific work and also benefit from its dissemination.

4. The newsletter has a column such as Happy Wedding and A New Member of a Family to let the other people contribute news. Are there any other subjects or recent events you would like to see in the newsletter?

There is a suggestion to publicize any job promotion or new position in the newsletter to draw attention to new contact information, as well as giving a news update.

5. What topics are you interested in?

Fellows are suggesting that the topic currently are covering everything is needed, such as wedding events, job promotion, meetings, what's going on in fellows' lives, careers, achievements, IMO regulations, Secretary General speeches, new developments, new projects. There was also support for promoting the publication of new scientific works.

6. What is the effectiveness of the newsletter?

People are reading the newsletter for news, keeping in touch and learning new approaches. Fellows suggested that the newsletter has more sentimental value rather providing a technical contribution. Also, many fellows expressed their pleasure when getting the newsletter because they feel proud to be a Sasakawa fellow. Fellows also suggested that receiving the newsletter make them feel a part of the Sasakawa fellows's network and WMU organizations. It was also seen as a useful way to exchange information and knowledge.

7. When you receive the newsletter in your office, do you circulate it?

Many fellows deemed it unnecessary to circulate the newsletter due to the distinct maritime and fellowship profile that it provides. Also, there are many personal and family events and information about Sasakawa fellows of no interest to people outside the network. Other fellows have taken a different approach, and make available the newsletter in their work environment, especially in educational institutions, so students and colleagues can utilize the newsletter. Participants emphasized that Sasakawa fellows should be responsible for providing articles to be published in the newsletter. There was also discussion among the fellows about whether the number of pages of the newsletter should be increased to have more information included

Agenda 4

Expansion of the Network

Participating Fellows:

1. Dr Mohab Mohamoud Abou-Elkawam, Egypt, 2003
2. Dr Anete Logina, Latvia, 2009
3. Ms Anna Rabotnova, Ukraine, 2012
4. Mr Amr Moneer Ibrahim, Egypt, 2013
5. Mr Mohamed Taalbi, Algeria, 2014
6. Mr Chihebeddine Badir, Tunisia, 2015

Many of the questions concerning the Expansion of the Network were one way or another discussed within the previous three Agendas. The Group therefore decided to sum up the opinions on those issues during consideration of Agenda 4.

1. What are the benefits of being a Sasakawa Fellow? Tell us about your experiences.

It was noted that working in IMO involves meeting and cooperating with many WMU graduates including Sasakawa Fellows, and network membership is beneficial for cooperation on various issues. Not only the representatives of governmental entities, but also those fellows engaged in private sector could get useful information and recommendations on, for example, avoiding bureaucratic formalities by simply contacting their fellows from governmental organizations. It was noted that Sasakawa Fellows feel closer to each other out of all the WMU graduates when working in an organization. Fellows also get support from each other on specific questions during PhD research work. It was suggested that it would be useful to have information on who is expert in which field to know whom to contact with questions.

2. Treatment of retired Sasakawa Fellows?

Even though in the East European, Middle East and North Africa regions there are no retired Sasakawa Fellows yet, but the question remains for the future. It was agreed that it would be useful to hold regular meeting in smaller groups; for example, within countries or neighboring countries to consider whether more senior fellows were in need of support, or for older group members to share their experience with the younger ones. Retired fellows could be recognized by being involved as tutors, lecturers or mentors to the meetings or other Network activities.

3. How could the Network take a role in IMO work?

The possibility was discussed of Sasakawa Fellows having representation at IMO as an NGO to have an opportunity to contribute their research results or opinions on issues being raised. As the procedure for such recognition is challenging and takes time, Network members could contribute under the umbrella of the other NGOs attending IMO meetings. Members would approach such other NGOs after this discussion.

4. Would you like to have regular regional Network meetings like the colleagues from Southeast Asia do?

The participants agreed that would be useful to keep the Network connected. The question was considered of whether we should hold separate meetings within the East European, Middle East and North Africa regions or to keep meeting as one group as we are not too many in quantity. It was agreed we should get more data on the numbers before making that decision. As such meetings are not supported by the SPF funding, it is more challenging to organize meetings for fellows from various countries. It could be challenging for some fellows to attend meetings and meet their own expenses.

5. What would be the best way to join voluntary Network meetings without financial support?

It was agreed that the meetings are more effective with more people involved, so there are advantages to finding funding for that purpose, aside from funding from the SPF. Funding could be sought from governments and other organizations represented by the fellows, as well as from companies that would like to be advertised as sponsors of the meetings.

Conclusion

We think that the key to achieving the utmost benefit from the WMU Sasakawa Fellows' Network is to transform the nature of this Network from being a social association to a business-oriented network.

There are two pillars of any Network: the people that the Network consists of, and the tool used to allow these people to interact. In order for the transformation to take place we have to improve and develop both pillars.

Firstly, the people. The fellows themselves need to understand the value of this Network and contribute to its fruitfulness, which depends on the fellows realizing that one will benefit from such an interaction. If the Network is used to achieve professional interests, fellows will be encouraged to participate more fully.

Fellows need a platform that easily allows communication between them, and at the same time will have the ability to clearly show the different capacities of different fellows. We are sure that the 600 plus Sasakawa graduates from WMU covers each and every aspect of the maritime domain. The problem is that it is difficult to identify individual expertise. If the communication platform were able to pinpoint the field of expertise of every Sasakawa fellow, assisting fellows to reach out to each other for professional assistance.

Finally, if we manage to achieve the transformation of the nature of the Network into a professional, business-oriented Network, we believe that then, and only then, the Sasakawa Peace Foundation will achieve its ultimate goal of building maritime capacity around the world.

Exchange of Maritime Information

WMU Sasakawa Fellows' Network Meeting
in the East European, Middle Eastern, and North African Regions

1. Update on WMU
2. Workshop Discussion Items
3. Role of The Human Element
4. Maritime Education & Training in Ukraine
5. Ports and Emission reduction
6. Improving the Future - Shipping Emission Reduction and Energy Efficient Technology
7. Maritime Accident Investigation in Algeria
   Case study: Grounding of the Korean cargo ship M/V LUJIN 2 the 11th of April 2005 at ''Ras Atia'' (JIJEL - ALGERIA)
8. Structural Changes in Maritime Governance: Lithuanian Case
9. Maritime Sector In Tunisia Problematics and Development Strategy
10. Current Development Strategy of Maritime and Inland Waterways Transport Sector of Ukraine
11. Barriers and bottlenecks of applying the multimodal transportation system in Egypt
12. LNG Terminal: Gateway for the Baltic Gas Market
13. The Significance of The Turkish Straits and Its Regime
14. Present and Future Challenges to Suez Canal
15. Is there a success formula for community-based fisheries management ?
16. The Marine Aquaculture in Morocco: Thinking Outside the Box at the Legal and Technical Levels For Building a New Sector and Industries
17. Legal Concerns Vis-à-Vis Maritime Boundaries Delimitation
18. Maritime arbitration between present and future
19. Historical insight into the issue of unfair treatment of seafarers after maritime accidents
    Collision of Imo and Mont Blanc

Update on WMU

Ms. Susan Jackson
Registrar, WMU

I am delighted to present an update on WMU's recent progress. Some of you have only just graduated, while others graduated in the last millennium – and two Sasakawa Fellows have returned to WMU after their Master's degree to complete a PhD.

The University is looking forward to a very exciting 2018. This year marks WMU's 35th Anniversary, and both the 60th anniversary of the IMO Convention entering into force, and the 70th anniversary of its adoption. On 8 and 9 May, we will inaugurate the WMU-Sasakawa Global Ocean Institute, and hold a major international Ocean Conference.

The University continues to broaden its portfolio of programmes, with new distance learning qualifications starting in 2017. 2017 also saw the first graduates from the Malmö-based MSc programme who had specialized in the two new specializations – Maritime Energy Management and Ocean Sustainability, Governance and Management.

These new programmes and specializations are part of the University's efforts to assist in achieving the United Nations Sustainable Development Goals (UNSDGs). Among the 17 UN SDGs, four are of particular importance and have been integrated into the strategic directions of WMU:

- Goal 4 - to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all
- Goal 5 - to achieve gender equality and empower all women and girls
- Goal 8 - Decent Work and Economic Growth
- Goal 14 - to conserve and sustainably use the oceans, seas and marine resources for sustainable development.

The SDGs are fully integrated into the University's Business Plan for 2018-2019, approved by the Executive Board on 8 December 2017.

Financially, the University is making good progress, and under the guidance of the Executive Board and Board of Governors, is re-building the financial reserves. Donations are already being made to the Endowment Fund, most notably the sum of Euro 1 million, donated by the Government of Germany. New donations are constantly being sought by WMUs President and by IMO.

WMU, with the support of fellowship donors, particularly The Nippon Foundation, is keenly focused on increasing women's participation and access to educational opportunities in the maritime sector, including at postgraduate level. Women's participation in seafaring jobs remains as low as it was 25 years ago - between 1 and 2 per cent of the total seafaring population. Progress in achieving greater gender equality in the maritime sector has been hindered by the long-misplaced perception that women are not suitable for working on board ships due to the nature of seafaring. In 1995, WMU had less than less than 8 per cent of women enrolled in its

Master of Science programme. In 2016-2017, women made up 37 per cent of the student intake. In total, since the establishment of WMU in 1983, out of the total of 4,654 graduates, 950 - or over 20 per cent - are women.

WMU is also recruiting new members of faculty to replace the generation that has recently or is about to retire. Processes to fill the posts established within the WMU-Sasakawa Global Ocean Institute are also well advanced. A significant number of research staff have joined the University under new projects, most notably under the two-year, USD 1 million project funded by the International Transport Workers' Federation (ITF), to assess the impact of technology and automation on jobs and employment in the global transport sector. WMU faculty members are supported by four Technical Officers (Research) hired for the project

The University continues to host and co-host international conferences, to which all graduates are of course invited. A high point in the autumn was the Life Below Water Conference, that took place in Malmö, Sweden from 11 to 13 October, and at which the President was a keynote speaker. The overriding theme for the event was local implementation of UN Sustainable Development Goal (SDG) 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development. HRH The Crown Princess Victoria visited the University in association with this conference.

The University received formal accreditation of its programmes in 2015 (until 2020) from the ZEvA, the Zentrale Evaluations- und Akkreditierungsagentur Hannover/ Central Evaluation and Accreditation Agency Hanover. We are continuing to work on conformity with European requirements, with the introduction of new rules governing re-sits of exams (Class of 2017) and a mandatory dissertation for MSc students for the 2018 intake (Class of 2019), along with other Bologna-compliant changes. The Board of Governors has instructed the University to work to achieve accreditation by Sweden. This raises certain issues to do with our UN privileges and immunities, but active discussions are continuing.

The President, Dr Cleopatra Doumbia-Henry has emphasized on many occasions the overwhelming importance of the graduates. At Graduation 2017, she noted: “The exceptional international network of WMU graduates is making a difference for a better world. Use the expertise you have gained to nurture and inspire those around you to broaden their horizons, to create positive impact and to continue to contribute to the sustainable development of your country and in the maritime, marine, ports and ocean fields.” The graduates are WMU’s most precious resource and proudest product; all graduates can continue to play an important role in the University’s life now and in the future.

Workshop Discussion Items

Mr. Amr Moneer IBRAHIM
Egypt (2013)

The workshop topic **On-board Training** contained 4 main items of discussion

- What needs exist for onboard training
- What is the role of simulator-based training vis-à-vis onboard training?
- How accessible is onboard training to maritime student
- What can global strategies be taken to make on board training more accessible and effective?

The group consisted of 12 deck and engine cadets, from 11 different countries, the workshop discussions went as follows:

What needs exist for onboard training?

The discussion at this point tried to find out the importance of onboard training for the future of the seafarer, pointing that the maritime career is a vocational job that needs on-hand training.

The fact that there are three dimensions of education, cognitive, effective, and psychomotor where highlighted and discussed, and how they would be translated into Knowledge, Skills, and Attitude, respectively.

The discussion went on to conclude that the maritime education must pass through all three dimensions of education in order to ensure well-educated and trained seafarers. They also agreed that cognitive education (knowledge-based) is not sufficient, and reaching to the next dimension, which is effective (skill based), will not be achievable if not training on-board.

In addition to the above, more importance to the on-board training may be found but not limited to the below list

- Appreciation of the safety culture and increasing environmental sustainability awareness and techniques.
- Familiarization to shipboard living conditions & cultural difference behavior within the multinational crew.
- Gain adequate experiences that would not be normally enlisted in theoretical syllabuses and curriculums (Hidden curriculum)
- Transfer from theoretical to practical education through hands-on training.

What is the role of simulator-based training vis-à-vis onboard training?

The group then discussed the role of Simulator-based training and its influence on the seafarer compared with on-board training. The group was divided into two teams, one team favored the Simulator-based training over onboard training, and their defenses were that simulator-based training would quickly/safely/cheaply give 80% of the training experience a seafarer will obtain from his on-board training especially with the current situation of a decreased number of training on-board opportunities.

On the other hand, the opposite team sided with on-board training. The team claimed that simulator-based training will never deliver the real training “feeling”, in addition to the high dependency on the trainee himself to

understand and appreciate how the simulator-based training works. They also stated that simulator-based training would be more fruitful when applied at later stages of basic studies, rather than earlier years.

The fact that simulator-based training will clearly escalate the transfer from “Skills” to “Attitude” was also discussed and agreed upon by the two teams.

At last, after debating, both teams agreed on the following advantages/disadvantages on the role of simulator-based training.

Advantages:

- Familiarization with onboard equipment & Tasks
- Learn by doing mistakes and applying corrective actions
- Self-assessment
- Risk-free & Low cost
- Assessment of competency

Disadvantages:

- Hard to access in some countries
- Need for continuous update
- Need of highly qualified instructors
- Depend highly on the trainee level of appreciation and in some cases experience.
- Negative results when low fidelity

In Conclusion, the entire group agreed that Simulator-based training should take place in addition to on-board training, and not as a substitute, although they conflicted on the appropriate stage of implementing simulator-based training.

How accessible is onboard training to maritime students?

On the second day, the group started with this very interesting issue, the accessibility of on-board training to maritime students.

As mentioned before, the group consisted of 12 members from 11 different nationalities; we decided to use this diversity to answer the same question from different places/regions around the world.

Moreover, in order to investigate the reasons behind high/low accessibility, we needed to relate the answer to the number of national fleet and number of maritime student in the same region/country

A quick survey was carried out using members of our group, members of other groups, and even some of the facilitators and organizers as well, we even called upon Mr. Blackwood the Chairman of the IAMU to contribute in the survey.

The survey asked three questions:

1. On a scale from 0 to 5 (5 is highest) rate the following in your country/region
   a. The accessibility of on-board training to maritime students
   b. Number of ships flying national flag or under administration influence
   c. Number of maritime students

The results of the survey where as follows:

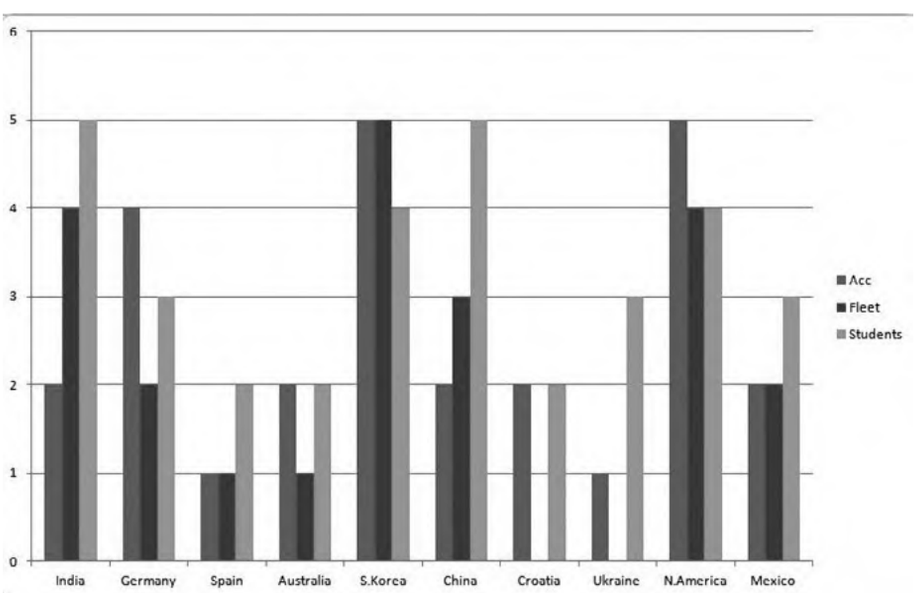
In alphabetical order

Country/Region	Training accessibility	Fleet Numbers	Students Numbers
Australia	2	1	4
Canada	5	3	5
China	2	3	5
Coratia	1	0	5
Egypt	2	0	4
Germany	4	2	3
Ghana	0	0	1
India	2	4	5
Iran	4	3	1
S.Korea	5	5	4
KSA	5	4	1
Mexico	2	2	3
Romania	1	0	4
Spain	1	1	2
UK	4	3	3
Ukraine	1	0	3
USA	5	4	4

In training accessibility order

Country/Region	Training accessibility	Fleet Numbers	Students Numbers
Ghana	0	0	1
Coratia	1	0	5
Romania	1	0	4
Spain	1	1	2
Ukraine	1	0	3
Australia	2	1	4
China	2	3	5
Egypt	2	0	4
India	2	4	5
Mexico	***2***	***2***	***3***
Germany	***4***	***2***	***3***
Iran	4	3	1
UK	4	3	3
Canada	5	3	5
S.Korea	5	5	4
KSA	5	3	1
USA	5	4	4

By geographical distribution



Showing example of correlation

Analysis of Accessibility Survey:

- Very high correlation between high accessibility and the high number of ships flying national flags like in the cases of Iran - UK - Canada - S. Korea - KSA – USA. And vice-versa.
- The only exception from the above was found in the Indian case, where they have no problems with ships numbers but poor government approach lead to losing the connection between the market and the students.
- The role of the government/administration clearly shows in comparing China and Canada cases, where both countries share the number of students and fleet, but because the big interest that the Canadian government shows to its maritime sector due to its high independency being a peninsula lead the Canadian government to adopt certain strategies that insured a training position for all their graduates.
- In KSA and Iran cases, a number of ships are not very high but the accessibility increases due to very low numbers of maritime students.

In conclusion, we would find different solutions introduced in different countries tackling the training accessibility problem, it would be very interesting to know the successful examples from around the Globe. This could be done through a worldwide fact-finding project (maybe managed by the IAMU), where successful approaches may be used elsewhere where appropriate.

What can global strategies be taken to make on-board training more accessible and effective?

By analyzing the results of the short survey mentioned above, we reached the result that if any global strategies would be adopted they would be introduced from one of three entities.

1. Governments (Maritime Administrations and Ministries).
2. Companies (ship owners).
3. Maritime Education and Training Institutes.

Governments

Maritime administrations have a very big role and responsibility when it comes to training of maritime students, it would be fair to say that governments are the body that may have some sort of pressure "softly" applied on the other two entities.

Some of those strategies may include:

- Creation of state-owned training fleet in cooperation with industry.
  Having a state-owned fleet would (to a certain level) decrease the economic burdens that companies claim to have because of training maritime students. In addition, in this case, the administration could supervise the "structural" training programs on board its vessels.
- Tax breaks for proactive industrial recruitment.
  As an incentive to ship owners, the administration could install a student's recruitment scheme, if followed by the companies, this company may have tax breaks or port fees deduction or any type of financial privilege over other companies not implementing this recruitment scheme.
- Governmental grants supporting industry costs.
  Other systems of compensating the ship owners, of which governments would help in the training expenses through funding programs either fully or to a certain extent.
- Government acts in agency role.
  Recently, manning agencies had played an important (but unethical) role in recruiting maritime students for the huge amount of money; this left the students in some cases subject to foul play. Governments could easily fill in this gap, acting as an intermediate between students and ship owners, throughout establishing profitable / non-profitable government-owned agencies.
- International governmental / non-governmental cooperative. Like IMO IAMU ESMA.
  Comprehensive cooperation between member governments in the IMO and all other involved NGOs may introduce solutions to this problem.

Companies

The second pillar is the Navigation companies, i.e. ship owners, those who are responsible for implementing whatever strategies adopted by administration They also can have strategies of their own of which can help in resolving the problem

These strategies may be

- Applying the “Hire and educate” principal.
  Companies may have special programs and scholarships to hire juniors and cover their education fees throughout a structural education/training program, which will, of course, be under close supervision from the company to ensure the quality of their future officers.
- Cooperation and collaboration with universities and training centers through agreed training programs.
- Company-owned training vessels

M.E.T

The third and last pillar is the Maritime Education and Training Universities/institutes (METs).
An example of their role is as follows:

- Balancing the student/ship gap
  Going back to the results of the quick survey we made, we found that a certain country may have excessive numbers of maritime students when another country lack those numbers but relatively generous in ship numbers. METs may be used to balance this through its membership in the IAMU. The IAMU may be able to liaise between member universities.
- Enrolling multi-national students in the MET training program.
  The same thing goes if a certain MET institute that owns a training vessel or has access to one, may allow multinational students from neighbor countries to join its training program, similar to what have previously done in METs in Japan.
- Cooperation and collaboration with companies for better training environment (mentioned before).
- Limit the intake of students to match the market capacity.
- Applying for an incentive program
  Companies that offer a training post for their students will be liable to an incentive submitted by the MET Institute. This program may include discounts on short courses for the same company employees or any other privilege that the company would have over the others.

Conclusion

In conclusion, and given the short period of time of discussion, it is clear that the training on board is vital for the maritime sector, it intervenes in a very critical period of the seafarer career. It directly affects the competence level of every seafarer, therefore, this stage should be addressed more deeply.

A quick survey had been made, showing the high correlation between accessibility of training on board, the number of students, and the national fleet number in the same country/region.

And lastly, the discussion reviled that there are three pillars that control training on board; administrations, ship owners, and METs. The group proposed strategies that if implemented by those three pillars; will have a good influence in improving the training on board dilemma.

ROLE OF THE HUMAN ELEMENT

Ms. Aynur MAHARRAMOVA
Azerbaijan (2017)

This document provides information on a human element strategic plan that Australia will be adopting in the development of a Fatigue Risk Management System in Australian Shipping. The plan is framed around five key elements which need to be developed to support and implement this holistic approach to fatigue management at sea. (Submitted by Australia).

It is now evident that despite efforts directed at mitigating the risk of fatigue at sea through the adoption of hours of work and rest regulations (STCW and MLC conventions) and the development of fatigue codes and guidelines (MSC/Circ.1014) this issue still remains a concern in shipping. Lack of fatigue management has been identified as a contributory cause in a number of recent accidents at sea (e.g. Fingal (2007); Antari (2008); Shen Neng 1 (2010); Soring Bok (2012)). A report submitted to STW 38 (STW 38/13/2) by the ICTU highlighted the issues associated with fatigue management approaches currently adopted in shipping. The research presented in the document notes that current fatigue management systems tend to focus on a more individualistic approach to managing fatigue at sea rather than taking a risk-based approach. This was further substantiated in a report submitted by the Netherlands to STW 40 (STW 40/INF.2) in which the findings support the notion that fatigue should be seen as a risk and part of a broader management system. To date, the industry has taken a very fragmented approach to managing fatigue at sea. Considering what we know now about the risks and consequences of fatigue within shipping it is opportune that a more holistic approach to managing fatigue is adopted.

Australia is of the opinion that a FRMS in shipping is important for reducing the risks of fatigue at sea and hence has identified this as one of its focus areas. IMO resolution A.1038(27) which sets out the Organization's Strategic Plan for the period 2012 to 2017 further identifies "the increased emphasis on the role of the human element in safe shipping" (no. 5.4) through the "development of a strategy for work related to the role of the human element including the chain of responsibility in maritime safety" as one of its key strategic directions. Australia is, therefore, committed to improving maritime safety through the holistic management of fatigue-related risks. Australia is of the opinion that a collaborative approach with stakeholders in the provision of high-quality guidance material and training based on the substantial work undertaken by the academic and research experts in the maritime domain, the adoption of a robust fatigue monitoring and assessment framework, together with well-informed,

Competent and suitably empowered maritime regulators, operators and seafarers will ensure success in the implementation of a FRMS in a diverse and growing maritime industry.

The Maritime Safety Committee at its seventieth session tasked the Intersessional Correspondence Group to report to the seventy-first session of the Committee on issues relating to fatigue. The United States, as co-ordinator of the Correspondence Group, requested comments in accordance with the following terms of reference and tasking (Submitted by the United States).

Members of the Correspondence Group included Australia, Canada, China, Netherlands, New Zealand, Norway, Poland, United Kingdom, United States, International Association of Classification Societies (IACS), International Council of Cruise Lines (ICCL), International Maritime Pilots' Association (IMPA), International Ship Managers Association (ISMA), International Shipping Federation (ISF), and the International Confederation

of Free Trade Unions (ICFTU). While the members of the Group generally agreed with the intent of the terms of reference, the short time (two months) available to complete the tasks laid out, and the magnitude of the issues, precluded an in-depth exchange of ideas and reaching of any firm conclusions. With a review of the activities of other Sub-committees and IMO instruments, it was clear that much work has been done, but gaps still exist in our knowledge of fatigue, and that the full impact of recent initiatives (e.g., STCW '95, ILO 180, and joint ILO/IMO efforts) is yet to be fully evaluated.

By searching the IMO Vega database using key words, the Correspondence Group reviewed all the IMO instruments in search of the various terms that related to fatigue and contacted representatives to the Sub-Committees that were also dealing with the issue of crew fatigue. A listing of those instruments is at annex 1. Additionally, sample fatigue definitions from various sources are attached at annex 2. An extensive review of external definitions used in academia and in fatigue research was not completed, nor were non-IMO instruments, such as those of ILO, reviewed. The limited review reaffirmed the statement in IMO Assembly resolution A.772(18), Fatigue Factors in Manning and Safety, that is no universally accepted technical definition of fatigue." However, a current working definition can be found in MSC/Circ.813/MEPC/Circ.330 which has a List of Human Element Common Terms, including fatigue. This definition is quoted in annex 2. Attempting to define fatigue more concisely may not be fruitful because it might place artificial limits on the issue. It should be noted that a common thread in all definitions is the degradation of performance.

In the course of conducting the work of the Correspondence Group, it was noted that significant issues related to fatigue, with respect to manning and work hours, remain to be resolved. However, it is just as notable that a vast amount of work has been accomplished, in the form of IMO instruments, through ILO instruments, through guidance provided jointly by IMO and ILO, as well as in research outside the Organization. In order to assist the development of a marine safety culture by addressing the issue of "fatigue", the Correspondence Group has given some consideration to the need for additional practical guidance to address each of the fatigue factors identified in the Annex to Assembly Resolution A.772(18). Such work would need to be conducted in cooperation with the ILO, perhaps through the Joint IMO/ILO. Committee on Training (JCT) which has addressed fatigue in the past. These ideas would be further explored if the Committee authorizes the intersessional Correspondence Group to continue working on issues relating to fatigue. In addition to the above terms of reference the Correspondence Group was also asked to review and take appropriate account of Australia's study into fatigue, stress and occupational health of seafarers. All members of the Correspondence Group received a copy of the study and most found the information (MSC 70/INF.2) of benefit in presenting various factors of fatigue and methods to reduce or control its onset. This study should be examined further as source material, along with other research, to assemble international practical guidance. As with annex 1 of MSC 70/13, the Correspondence Group was not able, in the time available, to consider this document in detail or in connection to other studies. This matter would be taken up again if the Committee agrees on continuing the intersessional Correspondence Group on Fatigue.

GUIDANCE ON FATIGUE MITIGATION AND MANAGEMENT

The Maritime Safety Committee (MSC), at its seventy-first session (19 to 28 May 1999), considered the issue of human fatigue and the direction where IMO efforts should be focused. In this regard, it was agreed that practical guidance should be developed to provide appropriate information on fatigue to all parties concerned. This guidance should inform each party that has a direct impact on vessel safety (naval architects, owners/operators, masters, officers, ratings, training institutions,etc.) of the nature of fatigue, its causes, preventive measures and countermeasures.

Fatigue can be defined in many ways. However, it is generally described as a state of feeling tired,

Weary, or sleepy that results from prolonged mental or physical work, extended periods of anxiety, exposure to harsh environments, or loss of sleep. The result of fatigue is impaired performance and diminished alertness. The effects of fatigue are particularly dangerous in the shipping industry. The technical and specialized nature of this industry requires constant alertness and intense concentration from its workers. Fatigue is also dangerous because it affects everyone regardless of skill, knowledge and training. Effectively dealing with fatigue in the marine environment requires a holistic approach. There is no one-system approach to addressing fatigue, but there are certain principles (e.g. lifestyle habits, rest, medication, workload.) that must be addressed in order to gain the knowledge and the understanding to manage this human element issue.

The guidelines provide information on the potential dangers of fatigue and ultimately the effect on the health and safety of the personnel working on ships. The guidelines contain information on the symptoms and causes of fatigue, and address solutions to combat fatigue in order to reduce associated health problems and prevent fatigue-related accidents from occurring. The guidelines have been divided into nine modules: Fatigue, Fatigue and the Rating, Fatigue and the Ship's Officer, Fatigue and the Master, Fatigue and the Training Institution and Management Personnel in charge of Training, Shipboard Fatigue and the Owner/Operator/Manager, Shipboard Fatigue and the Naval Architect/Ship Designer, Fatigue and the Maritime Pilot, Fatigue and Tugboat Personnel, Fatigue related documentation.

"A reduction in physical and/or mental capability as the result of physical, mental or emotional exertion which may impair nearly all physical abilities including: strength; speed; reaction time; coordination; decision making; or balance." It is definition of Fatigue

The most common causes of fatigue known to seafarers are lack of sleep, poor quality of rest, stress and excessive workload. There are many other contributors as well, and each will vary depending on the circumstance (i.e. operational, environmental). There are many ways to categorize the causes of fatigue. To ensure thoroughness and to provide good coverage of most causes, they have been categorized into 4 general factors.

- Crew-specific Factors
- Management Factors (ashore and aboard ship)
- Ship-specific Factors
- Environmental Factors

Fatigue is a problem for all 24-hour a day transportation modes and industries, the marine industry included. However, there are unique aspects of seafaring that separate the marine industry from the others. It must be recognized that the seafarer is a captive of the work environment. Firstly, the average seafarer spends between three to six months working and living away from home, on a moving vessel that is subject to unpredictable environmental factors (i.e. weather conditions). Secondly, while serving on board the vessel, there is no clear separation between work and recreation. Thirdly, today's crew is composed of seafarers from various nationalities and backgrounds who are expected to work and live together for long periods of time. The operational aspects associated with shipping become more complex compared with standard industries, for reasons such as: variety of ship-types, pattern and length of sea passage, port-rotation, and length of time a ship remains in port. All these aspects present a unique combination of potential causes of fatigue.

Fatigue is dangerous in that people are poor judges of their level of fatigue. Fatigued individuals become more susceptible to errors of attention and memory (for example, it is not uncommon for fatigued individuals to omit steps in a sequence). Chronically fatigued individuals will often select strategies that have a high degree of risk on the basis that they require less effort to execute. Fatigue can affect an individual's ability to respond to stimuli, perceive stimuli, interpret or understand stimuli, and it can take longer to react to them once they have been identified. Fatigue also affects problem solving which is an integral part of handling new or novel

tasks. Fatigue is known to detrimentally affect a person's performance and may reduce individual and crew effectiveness and efficiency; decrease productivity; lower standards of work and may lead to errors being made. Unless steps are taken to alleviate the fatigue, it will remain long after the period of sustained attention, posing a hazard to ship safety.

The most powerful means of relieving fatigue is to get proper sleep and to rest when appropriate. However, a number of things have been identified as potentially providing some short-term relief. Note, however, that these countermeasures may simply mask the symptoms temporarily —the fatigue has not been eliminated. An interesting challenge, an exciting idea, and a change in work routine or anything else that is new and different. Bright lights, cool dry air, music and other irregular sounds, any type of muscular activity, controlled, strategic naps, conversation, caffeine (encountered in coffee and tea, and to a lesser extent in colas and chocolate) may combat sleepiness in some people for short periods. However, regular usage over time reduces its value as a stimulant and may make you more tired and less able to sleep.

Maritime Education & Training in Ukraine

Mr. Igor PISHENIN
Ukraine (2013)

Ukraine has an advantageous geographical position and the highest transit rating. The development of transport corridors and their entry into international transport systems is a priority direction for the development of the transport complex in Ukraine.

Has access to 2 seas (Black and Azov). The length of the sea borders is 1355 km (along the Black Sea - 1056.5 km, along the Azov Sea - 249.5 km, along the Kerch Strait - 49 km).

Ukraine has the most powerful port potential among all countries of the Black Sea. On the coast of the Black and Azov Seas there are 18 sea trading ports and 12 port points. The most significant of sea trading ports of Ukraine are Odesa, Illichivsk and Yuzhny ports. They account for approximately 60% of the total turnover of Ukrainian sea trading ports.

The volume of cargo handling in the seaports of Ukraine for 2016 amounted to 131 million 998 thousand tons. Container turnover amounted to 588 542 TEUs. Processing of export cargoes amounted to 100 million 395 thousand tons, import - 16 million 013 thousand tons. Transshipment of transit cargo amounted to 10 million 370 thousand tons, coastal cargoes - 5 million 220 thousand tons. (source: Administration of seaports of Ukraine).

Sea transport is a strategic potential of the Ukrainian economy. One of the main priorities of transport complex development is the system of training of seafarers.

As of today, according to various estimates, about 80,000 Ukrainian seafarers working on the world fleet. According to BIMCO, Ukraine ranks 5th in the world in the number of seafarers (source: Manpower Report 2015 Executive Summary Final).

Education and training of seafarers in Ukraine is carried out by 4 Universities and the Academy. They also include 2 Institutes and 4 Colleges. All establishments are state-owned and controlled by the Ministry of Science and Education of Ukraine.

In 2017, about 4,000 cadets were enrolled in education in the marine educational institutions of Ukraine to become future deck and engine officers.

Specialized courses are conducted by training centers. About 90% are private training centers. The training centers are controlled by the State Service of Ukraine for Transport Safety, on behalf of the Ministry of Infrastructure of Ukraine.

These Institutes and centers are located in the cities: Odessa, Kiev, Kherson, Nikolaev, Mariupol and Izmail.

The educational system of training marine industry professionals Ukraine introduced the European Credit Transfer System - ECTS (European Credit Transfer System), designed to provide some single interstate procedures for measurement and comparison of learning outcomes, their academic recognition and re standings. The aim of ECTS is to support the academic recognition of learning outcomes throughout the European Community. The system is used between educational institutions, as well as between educational institutions - partners from different countries. ECTS is based on the principles of mutual trust of participants and provides for the implementation of rules regarding all its parts: ECTS loans, ECTS-assessments, agreements on training and credit summation.

All training and certification of seafarers in the country is carried out in full compliance with the

requirements of the STCW Convention (including all amendments), IMO model courses and national requirements.

The system of training and certification of seafarers in Ukraine is approved by the International Maritime Organization (IMO) (MSC.1/Circ.1163/Rev.10 and MSC.1/Circ.1164/Rev.18) and the European Maritime Safety Agency (EMSA), which allows our specialists to work in various foreign companies, including ships under the flags of the countries of the European Union.

All the maritime educational institutions of Ukraine have implemented the Quality Management System according to the standard ISO 9001. The corresponding audit is continuously conducted by the classification societies (Bureau Veritas, Det Norske Veritas, Shipping Register of Ukraine, and others). In addition, according to the order, all the maritime educational institutions must implement the Quality Standards Systems in compliance with Regulation I/8 of the STCW Convention.

To obtain a Certificate of competency (CoC) for work at sea, Ukrainian seafarers needs:

- successfully graduate the Institute;
- successfully complete the refresher courses (with increasing level);
- successfully complete special training at the training center;
- sea going service on board ship (for engineers also practice in workshops);
- successfully pass a medical examination;
- successfully pass the State Qualification Commission;
- get a Certificate of competency from the Harbor Master.

All documents of the seafarer are checked for legitimacy in the State Register of Seafarers' Documents in accordance with I/2 of the STCW Convention.

As of 01.01.2018 in Ukraine issued 64163 Certificate of competency for Officers and 49996 Certificate of proficiency for Ratings.

The work of the State Qualification Commission (SQC) is provided by the Inspectorate for Training and Certification of Seafarers. The SQC functions in the cities of Odessa, Kiev, Izmail, Kherson, Mariupol. The SQC includes captains and chief engine with valid maritime documents and work experience of at least 5 years in top positions.

Certificate of competency and Certificate of proficiency for work at sea are issued by the Harbor Master in the cities of Odessa, Ilyichevsk, Izmail, Nikolayev, Kherson, Mariupol.

The general structure of officer training, as well as the certification system for Captains, Watch Officers, and Engine Officers is described in the regulations of the Ministry of Infrastructure and the Ministry of Education and Science.

The training of specialists for the marine sector (no seafarers) is carried out by 3 Universities (in the cities of Odessa and Nikolayev), which include 2 Colleges. All establishments are state-owned and controlled by the Ministry of Science and Education. They train marine lawyers, port managers, personnel for coastal infrastructure, shipping companies and the shipbuilding industry. There is also the Institute of Postgraduate Education, which conducts relevant courses for the marine industry and is managed by the Ministry of Infrastructure.

In addition, there are 2 College (Odessa and Kherson), which train seafarers for the fishing fleet in accordance with the requirements of the STCW-F Convention. These establishments are state-owned and controlled by the Ministry of Science and Education of Ukraine and the State Fisheries Agency of Ukraine.

Conclusion. In Ukraine, a good system of education and training of seafarers. Today, the country fully meets all the requirements of the STCW Convention with all amendments. We will keep the leading place for seafarers in the world fleet, for this we will specifically focus on the quality of training of seamen.

Ports and Emission reduction

Mr. Hossame Eldin Bakr MOHAMED
Egypt (2016)

Global Warming and shipping share

Global Warming defined as the increase of average temperature near the Earth's surface globally. Through the last 100 years the Earth's surface air temperature had increased less than 1.3° Fahrenheit(F) or 1° Celsius(C), causing climate change (Venkataramanan & Smitha, 2011). According to "the U.S. National Oceanic and Atmospheric Administration" Warming is strongest at the poles, moreover, at the last years temperature increased 9°F/5°C at the Arctic and the Antarctic. Furthermore, it cause hurricanes and change the frequency of droughts and floods. Reason behind global warming is mainly fossil fuel emissions caused by human, which release high amount of CO2, water vapor, SOx, and NOx. These gases with other gases as methane and ozone create Green House Effect, which works on keeping heat radiation inside the atmosphere causing global warming.

Shipping industry share in CO2 global emissions is 3.3% (international shipping 2.7%, domestic shipping and fishing 0.6%), (M.Insel, 2016). In-addition to a share of SOx, NOx, and Particular maters accordingly the international maritime organization (IMO) set a regulatory framework to increase and manage energy efficiency to reduce and control air pollutant and Green House Gases (GHG) through the adaption OF MARPOL Annex VI, on 15 July 2011 to set a global cap by introducing technical code to marine engines in phases to reduce the emissions. Moreover, IMO adapted several measures to mitigate and reduce ship emissions through energy management and efficient ships using designing and operating measures (IMO, 2016).

Back ground

Exhaust emissions from marine diesel engines largely comprise of nitrogen, oxygen, carbon dioxide and water vapor with smaller quantities of carbon monoxide, oxides of sulfur and nitrogen, partially reacted and non-combusted hydrocarbons and particulate material, as shown in Figure 1. A similar composition will be apparent under both steady state and transient operating conditions, however, quantitative differences are likely between steady state and transient modes of operation.

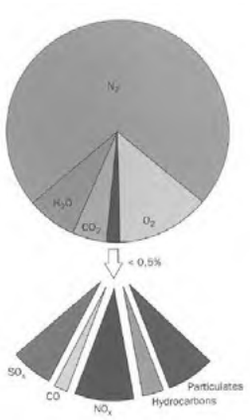


Figure 1: Marine diesel engine exhaust emission compositions

Source: Lloyds Register

The IMO set a target to reduce shipping CO2 emissions on all ships by a maximum of 75% using designing/technical and operational measures by 2050, moreover in was indicated that emissions from shipping could grow by between 50% and 250%, depending on future energy developments and economic growth (IMO, 2015). Shipping industry is the most efficient mode of transportation, and dominates nearly 90% of the trade (UNCTAD, 2015), accordingly active emissions control and energy efficiency became a vital operational strategy that shipping lines must flow to reduce CO2 emissions and other air pollutant.

The target set by the IMO is not an easy target; to achieve such target the contribution should be from all parties of the industry. Shipping and ports are linked together accordingly ports have a role in reduction of shipping emissions.

Port role in Emission reduction

The shipping activity nowadays is struggling with the harsh market situation, in particular on the box carrier. The shipping lines currently deployed a bigger ship to enjoy the economics of scale of the operation. Further, with the technology applied to the maritime industries, the ship was able to be more efficient through trim optimization, weather routing, and speed optimization. However, those efforts seem has a burden on the port side where the development of the port is not as fast as the development of ship itself.

Energy efficiency and management in the operation process extend outside the limits of the ship in other words ports have an influence on energy efficiency in shipping through ship port interface.

Through the ship port days during the year one ship produces approximately 272.51 tons of CO_2. By multiplying this figure by the number of ships within the international fleet we can recognize that the fleet can produce more than 15 million ton of CO_2 in the ports only.

Shipping and ports are linked together, accordingly, efficiency of the terminal is reflected on the fright rates set by the shipping companies, dwelling time for the cargo and ships turn-around time (Nyema, 2014). The increase in time will case need for increase in ship speed which will lead to increase fuel consumption and increase the CO_2 emissions. According to the simulation carried-out by Moon and Woo in 2014, with respect to the assumption that was set for the simulation. It was stated that the reduction in port time for a ship by 30% have an impact on reduction for the annual fuel consumption by 36.8% through the speed reduction. While if the port time increased by 30% will cause increase in fuel consumption by 30.7% due to increase of speed (Moon & Woo, 2014).

Ports have an important role in emission reduction from shipping by providing cold ironing for shipping which preferred to be from a clean energy source, and increasing the efficiency to reduce waiting and berth time to allow more sea time for the vessels to reduce speed to consume less and produce less emissions as shown in figure 2.

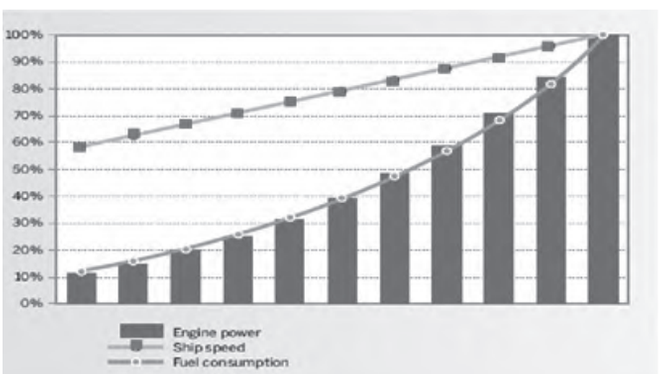


Figure 2: relation between ship speed and fuel consumption

Source: Dagkinis & Nikitakos, 2015

On the other hand ports need to reduce its own emission which produced by port activities by hybrid assist tugs, Clean truck program, and electrical Handling Equipment instead of diesel equipment, which prefer to be supported by Green energy source.

Egypt contribution in shipping emission reduction through ports

One of the solutions that was proposed in the last few years and proved its effect is: the Alternate marine power or AMP, as the name suggests, refers to the usage of other power supply sources to feed power to the ship. Such AMP is used when the ship is halting at a port so that the engines of the ship (working on diesel) do not need to be used unnecessarily. This in turn reduces the emissions by the ships by a great margin. This process is also known as cold ironing.

The concept of the cold ironing is being applied to the Egyptian ports and already started in Damietta port at the north cost of Egypt, and later on all the Egyptian ports will offer the cold ironing. Cold ironing will be supplied from the national grid which is heading to increase the renewable energy share year after anther accordingly Egypt intends to supply 20 percent of generated electricity from renewable sources by 2022, with wind providing 12 percent, Hydro power 5.8 percent, and Solar 2.2 percent. The solar energy plan aims to install 3.5 GW by 2027 (export.gov, 2017).

Presently Egypt is building a new wind farm in Suez which mainly will supply the power needs for The Suez Canal Economic Zone (SCZone) which contain Ain Sokhna Port and East Port Said Port. Moreover, East Port Said Port Planned expansions will increase the capacity for handling maritime traffic and for offering related services with the support of Green energy source and green port equipment.

Improving the Future - Shipping Emission Reduction and Energy Efficient Technology

Mr. Mark Philip CASSAR
Malta (2017)

Introduction

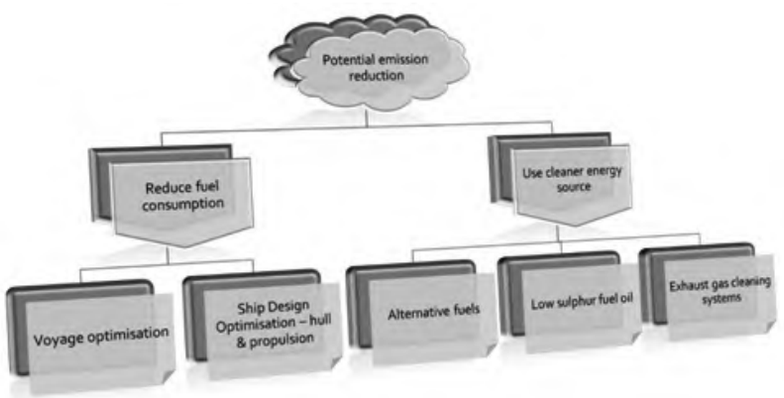
Exhaust gases are the primary source of emissions from ships. Carbon dioxide is the most important GHG emitted by ships. Both in terms of quantity and of global warming potential, other GHG emissions from ships are less important.

Mid-range emissions scenarios show that by 2050, in the absence of policies, carbon dioxide emissions from international shipping may grow by a factor of 2 to 3 (compared to the emissions in 2007) as a result of the growth in shipping.

A significant potential for reduction of GHG through technical and operational measures has been identified. Together, if implemented, these measures could increase efficiency and reduce the emissions rate by 25% to 75% below the current levels.

Shipping has been shown, in general, to be an energy-efficient means of transportation compared to other modes. However, not all forms of shipping are more efficient than all other forms of transport.

Potential Improvements in Energy Efficiency and Emission Reduction



Voyage Optimisation

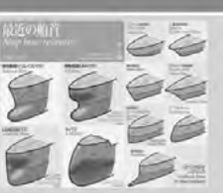
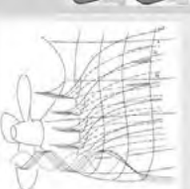
	Speed reduction	Fuel consumption savings
Trim		1-2%
Speed Optimisation	10%	20%
Weather Routing		3%
Autopilots		1%

Speed optimization, is mainly about slow steaming.

Weather routing depends a lot on climate and voyage length and route. But the optimal issue here is the Just in time arrival.

Ship Hull Design Optimisation

	Fuel cons. Saving	Notes	
High efficiency propeller design	3-10%	(eg: tip vortex)	
Air lubrication	10-15%	(value in terms of emission reduction)	 
Surface roughness	3-4%	Paint and material surface roughness	 
Fouling cleaning and repainting	10-12%		

	Fuel cons. Saving	Notes	
Bulbous bow redesign	Up to 21%		
Wake Equalisation & flow separation	0-10%	(eg: Grothues Spoiler, Schneekluth duct)	 
Pre/post swirl	2-6%	(eg: Stator fins, Mewis duct, Rudder Thrust Fins, Asymmetric Rudders, HHI Thrust Fins, Grin wheel)	 

	Fuel cons. Saving	Notes	
Rudder Improvements	1-4%	(eg: twisted rudder, Rubber/costa bulb, Propeller Boss Cap Fin, Divergent Propeller Caps)	
Renewable Energy	Up to 30%	Types of RE used: Kite, Flettner Rotor, PV. Effected by type of ship and kind of renewable energy technology	 
Material Selection		10% additional HTS can reduce steel weight by 1.5-2%. For deadweight limited ships, a 0.2-0.3% increase in deadweight and cargo payload is realized. Alternatively, fuel consumption per tonne cargo transported can be reduced 0.2-0.5%.	

Alternative Fuels

New/Clean Energy Generation:

Fuel cell

- Requires hydrogen rich fuel (gasoline, NG, Liquid propane, ethanol, methanol;
- Various system running temperature;
- Ideal for redundancy and combined power generation systems.

Battery

- Requires huge space and heavy for the proportion of power given;
- Not suitable to provide a substantial amount of power at a particular time;
- Batteries require very low voltage systems.

On-shore power supply

- An ideal solution for clean air in ports as ships will not be producing local air pollution;
- Huge electrical cabling infrastructure;
- Requires standardisation of power connection;
- One should see the chain supply of energy generation. A good perspective is to be able to generate renewable electricity.

Nuclear

- The fuel is uranium-zirconium or uranium-aluminium alloy (c15%U with 93% enrichment, or more U with less – eg 20% – U-235) or a metal-ceramic (Kursk: U-Al zoned 20-45% enriched, clad in zircaloy);
- Works on the heat exchanging principles;
- Fuel rods are designed to decay on ten years.

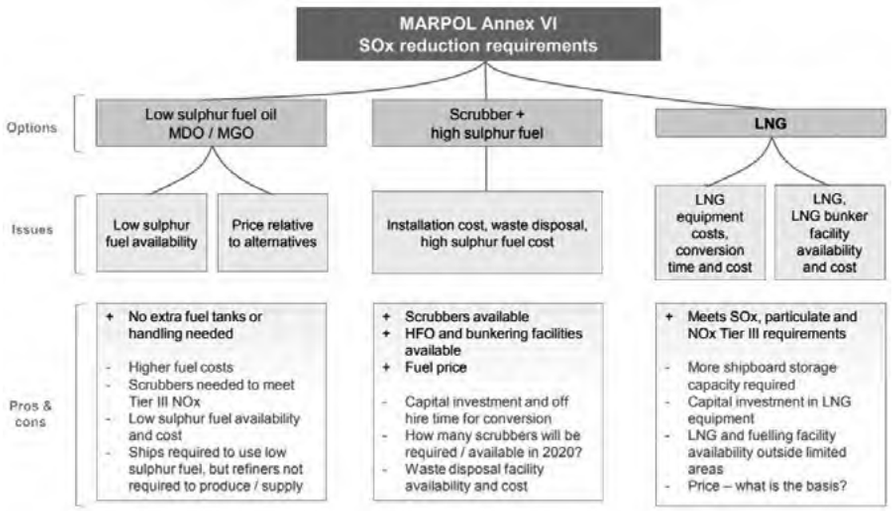
Types of fuels

Low-sulphur Fuel Oil:

- Easy to Refine into cleaner oil grades;
- More expensive fuels;
- No need to change onboard equipment.

Liquefied Natural Gas (LNG)

- Can reduce emissions drastically. SOx and PM 100%, CO_2 25%, NOx 80%;
- Can have issues with methane emissions, however, if handled well there should not be any issues;
- Some already installed dual fuel engines can be converted to gas;
- For a retrofitting, it can be very expensive to implement;
- Requires expensive and dedicated fuel storage tanks.



Emission reduction technology

Selective catalytic Reducer (SCR)

- Selective catalytic reduction is a catalytic reaction which uses ammonia to reduce oxides of nitrogen (NOx) into harmless nitrogen (N2) and water. Because of this function, the SCR catalyst is sometimes referred to as a NOx catalyst in the industry. It has been used in many industrial facilities including power plants and chemical refineries to reduce NOx emissions since the 1980's. It has been used in automotive applications since the mid 2000's to reduce NOx emissions from heavy duty and light duty diesel vehicles.
- It can be easily added as another stage in the exhaust cleaning system.

Scrubber

- Various types of scrubbers (open loop, closed loop, hybrid);
- Scrubbers are able to reduce emissions: SOx>90%, PM 60-90%, NOx<10%;
- The cruise sector has been a leader within the maritime community with respect to installation and operation of exhaust gas cleaning systems. To date, 99 ships have been fitted with an exhaust gas cleaning system representing more than 40% of the existing fleet. Retrofit installations are planned for 50 additional existing ships and commitments have been made to install systems on 29 new build projects.

Renewable Energy

Flettner Rotor:

- The principle on which the Norse power Rotor Sail operates is known as the Magnus effect. When wind meets the spinning Rotor Sail, the air flow accelerates on one side of the Rotor Sail and decelerates on the opposite side of the Rotor Sail. The difference in the speed of the air flow results into a pressure difference, which creates a lift force that is perpendicular to the wind flow direction. The same principle applies to rotating spheres and cylinders.

Kite:

- Have been used as experiments;
- Requires astern winds. Of certain force for effective use.

Solar:

- Practical for various types of ships;
- Effective as an secondary means of energy generation;
- Energy generated not directly used for propulsion;

• Requires unused deck space for installation.

Slide 11

Chart 1 shows the implementation of LNG and scrubbers for different type of ships. One can note that as per ship use, the trend varies accordingly. Even the amount of retrofitting or new builds indicate what is most practicable for each type of vessel to implement.

Chart 2 from Lloyds register various fuels can be used, combined with effective exhaust cleaning technology. The use of fuel in relation to the term of operation of the ship those also effect what technology to go for.

Chart 3 from DNVGL shows the pick-up in number of LNG fuelled ship along the years, some already in operation while others are on the order books.

From these charts it can be noted that scrubbers and LNG technology are currently the most preferred. The industry is still volatile where to go. Scrubbers are ideal solution to meet the requirements with a reasonable retrofit expense. On the other side LNG technology requires a considerable investment which make it ideal for a new built.

Other technologies are still in study phase, implemented through financed research projects. Trading area and type of vessel has its impact on the choice of technology used.

Fuel prices are also a factor leading to which type of fuel to use. Clean grades of oils can be a solution, especially when entering a regulated area for a one off or short voyage. However, the fuel price is considerable higher compared to normal used shipping fuel grades.

Regulations related to Emissions and Energy Efficiency

	Regulation
NOx	• MARPOL Annex VI Regulation 13 • NOx Technical Code 2008
SOx & PM	• MARPOL Annex VI Regulation 14
Exhaust Gas Cleaning Systems (scrubbers)	• Resolution MEPC.259(68) – 2015 Guidelines for Exhaust Gas Cleaning Systems
Selective Catalytic Convertors	• RESOLUTION MEPC.192(62) – 2011 Guidelines addressing additional aspects to the NOx Technical Code 2008 with regards to particular requirements related to marine diesel engines fitted with SCR Systems • RESOLUTION MEPC.260(68) - Amendments
Energy Efficiency for ships – EEDI, SEEMP, DCS	• MARPOL ANNEX VI – Chapter 4 • Regulation 20 - EEDI • Regulation 22 – SEEMP • MEPC.282(70) 2016 Guidelines for the development of SEEMP • Regulation 22A - Data Collection System for fuel consumption (MEPC 278(70) Annex 3)
Liquefied Natural Gas (LNG)	• International Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk. • International Code of Safety for Ships using Gases or other Low-flashpoint Fuels.

MARITIME ACCIDENT INVESTIGATION IN ALGERIA

Case study: Grounding of the Korean cargo ship M/V LUJIN 2 the 11th of April 2005 at "Ras Atia" (JIJEL - ALGERIA)

Mr. Mohamed TAALBI
Algeria (2014)

I. Introduction

Since the last century, maritime accidents have been significantly contributing to the enhancement of safety of life at sea and the protection of the marine environment, being usually the reason behind the adoption of new standards and safety regulations, or simply the trigger to break away from bad habits and acquire professional maturity within the maritime industry. By way of example, it should be enough to cite the sinking of the Titanic for the adoption of the first version of the SOLAS convention, characterized nowadays as a pillar of the international regulatory regime for quality shipping.

Following the occurrence of every very serious marine accident, a marine safety investigation shall be conducted, not to apportion blame and determine liability, but for determining the circumstances of the accident, indentifying causal factors and making safety recommendations as necessary, with the objective of preventing the recurrence of similar events in the future.

In this regard, the International Maritime Organization, as a universal regulatory framework creator for the shipping industry, adopted a Casualty Investigation Code to provide a common approach for states to adopt in the conduct of marine safety investigations into accidents occurring to their ships or within their territories.

Algeria being an IMO member state ratified numerous international maritime conventions, including the ones addressing marine safety investigations, such as SOLAS, MARPOL and UNCLOS, and has implemented the set of provisions through its national legislation.

In this context, and to fulfill the country's responsibility bound by those international conventions, the Algerian Maritime code sets up a Central Safety Commission (CSC) for, amongst other tasks, conducting marine safety investigations onboard vessels at sea.

This paper aims to briefly present the process of investigating maritime accidents in Algeria and to highlight their impact on maritime safety within the country. In this regard, the marine safety investigation conducted by the Central Safety Commission into the grounding of the M/V LUJIN 2 at 'Ras Atia' is taken as example.

II. Maritime accident in Algeria (some statistics)

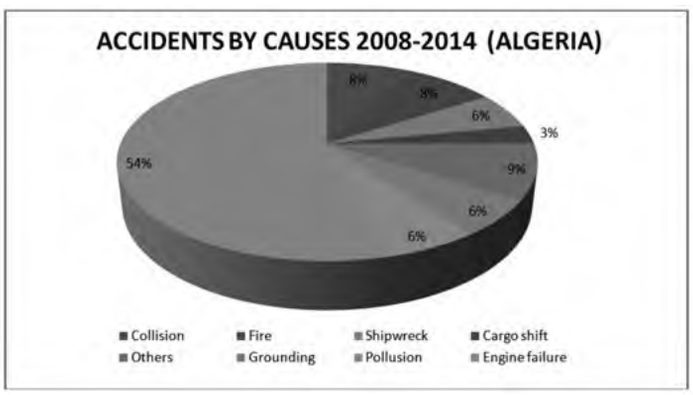
Algeria with its 1200Km coastline through which transit 10% of the global maritime traffic is considered vulnerable and potential scene for maritime accidents, particularly the eastern coast reputed for its hazardousness during adverse weather conditions.

Like other countries within the mediterranean, Algeria has experienced serious maritime accidents in the last fifty years, occurring both to Algerian ships and to foreign vessels in the Algerian waters.

In 1978, the Algerian flagged Ro-Ro ship M/V Collo sank near the Spanish coast carrying with it the 22 crew members between dead and missing. The same tragedy repeated 26 years later in 2004, with the cargo ship M/V Bechar struck off the list of ships flying the Algerian flag after its sinking near the port of Algiers

causing the loss of 18 human lives among the crew. During the same period, the Algerian cargo ship M/V Batna ran aground on the bay of Algiers and caused serious damage to the marine environment. Not to forget the grounding of the North Korean cargo ship M/V LUJIN 2 at Ras Atia causing the loss of 8 crew members in 2005, and the sinking of the Togolese cargo ship M/V Karim Junior at the entrance of the port of Ténès, with a death toll of 8 crew members, in 2009.

During the period from early 2008 to 2014, thirty-eight (38) maritime accidents involving merchant vessels> 500 GRT have been recorded by the Algerian maritime authorities. The following Figure illustrates the classification of those accidents by causes.



III. The Central Safety Commission

The Central Safety Commission (CSC) is the authority in charge of safety investigations within Algeria. Whenever a marine casualty occurs into Algerian ships or foreign vessels within the Algerian waters, the members of the CSC gather at the National Coast Guard headquarters, in order to deal with the event and to set up the commission for carrying out, in accordance with the national and international regulations into force, the marine safety investigation, referred to as 'Technical and Administrative Investigation' within the country. The Central Safety Commission is chaired by the Director of the Merchant marine and Ports. It includes Three (03) representatives from the Ministry in charge of the Merchant Marine – the Ministry of Public Works and Transports, three (03) representatives from the National Coast Guard Service, one (01) representative from the Ministry of Posts and Telecommunications, one (01) representative from the General Directorate of Fisheries, one (01) Medical Examiner of seafarers appointed by the Ministry of Health , the General Director of the National office of Marine Signalling, and the Consul territorially competent. Nevertheless, for the needs of the investigation, the CSC can appeal to any qualified person or organization able to bring it his assistance.

IV. Grounding of M/V LUJIN 2 at 'Ras Atia' (Case study)

As the main part of this humble work, the following section briefly presents the step by step approach followed by the central safety commission while carrying out, in accordance with the IMO investigation code, the marine safety investigation into the grounding of the M/V LUJIN 2, in order to shed light on the causes of the accident first, then to outline the recommendations made, and finally to highlight the resulting efforts made by the Algerian government to strengthen the maritime safety within the country.

1. Summary of the accident

The Korean registered cargo ship M/V LUJIN 2, in commercial call at the port of Djen-Djen in Jijel (Algeria) for unloading 3510 out of 5618 tons of sodium carbonates and 320 of 1550 wood bundles, stopped

its unloading operations started on March 30, 2005 and left the port on April 09, 2005 at 1:30 to shelter in the roadstead of the aforementioned port, due to the bad weather conditions announced by a special weather statement (SWT) the day before. The ship remained at anchor until April 10, 2005 at 21:30, then weighed anchor and headed to the northeast out to sea. On the 11th of April, 2005 at 6:50, following an engine failure, the vessel drifted dangerously toward the shore, at a place called 'Ras Atia' (37 ° 01.00 N and 006 ° 15 'E). The stern section of the vessel struck the ground in a rocky area, hardly accessible from the shore side, at around 10:45 the same day. The ship broke in two, the fore part sunk while the rear one including the castle, by the force of the waves and the raging sea, impaled on a rock, preventing it from sinking and allowing the rescue of the surviving crew members thereafter. Seven (07) crew members drowned; their bodies were recovered, and fourteen (14) others were rescued, whereas one (01) crew member is still missing and presumed drowned.

The stern section of the M/V LUJIN 2 impaling on a rock near the shore

2. Main characteristics of the Vessel

The crew consisted of 15 Romanians, 06 Syrians and 01 Lebanese. Their number and functions were in accordance with the safe manning requirements.

Name of the ship	LUJIN 2
IMO number	7618349
Nationality	Korea Democratic People's Rep.
Port of registry	WONSAN
Call sign	HMXZ 7
Name and address of the ship-owner	ERICSON & WILLIAM SHIPPING CO, S. A PANAMA CITY, PANAMA
Type of the vessel	General Cargo – Multipurpose ship
Gross registered tonnage	6253 T
Net registered tonnage	4024 T
Vessel dimensions	130.86 m X 17.70 m X 8.10 m
Engine power	6100 HP
Date and place of building	1976 GALATI ROMANIA
Classification society	Korean Bureau of Classification

3. Technical state of the ship

The depositions of the crew members, including the captain and the chief engineer, as well as the examination of the documents relating to the technical condition of the vessel (declaration of entry) show on 30 March 2005, a good condition of safety equipments.

4. Detailed description of the circumstances of the accident

The following chronological events are based on the ship's entry declaration, the official log of the Harbor Master's Office of Djen Djen port, the masters' reports (LUJIN 2, tugs), the CNOSS's report (National center in charge of SAR operations) and the official transcripts of the interrogations and depositions of ship's crew members, as well as the audio recording provided by the Harbor Master's Office of Djen-Djen port.

This part relates only the detailed circumstances of the first phase of the accident, i.e. until the ship collided with the rock, necessary for a better understanding of how the causal route of the accident is drawn. The general emergency management and the SAR operations are discussed thereafter.

Narrative of the accident

01:30 the 09/04/2005, the M/V LUJIN 2 left the quay and dropped its anchor in the roadstead of Djen Djen port upon request of the harbor master's office, following the reception of a Special Weather Statement for the related region: Wind N-NW force 7 valid from 03:00 the 09/04/2005 until 12:00 the same day;

11:30 the 09/04/2005, all ships in harbor were instructed to leave the roadstead following a weather-related broadcast from Algeria Weather Services the 09/04/2005 at 05:30, announcing a strong swell NW 4-6 meters with peaks of 8-12 meters valid from 09/04/2005 at 21:00 until 11/04/2005 at 00:00;

NB: Ministerial instruction N ° 475 /CAB/ M of the 21/04/2003 prohibits anchorage in the bay of Skikda and Jijel (Djen Dejn port) during bad weather conditions.

05:45 the 10/04/2005, only M/V LUJIN 2 and M/V IEVOLI SPLENDER have still not left the roadstead and were instructed a second time by the harbor master's office to leave the roadstead immediately following the reception of a gale-warning weather forecast, the 10/04/2005 at 07:00 wind W-NW force 7;

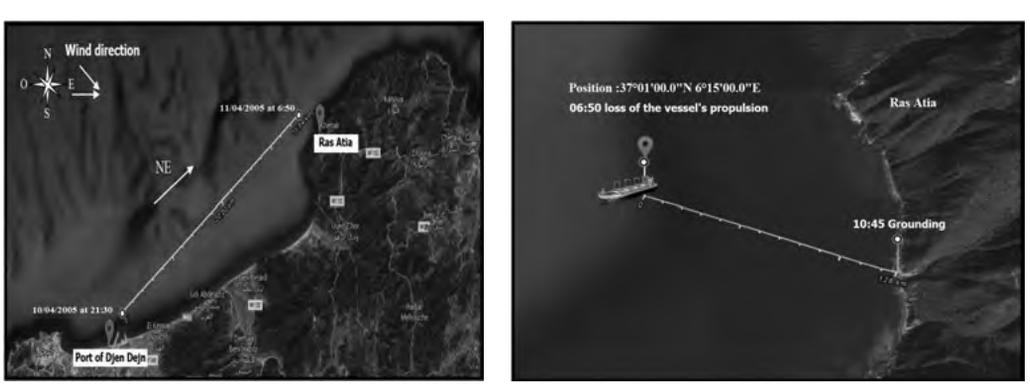
11:20 the 10/04/2005 the ship IEVOLI SPLENDER left the harbor of Djen-Djen and headed to Béjaïa, in the west;

The ship LUJIN 2, according to the captain's deposition, had a DO restriction that would have prevented it to sail safely out to sea, and hoping for lull, he decided to remain at anchor in the roadstead. However, once the ship started to drag its anchor, the master was obliged to weigh the anchor and sail out to sea to avoid drifting toward the shore.

21:30 the 10/04/2005, the ship LUJIN 2 left the roadstead of Djen-Djen after several attempts to weigh anchor and headed to the northeast.

06:30 the 11/04/2005, according to the master, the engine stopped suddenly, and all launching attempts failed as the ship was dangerously approaching the coast;

06:50 the 11/04/2005, the captain of M/V LUJIN 2 requested assistance to the harbor master's office of Djen-Djen reporting an engine failure at the position: 37 ° 01, 00'N - 006 ° 15'E at a distance of 0.7 nautical mile (1280 meters) from Ras Atia;



Vessels track before the grounding

06:55 the 11/04/2005, the harbor master's office called the CROSS Jijel to inform it of the distress situation of M/V LUJIN 2;

07:20 the 11/04/2005, CROSS Jijel called the harbor master's office and requested it to send the tugboat NIL 2, property of the port of Djen Djen, to assist the M/V LUJIN2;

07:25 the 11/04/2005, M/V LUJIN 2 contacted by VHF M/V MARINE SATURNE and asked for assistance, the latter replied that it cannot get closer;

07:45 the 11/04/2005, M/VLUJIN 2 dropped an anchor with 07 shackles in emergency at 70 meters from the shore;

08:00 the 11/04/2005, the harbor master's office called M/V LUJIN 2, this latter transmitted its anchorage position 37° 01,00'N -006° 15'E in front of Ras Atia at about 70 meters from the shore;

08:15 the 11/04/2005, the harbor master's office called M/V LUJIN 2, same anchorage position but it got dangerously close to the shore about 40 meters. The tug NIL II headed toward the M/V LUJIN 2 at the same time;

At 08:30 the 11/04/2005, the harbor master's office called M/V LUJIN 2, same anchorage position, the distance to the shore decreased to about 20 meters;

08:35 the 11/04/2005, the tug NIL II returned to the port due to the rough sea;

At the same time reception of a gale-warning weather forecast for the related region: wind NW force 8 to 9, sea very rough or high;

08:53 the 11/04/2005, CROSS Jijel contacted the port of Skikda for the intervention of its tugs;

09:52 the 11/04/2005, CROSS Jijel was informed by RCC Algiers (Rescue Coordination Center) of the take-off of the KAMOV helicopter from the military base of Boufarik, in the west;

10:00 the 11/04/2005, the tug MAZAFRAN 6, property of the port of Skida, headed toward M/V LUJIN 2;

At the same time, M/V LUJIN 2 informed the harbor master's office by VHF that the ship's rudder was touching the bottom;

10:05 the 11/04/2005, the captain of M/V LUJIN 2 requested a helicopter for assistance;

10:28 the 11/04/2005, CNOSS Algiers was informed of the situation of the M/V LUJIN 2;

10:38 the 11/04/2005, the tug MAZAFRAN 6 returned to the port due to the rough sea;

10:46 the 11/04/2005, M/V LUJIN 2 requested again by VHF helicopter assistance informing that the ship was hitting the rocks;

10:55 the 11/04/2005, last contact with M/V LUJIN 2;

11:04 the 11/04/2005, the M/V LUJIN 2 under the effect of rough sea and breaking waves, breaks in two. Its front part sunk, and the rear one impaled on a rock;

11:25 the 11/04/2005, CROSS Jijel informed the harbor master's office of the return of the KAMOV helicopter to military base of Boufarik due to adverse weather conditions;

The crew members of the M/V LUJIN 2 took refuge in the aft part of the ship and attempted to grasp onto every accessible mean to save their lives. They were desperately waiting for help to arrive in that hardly accessible area. All attempts to contact the crew members (VHF - cell phone) remained unsuccessful.

From that time, the M/V LUJIN 2 was considered as lost as well as its cargo and all the efforts and actions undertaken were focused on the rescue of human lives from both shore and sea sides, especially by air means.

It should be noted that CNOSS Algiers asked assistance from MRCC/Madrid, which sent immediately two SAR units - one aircraft type Aviocar and one helicopter type PUMA from Palma (Spain). It is also unfortunate to remind that two (02) Algerian civil protection officers lost their lives during the operations of search and rescue.

Management of the event by the port of Djen-Djen

Djen-Djen Port owns 03 tugboats NIL I and NIL II and ISSER 6, Although instructions were given to the tug NIL II to go out at sea, the latter could not cross the 580-meters wide pass because of the rough sea with high waves and strong swell.

NIL II trying to get out the pass of Djen Dejn port

The captain of the tug NIL II stated in his report that he could not continue his route toward the ship in distress and returned back to the port for the safety of the tug and the crew.

The geographical configuration (a 580-meter wide pass) and the vulnerability to adverse weather conditions of the port of Djen-Djen seriously affect the port's operations including the unloading of goods. For this reason priority is given by the Harbor Master's Office to the safety of the port facilities and the safety of the navigation around the port regardless the commercial imperatives. The significant number of days the port remains not operational due to adverse weather condition (37 days a year on average), shows this vulnerability.

The harbor master's office therefore implements those safety instructions and brings them to the attention of all ships calling at Djen Djen port. Those latter are requested to strictly observe them.

Management of the event by the CROSS Jijel

The CROSS's own means of assistance and rescue (semi-rigid boats / speedboats) could not intervene immediately after the distress message was broadcasted because of their non-adaptation to bad weather conditions.

The CROSS duly requested, on 11 April 2005, the provision of maritime means to the ports of Djen-Djen and Skikda but was informed that the adverse weather conditions did not allow the tugboats to leave the area beyond the pass of the port.

The CROSS then requested the intervention of aerial means from the RCC Alger (Rescue Coordination Center) but they could not take off because of bad weather conditions.

Therefore, it was officially appealed around 18:00 pm to the Spanish SAR, and two units took-off from Palma at 21:00 but could not intervene until the next day at 6:30 due to bad visibility in the accident site.

The two Spanish units were able to hoist 08 survivors.

V. Analysis, Observations and Comments

1. Navigation conditions

A. Meteorology

Between the 09 April at 01:30, date and time when the LUJIN2 left the quay to the roadstead of Djen-Djen port, and the 11 April at 10:45, date and time of its grounding, the local weather forecast services have

broadcasted several special weather statements announcing gale-warning, very rough sea and strong swell for the related region. The harbor master's office instructed all ships in the roadstead to weigh anchor and sail out to sea in accordance with the Ministrial instruction N ° 475 /CAB/ M of the 21/04/2003 that prohibits anchorage in the bay of Skikda and Jijel (Djen Dejn port) during bad weather conditions. Nevertheless, 34 hours has elapsed between the first request of the harbor master's office for all ships to leave the roadstead and the effective moment when the M/V LUJIN 2 weighed anchor.

B. Course choice

From 21:30 the 10/04/2005, time and date when the M/V LUJIN 2 weighed anchor, and 06:50 the 11/04/2005, time and date of the first call noticing the engine failure, the ship was proceeding northeast toward Collo. The course chosen by the captain put the ship in a dangerous situation, having the wind and the swell on the beam (wind and swell Northwest) while the sea was becoming rougher and rougher.

2. Organizational mismanagement and technical failure

On 05 April 2005, a fax was sent by the ship owner SAFE WAYS SHIPPING to the agent of the vessel MTA to ask about the procedures (price - means of delivery - method of payment) to be followed to supply the vessel with 30 tons of diesel oil (DO). A response from ''NFTAL carburant Branche'' specifying the requested information has been sent to the ship owner a day after; nevertheless, no action has been taken by either the ship owner or the ship's agent to place order for DO delivery according to NAFTAL procedures.

The vessel had on board a limited quantity of DO estimated at three (03) tones. This insufficiency of D.O was at the origin of the prolonged anchorage of the ship in the roadstead despite the repeated requests of the harbor master's office to weigh anchor and sail out to sea. This DO restriction is also the reason behind the choice of the route thereafter.

The Engine failure, according to the depositions of the Captain and the Chief Engineer would be due to the loss of prime of the cooling pump of the engine due to an air intake in the circuit. The course to the East chosen by the master with the strong wind and swell on the beam emphasized the ships' roll and therefore increased the risk of air intake in circuits.

3. Summary of causal factors

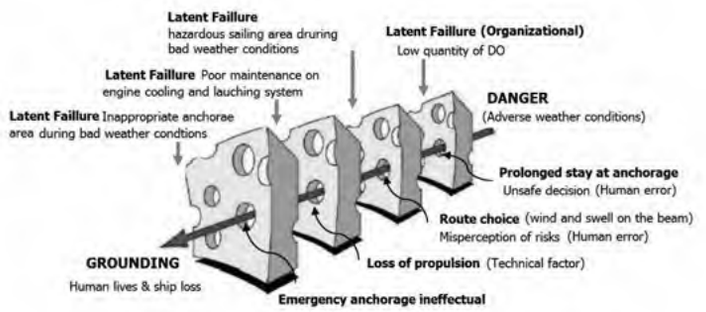
To sum up, the grounding of the M/V LUJIN 2 is the consequence of the hazardous prevailing conditions in the area together with a combination of numerous latent and active failures including technical failures, organizational mismanagement and human errors, in particular:

- The prevailing bad weather conditions in the area;
- The sudden stop of the engine;
- The prolonged anchorage (34 hours) despite the various requests of the harbor master's office, justified by the critical reserves of D.O;
- The master and the ship owner did not take action to appropriately bunker the vessel for safe sea-going
- The choice of the route made by the captain to the East (wind and swell on the beam increasing the ship's roll) ;
- Failure to respect the various instructions and security measures recommended by the Port of Djen-Djen;

From the analysis of this event, it is clear that the low reserve of DO considered critical by the captain and any professional in the maritime field is at the origin of the late decision to weigh anchor during deteriorating weather conditions. This DO restriction also contributed to the choice of the route (to the Northeast) by the captain, which in such a case would have been more prudent to head toward the North. In addition, the sudden loss of the vessel's propulsion left the ship vulnerable subject to the rough sea with strong wind and high waves,

causing it to drift toward the shore and to run aground.

In the following figure, the Swiss cheese model developed by Reason in 1997 is used to highlight the causal factors of the accident.



Application of the Swiss cheese model (Reason 1997) to the grounding of the M/V LUJIN 2

VI. Recommendations

After analyzing the circumstances and causes of the very serious accident, the following recommendations have been raised:

The strict application of ministerial instruction N ° 475 / M of 21/04/2003 prohibiting anchorage in the roadstead of Skikda and Jijel during adverse weather conditions;

Ship captains (ship owners) calling at national ports must scrupulously respect the port's safety rules and procedures;

The Ship agents must inform as quickly as possible and facilitate for all foreign vessels in Algerian ports the process, formalities and procedures regarding the various supplies necessary for the ships;

A coastal VTS (Vessel Traffic System) well equipped (ECDIS, AIS,GMDSS..) must be put in place to effectively monitor the maritime traffic within the Algerian coast and, in particular, to monitor the progress of ships in difficulty and provide them in a timely manner with relevant advices and technical assistance;

Personnel on board tugs shall be trained for assistance, towing and rescue during adverse weather conditions and rough sea. In addition, periodic training and exercises shall be carried out by the crews;

The Local Maritime Administration should strengthen controls as part of Port State Control (PSC), in accordance with the established and updated international standards (prevent restricted bunkering);

The Regional Center for Surveillance and Rescue Operations (CROSS) shall be provided with appropriate means of communication in accordance with the IMO standards;

There is an urgent need to provide the CNOSS and the CROSS with appropriate means able to carry out SAR operations at sea regardless the weather conditions. (Helicopters – Marine Rescue Boats…etc);

Establish a Maritime Assistance Service provided with sea-going salvage tugs to assist vessel in distress.

VII. Lessons learned/Conclusion

A marine safety investigation plays a primordial role in the strengthening of maritime safety. In fact, it allows answering the questions: why the accident happened and what should have been done to prevent it and to mitigate the consequences.

Following the marine safety investigation conducted by the Central Safety Commission into the grounding

of the North Korean cargo ship M/V LUJIN 2 in 2005 and the sinking of the Algerian cargo ship M/V Bechar a year before in the port of Algiers, causing the loss of 18 crew members, it has been clearly and officially stated that Algeria lacks of effective means for conducting successful search and rescue operations.

As a result, the Algerian government provided a significant budget for strengthening maritime safety within the country. Hence, for search and rescue purposes, three (03) powerful and sophisticated sea-going salvage tugs type UT515CD built by STX Europe has been acquired, along with six (06) helicopters AgustaWestland AW101 Merlin, four (04) helicopters AgustaWestland AW139 and four (04) helicopters Super Lynx MK130. Furthermore, many members from the navy have been sent to Norway for training in advanced search and rescue techniques.

In 2012, the French online journal 'Mer et Marine' stated that Algeria with its new acquired units became one of the most important countries within the Mediterranean region in the field of SAR operations.

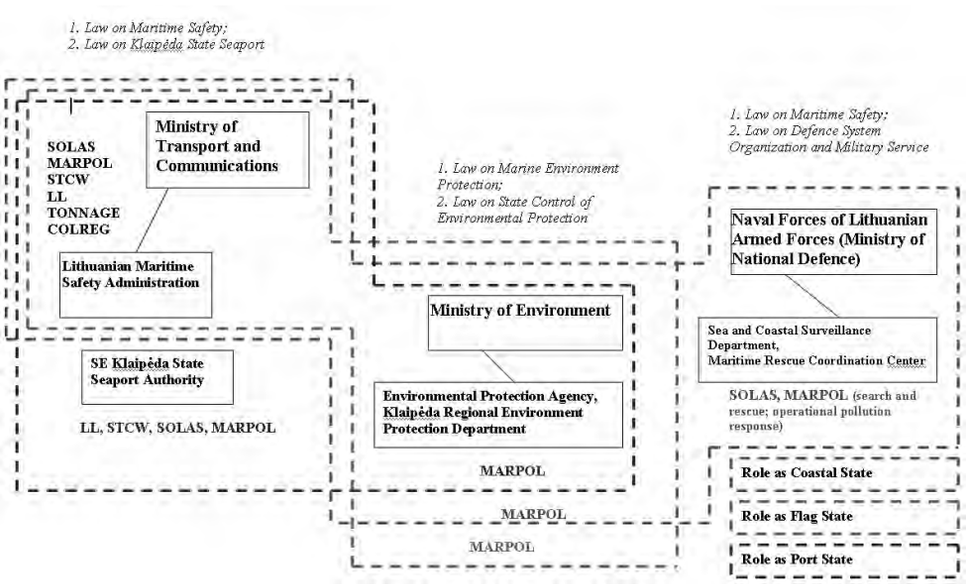
In fact, Since the strengthening and modernization of the Algerian SAR fleet, many near misses have been avoided, as was the case of the Panamanian cargo ship M/V Zeus I rescued by the Algerian new acquired sea-going salvage tug 'El Moundjid', which was about to run aground in the bay of Algiers due to the total loss of its propulsion, in 2015.

Algerian new acquired units for Search and Rescue purposes

Structural changes in Maritime Governance: Lithuanian case

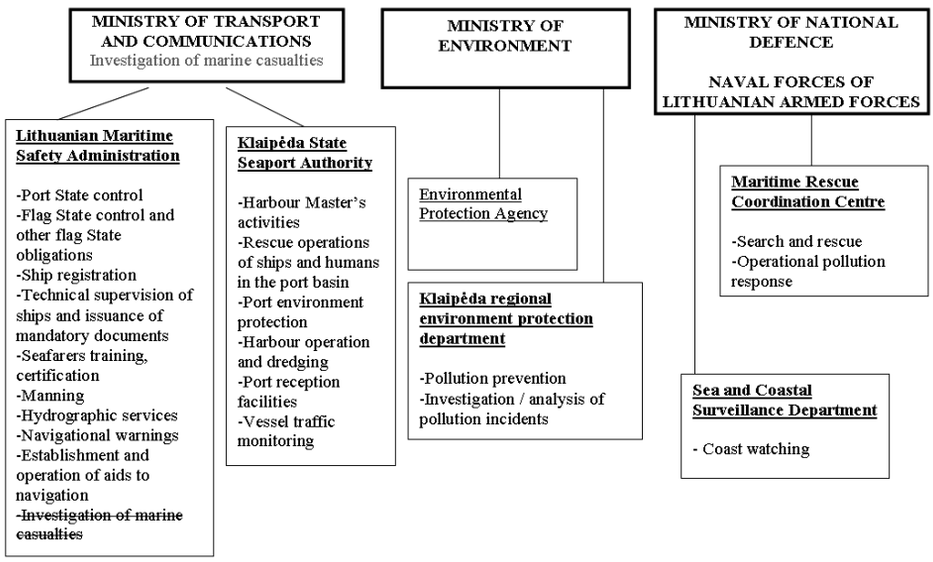
Mr. Robertinas TARASEVICIUS
Lithuania (1999)

In this presentation author is shortly presenting institutions forming Lithuanian Maritime Administration in the field of maritime transportation and being responsible for implementation of International Maritime Organization instruments on maritime safety, security and environmental protection. Although important role in the field of maritime safety, security and environmental protection is playing Ministry of National Defense (MRCC of Naval Forces responsible for SAR and oil pollution response) and Ministry of Environment (regional environmental protection agency is responsible for implementation of MARPOL, except certification of ships and Port State Control), the main actor in this field is Ministry of Transport and Communication who with the support of Lithuanian Maritime Safety Administration and Klaipėda State Seaport Authority is responsible for implementation of requirements enshrined in the international conventions such as SOLAS, MARPOL, STCW, LL, TONAGE, COLREG. Division of such responsibilities is specified in Picture 1.



Picture 1. Division of responsibilities between institutions

The overview of main functions of institutions forming Lithuanian Maritime Administration playing the role as a flag state, port state or coastal state is presented in Picture 2.



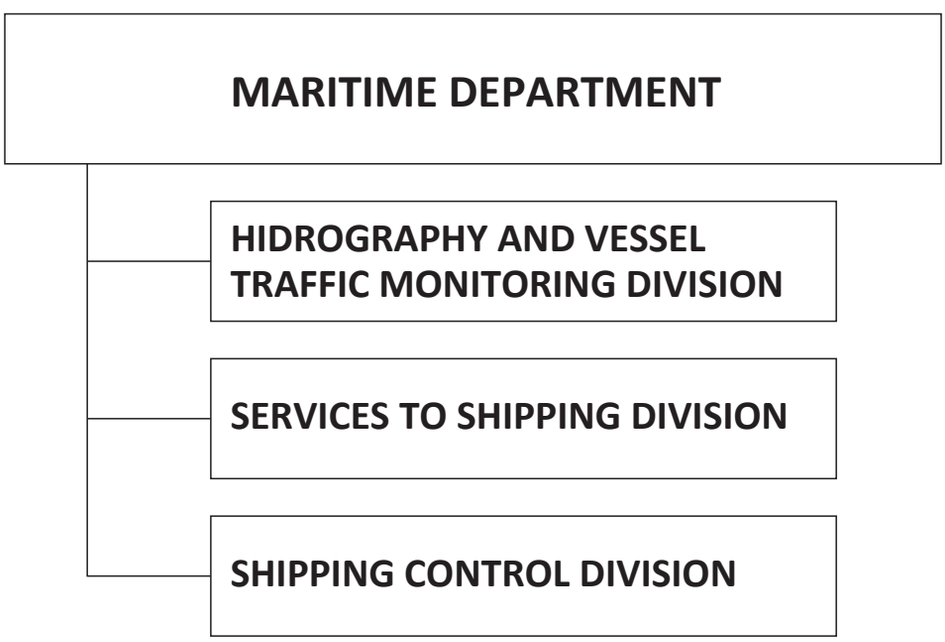
Picture 2. Main functions of institutions forming Lithuanian Maritime Administration

Secondly, some elements of policy in restructuring of Lithuanian civil service, witch was adopted by newly formed Government for the period from 2016 up to 2020 is presented. One of the adopted element of such a policy is the efficiency, meaning inter alia that all services to general public should be provided in efficient way by eliminating of waste and optimization of functions of institutions in question.

Thirdly, by decision of 31 May 2017 the Government of the Republic of Lithuania adopted Resolution No. 402 regarding the consent to reorganize the Lithuanian Maritime Safety Administration. It is foreseen that Administration will become a part of a new entity created by merging State Road Transport Inspectorate, State Railroads Inspectorate and Lithuanian Maritime Safety Administration into one organization (Lithuanian Transport Safety Administration) dealing with transport safety in three modes of transport – sea, road and railroad. Further, it is foreseen that Lithuanian Civil Aviation Authority shell join this new organization not later then 1 July 2018. This reorganisation will contribute to entities performance efficiency and substantial savings of resources, what in turn will contribute to enhancement of competency of civil servise.

Example of structural changes in the purview of Ministry of Transport and Communications, which in turn have affected Lithuanian Maritime Safety Administration is presented in Picture 3 and Picture 4, where Picture 3 shows structure of Lithuanian Maritime Safety Administration before structural changes and Picture 4 shows structure of Maritime Department of Lithuanian Transport Safety Administration which is descendant of role and functions of Lithuanian Maritime Administration.

Picture 3. Organizational structure of LMSA before restructuring



Picture 4. Organizational structure of maritime part (Maritime Department) of Lithuanian Transport Safety Administration

Finally, the new organization, namely Lithuanian Transport Safety Administration, is shortly presented and internet adress provided.

Lithuanian Transport Safety Administration
www.ltsa.lrv.lt
Lithuanian Maritime Safety Administration
www.old.msa.lt/en/home-page.html

MARITIME SECTOR IN TUNISIA PROBLEMATICS AND DEVELOPMENT STRATEGY

Mr. Chihebeddine BADIR
Tunisia (2015)

I. IMPORTANCE OF INTERNATIONAL MARITIME TRANSPORT

"Maritime transport is the backbone of global trade and the global economy" stated the previous UN Secretary-General Ban Ki moon in his message on world maritime day. This message provides strong statement that maritime transport is crucial for economic development by providing the essential support for commercial and industrial activities, foreign trade and transit traffic. In fact 90% of the world's trade is carried by sea. It is the most cost effective way to move large amount of goods and raw materials around the world.

Maritime transport is insured by a fleet of more than 50,000 vessels, the largest of which are bulk carriers and tankers.The world shipping fleet provides not only transport connectivity to global trade but also livelihoods to those working in maritime businesses. In 2016, world fleet capacity increased by an estimated 3.2 per cent, down from 3.5 per cent in 2015. Dead-weight capacity of the world commercial fleet was 1.86 billion dead-weight tons (dwt) in early 2017, worth $829 billion.

II. MARITIME TRANSPORT IN TUNISIA

The maritime sector plays an important role in the development and promotion of Tunisia's foreign trade. In fact, 98% of Tunisian foreign trade is carried out by sea through the 7 ports. In 2015, these ports handled 28 million tons, 729 thousand passengers and 297 thousand cars.

The maritime sector is home of nearly 560 companies engaged in the maritime professions, freight forwarders and providing nearly 6,000 direct jobs.

Tunisian maritime fleet is composed of 8 commercial vessels owned and 3 ships chartered in time (provide 11% of traffic).

- 6 ferries between Sfax and Kerkennah.
- 12 tugboats
- 5 supply vessels
- 12,000 fishing and recreational units

The maritime sector has undergone numerous reforms and has undertaken several programs to modernize and adapt port infrastructure, improve quality of services and develop national fleet. In this context, Tunisia has made a commitment to bring the legislative and regulatory framework of the maritime sector into line with European standards and the reinforcement of maritime safety and security.

III. ANALYSIS OF MARITIME ADMINISTRATION AND AUTHORITY

Since 1998, all the powers of Maritime Authority and Administration have been transferred to the Office of Merchant Marine and Ports (OMMP).

The General Directorate of Merchant Navy has been entrusted with the legal and economic responsibilities

of control, coordination and cooperation, and participates in operational actions with other departments and structures concerned. Therefore, the Tunisian maritime authorities are composed of the following organs:

- General Directorate of the Merchant Marine (DGMM) of the Ministry of Transport (pursuant to Decree 2014-410 of 16 January 2014 - the Directorate General of Maritime Transport and Maritime Ports of Commerce (DGTMP);
- Office of the Merchant Marine and Ports (OMMP) of the Ministry of Transport.

The General Directorate of Maritime Transport and Ports (DGTMP) is a public administration under the Ministry of Transport, responsible in particular for:

- The general maritime and port policy;
- Regulation and organization;
- Control and coordination;
- International relations.

The Office of Merchant Marine and Ports exercises the attributions confided to the maritime authority and administration as well as the tasks of port authority in accordance with laws in force.

Problems related to these organizations:

* There is an overlap in competency needed to be clarified in the legal framework adapting the respective responsibilities of the General Directorate of the Maritime Transport and Ports and the Office of Merchant Marine and Ports.
* The existence of conflicts of interest within the Office of Merchant Marine and Ports between port issues and the strict exercise of the missions of the maritime authority.
* Weakness in coordination of interventions of different entities in charge of coastal state missions.
* Deficiencies in monitoring the evolution of international regulations.

IV. MARITIME LEGAL FRAMEWORK

Tunisia has developed its maritime legislation through years. Many national maritime laws have been implemented since 1989.

Moreover, Tunisia ratified international maritime Conventions such as

SOLAS 74 / Protocols 78 and 88

-LL 66 / Protocol 88

-COLREG 72

-STCW 95 and STCW - F 95

-SAR 79

-SALVAGE 89

The MLC convention is ratified on April 2017.

The other conventions such as BWM 2004, wreck removal and LLMC conventions are in progress.

V. STRATEGY FOR THE DEVELOPMENT OF MARITIME SECTOR IN TUNISIA

Regarding the importance of maritime and port sector in the Tunisian economy and the new requirements of international maritime conventions, there is obligation to adopt strategy. This strategy is needed to strength

maritime administration and authority, maritime safety, security and the preservation of marine environment in Tunisia.

The strategy can be elaborated in 2 levels:

- Investment level:
  - Investment program for the Tunisian Navigation Company (2 bulk carriers, 1 ro-ro, 1 container ship)
  - Modernization of the current port infrastructure and implementation of extension projects (Port of Rades, LAZ of Rades, Port of Sfax, Port of Zarzis)
  - Creation of 2 latest port (Enfidha for containers and La Skhira for petrochemical activities)
  - Investment program in high performance handling equipments by STAM
- organization and skills development level
  - Revision of the regulatory framework
  - Facilitation of procedures and work organization in ports
  - Strengthening maritime safety, security and protection (SAFEMED project)
  - development of maritime policy that coordinates sectorial strategies for sustainable development

Challenges:

- Build a vision for the maritime transport sector in Tunisia and develop a strategic program for its implementation (IMP and Blue Economy)
- Establish a Maritime Administration capable of honoring Tunisia's commitments as flag State, port State and coastal State
- Mastering the flow of navigation in Tunisian territorial waters (safety, security and environmental protection)
- Skills development.

Current Development Strategy of Maritime and Inland Waterways Transport Sector of Ukraine

Ms. Anna RABOTNOVA
Ukraine (2012)

Maritime transport in Ukraine

Sub-sector Strengths:

- Gradual progress with introduction of electronic documentation exchange at Ukrainian sea ports
- Elaborated and implemented procedures for container processing prior to their entry to sea ports
- Available dry port facilities, which can ease transport formalities outside of sea ports
- Ukrainian seafarers working on board foreign ships have a positive impact on the local economy

Sub-sector Weaknesses:

- Modest share of maritime transport in freight and passenger transportation
- Lack of Ukrainian Flag fleet and a growing pressure for establishing a State Shipping Register
- Ukrainian flag listed in the "Grey" category of the Paris MoU on Port State Control
- 80% of sea ports infrastructure is depreciated
- Unbalanced cargo and reducing transit
- Long cargo dwell time at sea ports
- Ukrainian Port State Control practices not in line with international standards (does not target sub standards ships)
- Limited number of deep sea port facilities; restricted depths at approach channels
- Lack of infrastructure facilities capable of service large scale vessels (Capsize, VLOS, etc.)
- Rigid state control of transport tariff setting
- Sea port fees appear uncompetitive within the context of long-distance transport haulages
- Absent legislation in the field of port operations on PPP principles

Sub-sector Opportunities:

- Road Map for adaptation of EU directives and regulations established
- An agreement reached between USPA, regulatory and controlling authorities operating at sea ports, stevedoring companies, maritime agents and freight forwarding companies on information exchange
- Strong interest of state to attract private funding on the principles of public-private partnership (PPP)
- Methodology for sea port charges to be revised. It shall propose clear and transparent tariff setting

Inland waterways transport in Ukraine

Sub-sector Strengths:

- Presence of a private operator
- Availability of privately-owned river berths and terminals

Sub-sector Weaknesses:

- Low share of river mode in freight transport; river is currently used only for cabbotage (short shipments) purposes
- Obsolete vessels and lack of proper cargo handling equipment
- Growing pressure to open river to foreign flag vessels
- Low carrying capacity of river locks; high lock fees
- The navigation along Dnipro is limited to low capacity self-propelled vessel, which is the only alternative to slow barge convoys or 1500 th TEU vessels

Sub-sector Opportunities:

- Ongoing revision of inland waterways legislation
- Opening of river navigation for foreign flag fleet can help bringing more operators and vessel to deliver river transport services

EUROPEAN INTEGRATION

European integration is a key and unchanging foreign policy priority of Ukraine and further development and strengthening of relations between Ukraine and EU is based on the principles of political association and economic integration.

The main strategic document for achieving these goals is the Association Agreement between Ukraine, on one party, and the European Union, the European Atomic Energy Community and their state-members on the other party, and the agenda of EU - Ukraine Association.

The Association Agreement defines a new format of relations between Ukraine and the EU and serves as a strategic guideline for systematic socio-economic reforms in Ukraine, and the Deep and Comprehensive Free Trade Area between Ukraine and the EU, which is part of the Agreement and defines the legal framework for the free movement of goods, services, capital and regulatory convergence aimed at the gradual integration of Ukraine into the EU common market.

An effective platform for cooperation at the regional level was established within the Transport Panel of the Eastern Partnership, which aims to facilitate the improvement of transport links between the EU and its immediate neighbours.

Transport networks and services play a key role in improving the quality of life of citizens and building capacities of industrial development. Therefore, transport is one of the key areas of cooperation between the EU and Ukraine, and in **accordance with Article 368 of the Association Agreement primary purpose of this cooperation is to facilitate the restructure and renewal of the transport sector of Ukraine and the gradual harmonization of existing standards and policies with those in the EU.**

CURRENT STATE OF IMPLEMENTATION OF THE ASSOCIATION AGREEMENT

In order to organize the work for implementation of the Association Agreement by the Ministry of Infrastructure, the **Coordination Council and working groups in the relevant areas** (including transport policy and infrastructure, security and transportation of dangerous goods, air transport, maritime and river transport and postal communications) have been established.

The first stage for legislative adaptation is transposition of the EU acquis communique into the Ukrainian legislation.

Therefore, as part of realization of activities for the implementation of the Association Agreement the

Ministry of Infrastructure put the main focus on the development of primary legislation in the relevant sectors of transport.

For today, basic laws of Ukraine have been submitted to the Verkhovna Rada, including

- on Inland Waterway Transport
- on Amendments to Some Legislative Acts to Harmonize them with the EU Legislation in the Field of Transport of Dangerous Goods.

3 orders of the Ministry of Infrastructure (procedure for inspection of tanks for dangerous goods transportation, approval of the Commission on the evaluation of ratings of protection and plans for protection of ports and port facilities, changes to the Procedures for arrival of ships to seaports) have been approved.

The adoption of the necessary by-laws in accordance with the procedures identified in the Ukrainian legislation will take place after the adoption of framework laws.

IN THE FIELD OF MARITIME TRANSPORT

According to Annex 17 of the Association Agreement the Ukrainian experts together with the European experts have developed an updated Roadmap for approximation of the Ukrainian legislation to the EU law in the field of international maritime transport.

In addition, the Ukrainian side has again prepared documents on ratification of the Maritime Labour Convention (MLC-2006) and sent for approval to the involved bodies of executive power.

Also, the process of Ukraine's accession to the International Convention on the Control of Harmful Anti-fouling Systems on Ships is at the final stage. Ukraine's accession to the Convention contribute to the approximation of national standards for the use of anti-fouling systems to the European and global standards and improvement of legislation of Ukraine in the field of environmental protection of marine waters.

In order to implement the Directive 2010/65/EC on reporting formalities for ships arriving in and/or departing from ports of the Member States and the Directive 2002/59/EC on establishing a Community vessel traffic monitoring and information system, the Order of the Ministry of Infrastructure of 25 September 2015 No 387 approved changes to the Procedure for registration of vehicles coming to the sea port, providing the permission for vessels to leave the port and the registration of vessel leaving the seaport (reduce the load from the crews entering the seaports of Ukraine by significantly reducing the number of copies of the ship's papers and certificates to be provided to the captain of the seaport after the arrival of the vessel to the port).

According to the draft amendments, instead of 23 copies of the documents that the master of the vessel must provide now to the captain of the seaport, he will have to provide only 4:

- Classification certificate;
- Certificate of registration;
- International tonnage certificate;
- International Load Line Certificate.

The work on creation of the European standard sea navigation system of Ukraine and its further integration to the SafeSeaNet has begun.

The work is being carried out on implementation of the requirements of the Memorandum of Understanding on port State control in the Black Sea region to the national legislation of Ukraine, including amendments to the Regulation on control of ships in order to ensure safety of navigation, approved by the Order of the Ministry of Transport on 17 July 2003 No 54.

Preparations are under way to conduct the mandatory IMO audit, scheduled for June 2018.

In addition, it was also decided to establish a new body that will be entrusted with functions of the

Maritime Administration of Ukraine. The Maritime Administration is expected to begin operation in august of 2018.

In order to deregulate activities in the ports, 5 (five) resolutions of the Government were adopted, which greatly simplify the control procedures and registration of vessels in ports.

Deregulation of business conditions in maritime transport industry

The main benefit is a significant reduction in the number of control procedures. Earlier documenting of the vessel was realized on the board of the ship by at least 5 regulatory authorities and lasted several hours. Now, the vessel's agent will have all the necessary papers beforehand, before the arrival of the vessel in port. The controlling procedures will be realized in the supervisory authority office. This radical change will eliminate the human factor and will save time and money of the participants of the procedures.

During the transition between the Ukrainian ports, the controlling procedures of the vessel now will only be realized in the port of departure and the final port of arrival. Previously, controlling procedures used to take place during arrival to and departure from each port.

The changes will shorten the stay of vessels in ports and will increase the capacity of the ports by 15%. Inefficient idle time for which cargo owners previously had to pay will be reduced.

IN THE FIELD OF INLAND WATERWAY TRANSPORT

In order to open the inland waterways of Ukraine for ships under the third countries flags in accordance with the commitments made by Ukraine under the WTO, a number of draft laws have been developed and submitted to the Parliament:

1) on inland waterway transport of 4 August 2015 No 2475a (partially includes the provisions of 4 Directives) (legal settlement of shipping on IWW of Ukraine, determining the legal regime for infrastructure, improvement of river management, promote competitive services market, refocus cargo traffic on the environmentally friendly and economical river transport);

2) on bringing changes into the Maritime Code of Ukraine of 23 April 2015 No 2712 (renewal and replenishment of the fleet under the flag of Ukraine);

3) on bringing changes into the Customs Code of Ukraine of 23 April 2015 No 2713 (simplification of business activity in the field of shipping, reduction of licensing procedures by abolishing the permission of the Ministry of Infrastructure of Ukraine to carry out cabotage transport).

The priorities of cooperation with the EU in the field of IWW of Ukraine are:

- the inclusion of IWW of Ukraine to the regional network of the Eastern Partnership;
- joint participation in the project "Restoration of the E-40 waterway on the Dnieper-Vistula section: from strategy to planning", which brings together the interests of Ukraine, Belarus and Poland in the development of inland waterway connections of the Baltic and Black Seas.

IN THE FIELD OF TRANSPORT SAFETY

In order to implement the Directive No 2008/68 a Draft Law “On Amendments to Some Legislative Acts to Bring Them in Accordance with EU Legislation in the Field of Transportation of Dangerous Goods”, that takes full account of the Directive 2008/68/EC (reg. No 4644 of 11 May 2016), has been registered.

The draft law of Ukraine provides the improvement of conditions for transportation of dangerous goods up to the European level by reviewing national legislation in this the area, determining functions, duties and responsibilities of a body authorized for security transportation of dangerous goods and other participants in the

transportation of such goods.

In order to ensure the prevention of accidents that occur due to the leakage of dangerous goods, non-compliance of technical condition of tanks and their equipment to the requirements of the legislative and regulatory acts, a procedure for checking the tanks transporting the dangerous goods was developed and approved by the Order of the Ministry of Infrastructure and the Ministry of Internal Affairs of 12 May 2015 No 166/550 (registered in the Ministry of Justice on 5 June 2015 under No 663/27108).

The draft Procedures for Transportation of Dangerous Goods by Inland Waterways of Ukraine were developed to determine the conditions of carriage of dangerous goods, compliance of vehicles and personnel of shipping companies that carry hazardous cargo with the national and European legislation on transportation of dangerous goods. The draft Procedures have been submitted for re-approval due to the changes in the composition of the Government of Ukraine.

After the adoption of the Law of Ukraine "On Amendments to Some Legislative Acts to Bring Them in Accordance with EU Legislation in the Field of Transportation of Dangerous Goods" it is planned to amend some orders of the Ministry of Infrastructure regarding special education for workers of the dangerous goods transportation entities in the railway and river transport to establish requirements to the bodies responsible for security and to other participants of the transportation process.

The improvement of the system of certification of seafarers

Experts of the Ministry of Infrastructure and the Inspectorate for Training and Certification of Seafarers have developed the Plan of priority measures to improve the system of certification of seafarers (hereinafter – the Plan). The main purpose of the elaborated measures is to optimize and simplify the system of certification of seafarers by bringing it into the practice of leading maritime countries.

Thus the Plan includes:

1. Deregulation of the system of certification of seafarers;
2. Increasing objectivity of certification of seafarers and preventing potential corruption cases;
3. Increasing transparency and efficiency of the State qualification commissions and the State Register of Seafarers Documents of Ukraine.

Barriers and bottlenecks of applying the multimodal transportation system in Egypt

Mr. Mohamed Nabil Elnabawi A. BAHRIZ
Egypt (2015)

1. Introduction

The impact of the rapid growth of the containerization and globalization on the role of freight forwarders is their involvement in multimodal transport; a single contract can cover the carriage of goods by more than one mode of transport. The responsibility of implementing the multimodal transport contract can be taken by a freight forwarder when acts as a multimodal transport operator even if the operator involved in a separate subcontract would not affect the performance of the multimodal transport contract regarding liability and obligations arising under the contract.

There is no doubt that the different transportation means in Egypt plays a big role in the Egyptian national economy and the demand for the transportation service is increasing with the increase in the economic activities and population. Egypt has a large diversity of means of transportation such as the river Nile road, Railways lines, huge road network, ports, and airports but the transportation system did not evolve adequately, to face the global competitiveness.

Also, the different Egyptian government did not take serious steps to develop and reform the public ports in Egypt. They also did not allow the shipping companies to invest in different public transportation means in Egypt which restricts the transportation development and increases the burdens on the government budget.

The purpose of this, paper is to present a concise overview of the advantages and benefits associated with the development of integrated transport for Egypt, with the aim of stimulating investment in the sector. It will also present the challenges and obstacles that will be faced by such development, including a few recommendations to overcome them.

2. The definition of multimodal transport

There are numerous definitions and explanations for multimodal transportation, however for this paper the following definition is adopted: the process of efficient transport of goods from point of origin to destination on two or more modes of transport, which involves seamless, coordinated, continuous and flexible transfer between the modes of transport that implies systematic connectivity in an economic sustainable and environmentally friendly way (Muller, 1999 and author's own derivation)

This definition explicitly implies and demands a broader understanding of the whole modern transportation and logistics management process for all the participants in the process in delivering the reliable, safe and cost-effective service that is envisaged by multimodal transportation.

The concept of multimodal transport is to increase the efficiency of trade. It changes the relationship between the international carriers and trading partners from the traditional buyer-seller toles to a new partnership in trade and transport (Singapore Logistics Association, 2015).

3. Multimodal transport challenges in Egypt

From the previous analysis, it is apparently clear the different modes of transport in Egypt, but the majority of trade flows do not experience a well-structured multimodal mode, there are however some trade commodities which depend on Egypt's multimodal system (Ghoneim & Helmy, 2007).

One of the examples of the multimodal Transportation system in Egypt is when the oil tanker ships discharging the oil in Ain Sokhna port on the red sea, and pumped through the pipeline to Sidi Kerir port on the Mediterranean side, and by this way the tanker ships could avoid passing through the Suze Canal (Ghoneim & Helmy, 2007).

On the other hand, the same idea was not used for the container ships where there is no container train connecting the red seaports to the Mediterranean ports. Multimodal transport operations could help Egypt to improve the efficiency of transport in. However, they face numerous obstacles.

3.1. Shortage of multimodal operators

There is a shortage of qualified Multimodal Transport Operators (MTOs) in Egypt. As illustrated by UNCTAD those operators who go about as principals, furthermore expect obligation for the execution of the contract.

MTOs, as principals and not as agents or on behalf of either the consignor or the carriers participating in the transport.

Multimodal transport, therefore, infers that the MTOs is capable of controlling the whole door-to-door transport operation and also can assess and prevent the expected risks related to such an operation (Ghoneim & Helmy, 2007).

3.2 Lack a legal framework

There is no legal framework covering the intermodal transport regarding the liability and insurance of multimodal carrier. If there are cargo damages, the trader will not get a compensation due to the insufficient insurance for carrier liability (mainly for trucks), which mean additional costs for the trader furthermore impeded the trucking industry and the trade due to the confidence loss (Ghoneim & Helmy, 2007).

3.3 Customs procedures

The customs procedures and the period taken to release the cargo is a extensive, which should reduce by facilitating the procedures, and by building inland ports which could permit the transit cargo to pass under one bill of lading.

Plus using the automatic gates and it is not practical for the security to do a physical inspection for every single container.

4. The benefits, of applying multimodal transport system comparing to segmented transport

The advantages of intermodal transport are reflecting on the shipper and the carrier and the national economy. Using more than one mode of transportation inevitably leads to benefit from the advantages obtained by every means in term of cost, speed, and safety as shown in the graph 1 and 2. Hence, the result is to do the transportation service at a lower cost and higher quality with the optimal use of the means of transport which affects positively on the national economy. Here it is important to recognize that dependence on a multimodal transport as one of the numerous forms and choices available to the owner of the goods (Eltony, n.d.)

Also, multimodal transport will allow door-to-door transportation, reduce the paperwork needed, plus use containers in different types of modes will protect the cargo from the weather and more safety for the cargo and less damage which mean a reliable system of transportation.

5. The role of shipping lines to increase the efficiency of multimodal transport in Egypt

In the recent decades, the shipping lines such as COSCO and Maersk has expanded their activities by building a vertically integrated system where the shipping companies have moved away from its core business to meet new sets of problems. It may become a rail or road operator, which would probably give it better control over its container fleet traffic, containerization facilitates the transition from transactional markets to relational markets where transport supply is no longer segmented but offers a door-to-door solution to shippers (OECD, 2010).

6. Recommendations

- The Egyptian government should direct more investment to build a new specialized cargo train.
- The Egyptian government should direct more investment in road, river, ports and airports infrastructure.
- Investment needs for building inland Depot.
- The Egyptian government should change the national legislation and develop a legal frame to cover the multimodal transport and identify the carrier liabilities and cargo insurance under one bill of lading.
- The Egyptian government should put a higher standard of training requirements for multimodal transport operators.

References

Comcec. (2013). Transport Sector The Way Forward. Multimodal Transport. Retrieved from http://www.comcec.org/UserFiles/File/WorkingGroups/Transport2/Presentations/Muhammed_Cemalettin-Egypt/COMCEC_EGYPT.pdf

Eltony, F. (n.d.). Intermodal Implementation and Challenges. Retrieved from http://www.arabfcs.org/db_bin/doc_doc_pdf_66.pdf

Hannisfa, A. (2015). Multimodal Transport Operations Introduction. Retrieved from https://www.academia.edu/5742626/Multimodal_Transport_Operations_Introduction

Ghoneim, A. F., & Helmy, O. A. (2007). Maritime Transport and Related Logistics Services in Egypt. Maritime Transport and Related Logistics Services in Egypt. doi:10.7215/se_ip_20071201

LCA. (2013, November 19). Digital Logistics Capacity Assessments. Retrieved from http://dlca.logcluster.org/display/public/DLCA/2.3+Egypt+Road+Network

Muller, G. (1999). Intermodal Freight Transportation (4th edition). Washington D.C.: Eno Transportation Foundation and Intermodal Association of North America.

OECD. (2010, February 25). Integration and Competition between Transport and Logistics Businesses | OECD READ edition. Retrieved from http://www.keepeek.com/Digital-Asset-Management/oecd/transport/integration-and-competition-between-transport-and-logistics-businesses_9789282102619-en#page1

Singapore Logistics Association. (2015, September 28). Appreciating Multimodal Transport Advantages. Retrieved from http://sla.org.sg/appreciating-multimodal-transport-advantages

The Airport Authority. (2015). Browse airports by country. Retrieved from http://airport-authority.com/browse

The World Bank. (2014). Rail lines (total route-km). Retrieved from http://data.worldbank.org/indicator/IS.RRS.TOTL.KM

The World Bank. (2007). *Port reform toolkit effective decision support for policy makers and practitioners*. Washington, D.C: The World Bank. doi:10.1596/978-0-8213-6607-3

World Bank. (2014). Connecting rod. *The Logistics Performance Index and Its Indicators.* doi:10.1036/1097-8542.157200

World Trade Organization. (2014, September). Trade Profiles. Retrieved from http://stat.wto.org/CountryProfile/WSDBCountryPFView.aspx?Language=F&Country=EG

LNG Terminal: Gateway for the Baltic Gas Market

Mr. Andrius DAUJOTAS
Lithuania (2005)

In this presentation author will shortly elaborate on:

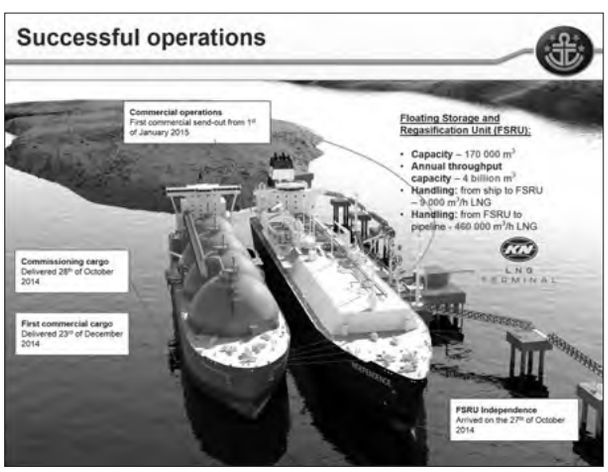
1. Newly built and run LNG terminal called Independence. The name brings the NOTE ***„Lithuania is independent from Russian gas and Influence“***.

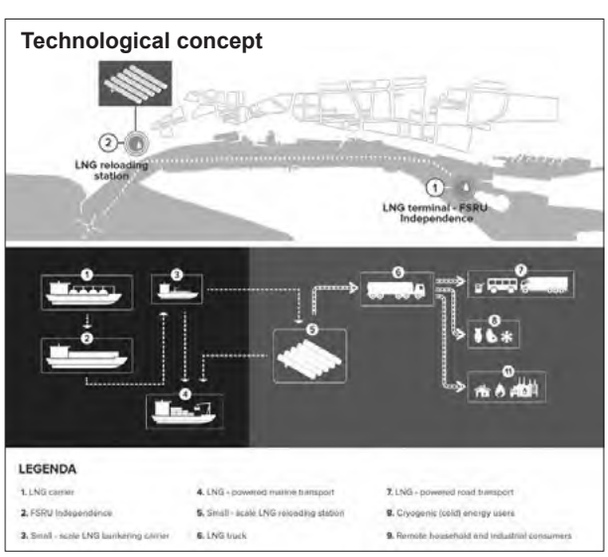
2. Big and risky investments were made to fulfil this project and make it reality. LNG terminal does not only fulfil Lithuanians need for gas. It has possibility to trade gas with load possibilities: ship to shore, ship to ship ways. These reloading possibilities allow Lithuania to keep imported gas price in low level to be competitive in the market. Therefore neighbors are looking forwards to trade with Lithuania in gas market and to ensure energy security for their own country needs too.

3. Statistical data and information describing LNG Capacity, Annual throughput capacity, handling possibilities. From the 1st of October 2016 till 30th of September 2017 LNG terminal had 75% of total unutilized capacity.

4. LNG reloading station concept and technological scheme, with short presentation on the ship-to-shore handling possibilities (are implemented by the end of 2016).
   - First stage in LNG implementation was to have independence and supply local needs and reserve local gas capacities.
   - Second stage is making reloading station for more wide use of LNG ship-storage, implemented end of year 2016.

Feeders are transferring gas between other ports. One of the projects for LNG transshipment is with Tallinn, Estonia, who are planning to transport gas with tank trucks for new Tallink LNG ferry fueling.





THE SIGNIFICANCE OF THE TURKISH STRAITS AND ITS REGIME

Ms. Ozlem MULUN AKPINAR
Turkey (2007)

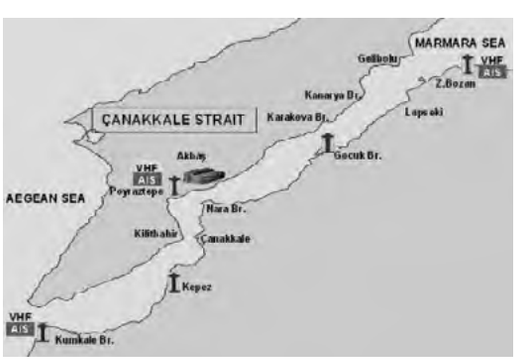
The Turkish Straits comprises «the Strait of the Istanbul, the Sea of Marmara and the Strait of Çanakkale». The Turkish Straits not only have geopolitical and strategic significance, but also rapidly increasing importance for international transportation, both for the Black Sea states and for the whole world.

1. Geographical Location

This waterway with its sharp turns (12 within the Strait of Istanbul, some up to 80º, and six within the Strait of Çanakkale, also in certain places reaching 80º) and narrowness (in some places to less than a nautical mile) creates real dangers for safety of passage and navigation. The Turkish Straits are not only important for international navigation but they also connect via an internal water two high seas, namely the Black Sea and the Mediterranean Sea are linked by the Istanbul Strait, Sea of Marmara (an internal water), the Çanakkale Strait and the Aegean.

The Turkish Straits are unique in many respects. These narrow and winding straits are one of the most hazardous, crowded, difficult and potentially dangerous waterways to navigate in the world. Furthermore, they also bear unique physical, geographical, hydrological and oceanographic characteristics and complicated navigational conditions.

The Strait of Istanbul, which runs right through the commercial and cultural capital of Turkey, is approximately 32 kilometres long and 700 meters wide at its narrowest point. As it has several sharp turns, ships are bound to alter course at least 12 times for these bends. At Kandilli and Yeniköy turns, the rear and forward sights are totally blocked before and during the course alteration. Ships approaching from the opposite direction cannot be seen round the bends. The Strait of Istanbul is so deep and steep that it offers few shallows or sandbars where ships in trouble might ground before smashing into buildings along the shore. Bad weather, fog and unpredictable currents only add to the danger.



The Strait of Çanakkale is about 70 kilometres long, with a general width ranging from 1.3 to 2.0 kilometres. A very sharp course alteration is needed at its narrowest point. The Sea of Marmara, between the Istanbul and Çanakkale Straits, is an enclosed sea within Turkey and has a densely populated coastline through which every transiting vessel has to pass.

2. Regulation of Turkish Straits

The present regime of the Turkish Straits is the outcome of a historical evaluation. From 1453 until 1809, the Ottomans were the sole power to determine the regime of the Straits. The accepted regime was to close the Straits to foreign civil and military traffic even in time of peace and it was called the Ancient Rule of the Empire. Due to the Capitulations, the Ottomans recognised concessions to allow merchant vessels of certain other states to pass through the Straits in time of peace. However, by 1809, passage through the Straits had become an international issue and subject to international agreements.

Under the 1809 Çanakkale, 1829 Edirne, 1833 Hünkar iskelesi, 1841 London, 1856 Paris and the Paris Straits conventions and the 1871 London and 1878 Berlin agreements, the Ottomans were committed to the signatory states to open the Straits to commercial vessels of all states and to close them, in principle, to all naval vessels of third states, in time of peace. In all those documents, reference to the Turkish Straits was as the Mediterranean or the Çanakkale Strait and the Black Sea Strait, as an indication of direction of access either from the Mediterranean or from the Black Sea. The Turkish Straits regime founded under the nineteenth century agreements lasted until the outbreak of the First World War, and Wilson's principles played an important role in determining the ensuing legal regime for the Turkish Straits.

The Lausanne Peace Treaty formulates the basic principles concerning the Straits regime. According to this agreement, the term 'Straits' comprises the 'Strait of the Çanakkale', the 'Sea of Marmara' and the Strait of Istanbul'. The Lausanne Straits Convention's regime was based on the principle of freedom of passage of merchant vessels and of warships, taking into account various alternatives such as whether Turkey is in a time of peace or of war and also whether it is a neutral or a belligerent power.

The Lausanne Straits Convention did not satisfy Turkey because of its establishment of the Straits Commission and the demilitarization of both shores of the Straits and all the islands in the Sea of Marmara except. The collective guarantee system accepted for the security of the demilitarized zones and the security of Turkey in this region was weak and proved its insufficiency during the 1930s. Events during those years - the revisionist policies of certain states, the militarization of certain areas in the south Aegean close to Turkish shores and the failure of global demilitarization efforts - led Turkey to refer to the principle of law known as the rebus sic stantibus clause and ask the parties for a new convention to safeguard its security. To this end, the Turkish verbal note of 11 April 1936, given to all the contracting states, was received with sympathy by all except Italy.

The Montreux Convention aimed to regulate the passage and navigation of commercial and naval vessels through the Straits in times of peace and war, and during times when Turkey considers itself under threat of imminent war. The Protocol annexed to the Convention empowered Turkey to remilitarize the shores of the Straits and the islands in the Sea of Marmara to ensure its security. The Straits remained open to commercial vessels and, in peacetime, to warships of the Black Sea states with some limitations, e.g. submarines and aircraft carriers. On the other hand, the size, number, armament and period of stay of vessels of Non-Black Sea states were greatly limited, both in passage through the Straits and in the Black Sea.

Montreux Convention, which set up such an admirable system, now require contemporary interpretation in the light of developments in international law, e.g. pollution, safety of navigation and environment, and the safety of people on shore. In 1936, when the Montreux Convention was signed, freighters and tankers were far smaller, their number passing through the Straits was one-tenth of what it is today, and Istanbul had one-fifteenth of its

present population. In order to prevent accidents, to safeguard security and provide protection for its citizens, new regulations were entered into force.

New Rules are as follows:

1. Ships with dangerous cargoes should inform the Turkish authorities of their intention to pass through the Straits 24 hours in advance and, while they were in passage, no other ship would be allowed to pass through the Straits.
2. Ships using the Straits should abide by the report systems, traffic control measures and traffic separation schemes put in place by the Turkish authorities.
3. Speed would be limited to 10 knots, overtaking would be forbidden and vessel height would be sensibly limited to 190 feet because of the two suspension bridges north of Istanbul.
4. Turkey reserved the right to close the Straits temporarily while fire fighting, sounding, sports and scientific activities, rescue operations or anti-pollution projects were going on.

Turkey, cognisant of its responsibilities, has submitted the traffic separation schemes (TSSs) in the Turkish Straits to the International Maritime Organization (IMO). The relevant bodies of the IMO, the Subcommittee on Safety of Navigation and the Maritime Safety Committee (MSC), discussed and adopted on 25 May 1994 the TSS and a set of associated special rules and recommendations relevant to the safe navigation of large vessels in the Straits of Istanbul and Çanakkale.

3. Vessel Traffic Services

In order to increase safety of navigation, ensure maritime safety, safety of life and goods at sea and protect the marine environment, Vessel Traffic Services was established and has been in operation since 2003. The competent authority of Turkish Straits Vessel Traffic Service (TSVTS) is the General Directorate of Coastal Safety under the Ministry of Transport, Maritime Affairs and Communications. In addition to the safety of navigation, the TSVTS applies the emergency plans and coordinates all the means to be used in accordance with these plans (towing, fire fighting, pollution, SARand medical care). All the VTS operators are captains with at least two years of command experience and received a specific formation in conformity with the IALA standards. There are currently two VTS centers in the Turkish Straits: the Istanbul VTS and Çanakkale VTS.

Duties and Responsibilities of VTS

- ✓ Constant watching of maritime traffic with high sensitivity in all weather conditions during day and night.
- ✓ To enhance the safety of maritime traffic within its service and responsibility area.
- ✓ To enhance the safety of navigation of vessel in reliance on the responsibility of the master.
- ✓ To establish and sustain the image of maritime traffic within its responsibility area and transferring

such information to the vessels when necessary, precisely measuring the navigational information to be used for this purpose and keeping records.

- ✓ To record all sound, data and images related to maritime traffic.
- ✓ To keep up with the implementation of national and international legislation on behalf of the administration in respect of maritime traffic in the maritime zone where it is located.
- ✓ To provide effective and rapid intervention in the event of a maritime accident, to minimize the loss of life and property, marine pollution and other economic losses and to ensure the maritime traffic safely keeping on as soon as possible and to provide necessary coordination and information services with related institutions for this purpose.
- ✓ To keep any kind of information, including all kinds of images and sound recordings that may be requested by the official authorities, in cases where a judicial and administrative investigation is required.
- ✓ In order to minimize the risk of accidents, it is necessary to provide timely information to assist the navigational decisions of the ship's captain and give him/her necessary warnings, recommendations and instructions in case of emergency.
- ✓ Making more efficient traffic organization and management by exchanging information with neighboring VTS centers.

4. Conclusion

Increase in the volume of maritime traffic through the Turkish Straits since 1996 demonstrates the necessity of Turkey taking all appropriate measures for safety of passage and navigation and the protection of the marine environment in accordance with the well-established principles of international law.

The volume and growth of traffic also demonstrates the need for states to fully respect and comply with Turkish measures because they are effective and successful despite the rapid increase in maritime traffic.

Present and Future Challenges to Suez Canal

Mr. Ehab Ibrahim OTHMAN
Egypt (2004)

1. Introduction

Suez Canal is an artificial sea-level waterway running north to south across the Isthmus of Suez in Egypt to connect Mediterranean Sea and Red Sea. The canal separates African continent from Asia, and it provides the shortest maritime route between Europe and the lands lying around the Indian and western Pacific oceans. It is one of the world's most heavily used shipping lanes. Suez Canal is one of the most important waterways in the world.

Suez Canal Corridor Area Project is a mega project in Egypt that was launched on August 2014. The project's aim is to increase the role of the Suez Canal region in international trading and to develop the three canal cities: Suez, Ismailia, and Port Said.

The project involves building a new city (new Ismailia city), an industrial zone, fish farms, technology valley, building seven new tunnels between Sinai and Ismailia and Port Said, improving five existing ports, and digging a new canal parallel to the Suez Canal.

The new canal has increased the canal capacity by allowing ships to sail into both directions at the same time for a greater proportion of the canal. The main aim of the project is to transfer the canal cities into an important trading center globally. And also build new centers on the Suez Canal for logistic and ship services.

2. Challenges facing Suez Canal Route

Currently, Suez Canal is facing a various number of challenges perhaps the North route yet is not the most critical one of them, however in the near future it will play a significant role in the reduce of Suez canal revenue.

I. Until very soon piracy and attack of ships in the Somali/ Gulf Aden area had a negative impact on ships calling the canal, however according to IMB report “PIRACY AND ARMED ROBBERYAGAINST SHIPS” that not incident were reported in the first quarter of 2016. The combined efforts of the Navies in the region, along with the increased hardening of vessels and Best Management Practices for Protection against Somalia Based Piracy (BMP) compliance, employment of Privately Contracted Armed Security Personnel, and the stabilizing factor of the central government within Somalia has resulted in this positive sign.

II. The low price of oil is allowing cargo vessels to avoid the costly tariffs of the Suez and Panama canals and take the long way round Africa instead, according to a new report. The report released on February 2016 by maritime trade analysts SeaIntel found that, since October 2015, 115 vessels transporting goods from Asia to North Europe and the U.S. east coast sailed around South Africa on their return journey, instead of using the canal.

III. Another challenge is the declining of the world trade, the number of ships passing through the Suez Canal has decreased which affected the Suez Canal’s revenue.

IV. Shipping lanes through the Arctic Ocean will put the Suez Canal out of business soon, as global warming will make these freezing routes much more accessible than ever imagined by melting an unprecedented amount of sea ice during the late summer.

3. North Pole Route

The North Pole route came to light as a result of global warming, rising temperatures are causing ice to melt in the northern hemisphere. When the various effects of climate and weather variability and change are introduced into computer models that project atmospheric temperature patterns, the results clearly show that average temperature in the Arctic region could rise by 3-9 °C over the next hundred years. Warming would cause an enormous quantity of ice to melt and it is believed that ice could disappear altogether from large areas of the ocean during the summer months in the coming decades as shown in Fig. (1) Extensive melting of the ice in the past few decades.

By 2050, Ice will still form during wintertime but it will be a comparatively thin layer and ice-breakers will be able to force a passage through it. Ocean currents will probably cause the ice to drift away from eastern regions of the Arctic Ocean, which would ease sailing conditions.

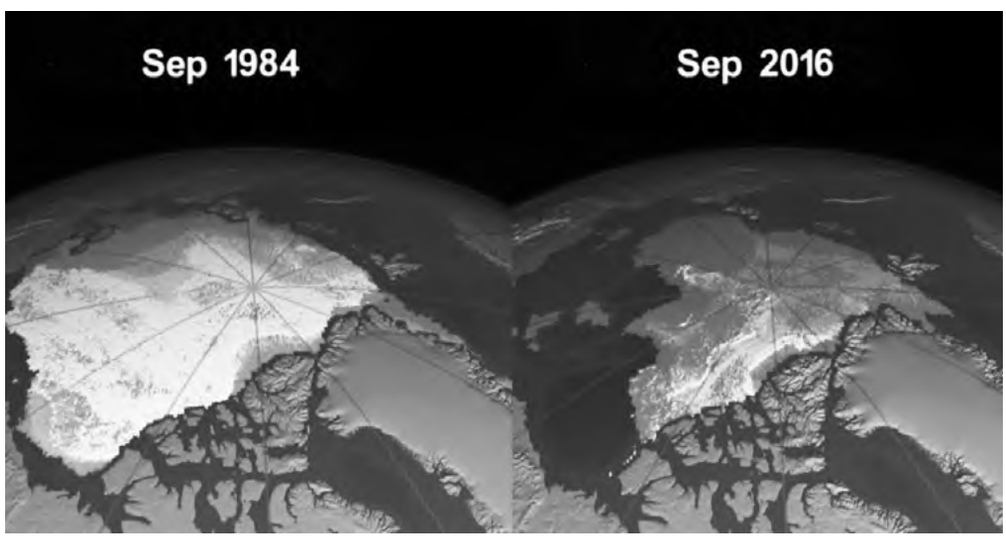


Fig. (1) Extensive melting of the ice in the past few decades

Source: NASA

Since 2007, the Arctic sea along the cost of Russia and Canada has been free of ice in September. Some international shipping companies have used this opportunity, as well as the fact that Russia opened maritime traffic in the far north to non-Russian vessels, to transport goods from Europe to the Far East.

There is a significant distance savings between Europe and Asia offered by the north route, however, uncertainty due to the Arctic environment and the lack of infrastructure in the hinterland could prevent the route from becoming popular with liner services. In contrast, for dry and liquid bulk carriers the route may become an alternative to more traditional shipping routes in the near future. Humper (2011)

The following table shows the loss or gain in terms of distance and days of navigation of the use of the North Route between Europe and Asia for a number of selected ports.

Origin	Destination	Suez route (km)	North route (km)	Δ km	Δ Days at Sea*
Europe (Rotterdam)	Japan (Kobe)	20516	12261	-8256	-9
	South Korea (Pusong)	19985	14096	-5888	-6
	China (Shangai)	19492	14714	-4778	-5
	Hong Kong	18053	15685	-2369	-2
	Phillipines (Manilla)	17833	16167	-1666	-2
	Australia (Sidney)	21428	20177	-1251	-1
	Vietnam (Saigon)	16546	17313	767	1
	Thailande (Laem Chebang)	16888	18246	1358	1
	Singapore	15349	18150	2800	3
	Indonesia (Jakarta)	15835	18656	2822	3
	Malaysia	14985	18624	3640	4
	India (Kolkata)	11705	21215	9510	10

Source: http://www.etsg.org/ETSG2013/Papers/016.pdf

It is clear that the total number of vessels passing through the Suez Canal in summer months decreased in 2016 comparing with the same months in 2015 (Fig. (2)). This is an expected statistic as the number of vessels passing through the North Pole route increases gradually through the last few years since the opening of this route

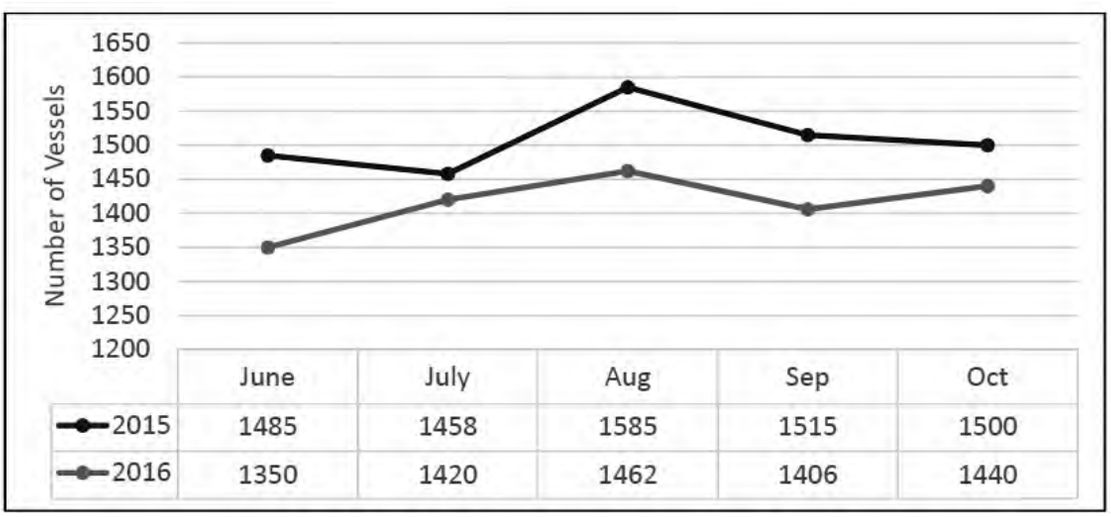


Fig. (2) Number of ships passing Suez Canal in the summer

Derived from different sources

Conclusion

North Pole route is threatening the Suez Canal future as it began to affect the revenue of Suez Canal. Presently, ships navigate through the North Pole route in the summer time only. In the future, by the effect of global warming, ships will be able to navigate throughout the year which will have very negative impact on Suez Canal.

References

Bensassi, S. Northern Trade Routes. Available online at http://www.etsg.org/ETSG2013/Papers/016.pdf

Dawood, A & Sharabia, A (2017). Risk of North Pole Route on Suez Canal Revenue. Journal of Shipping and Ocean Engineering, 7 (2017) 65-73.

Graham, L (2016). Cargo ships could save thousands by skipping the Suez Canal. Available online at https://www.cnbc.com/2016/02/26/cargo-ships-could-save-thousands-by-skipping-the-suez-canal.html.

Kenawy, K (2016). The Economic Impacts of the New Suez Canal. Available online at http://www.iemed.org/observatori/arees-danalisi/arxius adjunts/anuari/med.2016/IEMed_MedYearBook2016_New%20Suez%20Canal_Ezzat_ enawy.pdf

Is there a success formula for community-based fisheries management ?

Mr. Nabil ANWARI
Morocco (2005)

Introduction :

In a context strongly marked by the overexploitation of the main world's fish stocks [1], it has been crucial to strive towards ensuring sustainability of fishery resources through the elaboration of various tailored-made schemes. In this respect, it's widely recognized that the community-based management (hereafter co-management) approach has been the most realistic framework to deal with the numerous problems facing global fisheries and to avoid the eminent Hardin's tragedy of the commons [2].

It should be mentioned that co-management enhances the sense of ownership, takes into account the local socio-economic and ecological features and restraints, promotes the use of local knowledge and contributes to increasing compliance with regulations through peer pressure and better monitoring, control and surveillance by fishers. From this perspective, scientists and managers alike have put since many years the co-mangement approach under scrutiny in an attempt to develop a related model depicting genuinely the prevalence of the different attributes that need to be prioritized and reinforced within the process.

Against this background, this endeavour will shed light on one of the relevant works carried out concerning the subject matter , and which has been based on case studies. Later, a set of recommendations will be issued regarding the institutional and the managerial prerequisites that need to be fulfilled, in order to ensure a reliable and effective fisheries co-management.

1-Insights into a case-study research :

Based on a thorough literature review and for the sake of illustration, it would be relevant to look into a comprehensive research undertaken by some scientists, on a set of data assembled from a **total of screened 130 co-managed fisheries in 44 countries** [3] , covering , inter alia, different settings of fishing activity, ecosystem structure, human development index and social, economic and political features. The analysis of the data has permitted to extract ninteen variables relating to co-management attributes and which have been classified into five categories, namely co-management type, resource system, resource unit- governance system,users system and outcomes [4].

Although the assessment of success in this situation is a daunting task, since the research is mainly dealing with non-experimental studies, a set of eight indicators of performance such as the increase in abundance and the fishery status [5] , have been proposed for the calculation of the *success score (SC).*

With regard the variability of the SC with the socio-economic conditions and the ecological settings [6], it

1 The State of World Fisheries and Aquaculture 2016 at http://www.fao.org/3/a-i5798e.pdf.

2 An explanation of the concept of the tragedy of the commons is provided at : https://en.wikipedia.org/wiki/Tragedy_of_the_commons

3 L. Gutierrez et al. Leadership, social capital and incentives promote successful fisherie at : http://www.pedeciba.edu.uy/docspd/Gutierrez_Hilborn_DEFEO_2011.pdf

4 Ostrom, E. A general framework for analyzing sustainability of social-ecological systems. Science 325, 419–422 (2009).

5 Table 1 was elaborated according to the classification of Ostrom, E. A general framework for analyzing sustaina- bility of social- ecological systems. Science 325, 419–422 (2009).

6 Figure 1

has been found, among others, that the SC is higher in countries with a higher human development index (HDI) and in industrial fisheries, whereas the performance is lower within artisanal fisheries. Also and according to the study, it has been observed that if fewer than eight attributes were present, the SC was tending to zero and that in the case of the fulfillement of this threshold, there was a strong positive relationship,with increasing attributes leading to higher success scores [7].

In this respect, it has been clearly noticed that the probability of co-mangement success is notably improved if varions mangement tools are combined, since the SC is effectively increasing for example in case of adding a strong central goverance system to other local community attributes. However, there is no correlation between the time frame of implementation of a management regime and the likelihood of success.

By using regression trees and random forests [8] , it has been concluded that the most important co-management attributes necessary for successful management of fisheries are the ***presence of community leaders, strong social coherence, individual or community quotas and community-based protected areas.***

Table 1 | Fisheries co-management attributes and outcomes.

Group	Variable name	Frequency (%)
Co-management	Type (consultative, cooperative, delegated)	-
	Phase (pre-, implementation, post-)	-
	Time frame	-
Resource system	HDI (low, medium, high, very high)	-
	Governance Index	-
	Corruption Perceptions Index	-
	Resource type (single*, multi-species)	-
	Ecosystem (inland, coastal, offshore)	-
	Fishing sector (artisanal, industrial, sequential)	-
	Defined geographic boundaries	52
Resource unit	Sedentary/low mobility resources	38
Governance system	Central government support (local)	93
	Scientific advice	92
	Minimum size restrictions	76
	Long-term management policy	71
	Global catch quotas	52
	Monitoring, control and surveillance	47
	Protected areas	39
	Spatially explicit management	37
	Individual or community quotas	33
	Co-management in law (national)	32
	Seeding or restocking programs	19
	TURF	18
Users system	Social cohesion	78
	Self-enforcement mechanisms	71
	Leadership	62
	Tradition in self-organization	55
	Influence in local market	28
Outcomes	Community empowerment	85
	Fishery status (under or fully, over-exploited)	67
	Sustainable catches	62
	Increase in social welfare	61
	Increase in catch per unit of effort	54
	Add-on conservation benefits	45
	Increase in abundance	38
	Increase in unit prices	30

All attributes were grouped according to the classification of Ostrom[16]. Values in the frequency column denote percentage of co-management attributes reported as present within the co-management systems. For complete variable descriptions see Supplementary Table 2.
* Benthic, demersal, pelagic, mammal.

The analysis of the key data has showed that in terms of governance, the most predominant attributes are respectively, community quotas, long term management policies and protected areas, whereas leadership was the most significant in terms of user's attributes [9].

7 Part b of figure 1

8 Basics on regression trees and random forests may be found at http://whrc.org/wp-content/uploads/2016/02/DecisionTrees_RandomForest_v2.pdf

9 Figure 2.

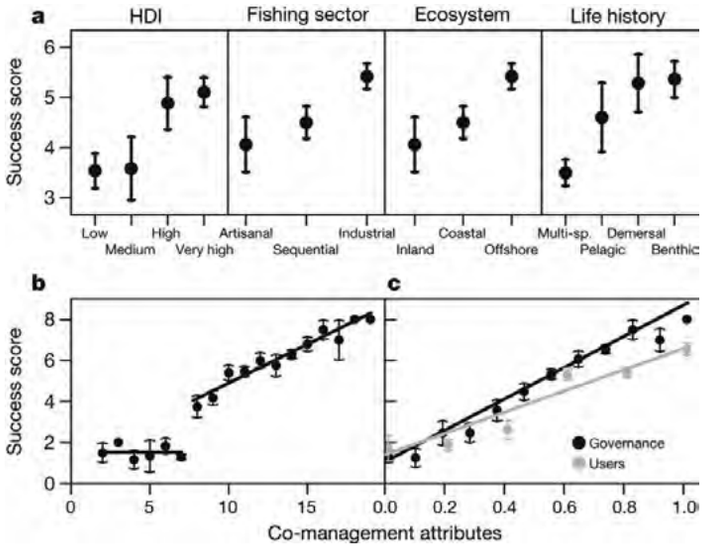


Figure.1

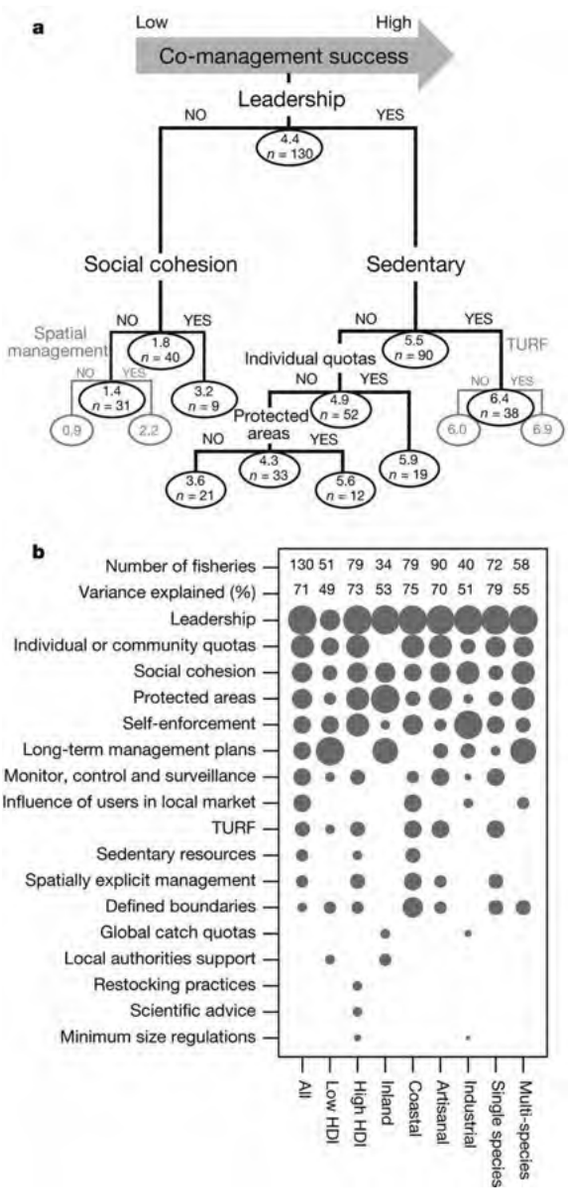


Figure.2

2- Concluding remarks and recommendations :

It's worth mentioning that the concept of community has been interpreted by some scholars such as F. Tonnies and Max Weber as being related to belongingness, close personal contacts and identity of interests, whereas others has solely defined the term as members of a collectivity, who share a common territorial base of operations for daily activities [10]. Having said that, policy makers are required to understand the internal mechanisms of communities, in paticular, those pertaining to social cohesion, in order to achieve a real community development [11].

Admittedly, the prioritization of the users-related attributes seen previously makes sense, as it's common practice to encounter complex hindrances in the implementation of the fisheries laws and regulations, in the absence of leaders that ***represent genuinely the interests of the fisher folks.*** In fact, hands-on experience has showed that these highly esteemed persons offer valuable assistance to the administrations in charge, particularly of fisheries matters in order to ensure ***the supremacy of the rule of law***, in a context characterized by the illiteracy among a substantial number of fishermen and by various socio-economic problems inherent to the fisheries activity, mostly within the small-scale segment.

Moreover, it’s instrumental to underline that the sanction-based mechanisms as practiced today may not always be the right path to follow for the enforcement of fisheries laws, if there is no change of the mindset of fishing communities towards reinforcing the rule of law, which shall prevail over any other social or economic considerations. Given the fact that the achievement of this state of mindset is not always possible within a sector, greatly influenced by ***conflict of interest,*** one may rely on the commitments towards the respect of a ***coherent social structure***, which may represent a strong impetus for compliance with rules and regulations. In such case, a blame-based culture will contribue immensely to set an effective enforcement system.

It's to bear in mind that inequity is inevitably among the most pressing obstacles for the implementation of the co-management approach [12]. In fact, granting fishing rights to a specific community may not be acceptable, particularly for political purposes. In Morocco, it might be noted that the maritime fisheries chambers and the fisheries associations are the main organs,that represent the fishing communities operating along the moroccan coast. In this respect and by virtue of the law regulating such chambers [13], these public and financially autonomous establishments are consulted by the government for advice on all issues concerning deep sea fishing, offshore fishing, artisanal fishing and aquaculture as well as on the operations of exploitation of coastal fishery resources. Nevertheless, the enhancement of the process of election within the chambers or associations so as ***to produce a genuine structure that represents to a great extent the interests of all categories of fishermen*** is certainly an issue that merits crucial consideration in the coming years.

Ultimately, ***there is no single magic formula*** to achieve an effective fisheries co-management, but the reinforcement of the above-mentioned ingredients and the adaptation of the existing regulations to local specificity will reduce the gap between policy markets and community needs. Also, it needs to be stressed that strengthening local governance models is depending on the in-depth understanding of how they function and the way they are maintained, since the various problems faced by the communities are not purely fisheries related, but concern other important socio-economic issues, that need to be considered, to ensure that the community-based management approach will not be compromised. Obviously, the realm of social sciences would prove of great benefit to fishery managers and to policy makers as a whole in this regard.

10 Community: Definitions, Bases and Changing Concept of Community at http://www.yourarticlelibrary.com/sociology/community-definitions-bases-and-changing-concept-of-community/35065

11 This development should enable community members to take collective action and generate solutions to common problems.

12 A review on fisheries and coastal community-based management regime in Thailand at : http://pubs.iclarm.net/Pubs/Way%20Forward/15%20tokrisna.pdf

13 Dahir No.1-97-88of 23 kaada1417 (April21997) promulgating Law No. 04-97 forming status of maritime fisheries chambers (O.B.No.4470 of April 3, 1997).

The Marine Aquaculture in Morocco: Thinking Outside the Box at the Legal and Technical Levels For Building a New Sector and Industries.

Ms. Fatima Zahra EL MARZOUKI
Morocco (2016)

INTRODUCTION

Usually, the marine aquaculture is considered the production of seafood, fish and aquatic plants by the means of aqua farming. The simple definition for mariculture is the cultivation of marine organisms in their natural environment for human consumption. This presentation will focus on saltwater aquaculture instead of the freshwater aquaculture. In fact, many countries have unique governmental bodies or administration dealing with either kind of activities or both sectors, as part of their attributions. This is not the case in the Kingdom of Morocco where two different governmental bodies deal with each sector. One designated for the continental aqua-farming [1] and the other one the marine aquaculture [2]. This might bring some difficulties whereas some aquatic species may rise in salt water then emigrate to fresh waters or vice versa. Or some might live in both environments. But according to the definition of the FAO of 1988 [3], this might not be a difficulty towards creating a separation between the two kind of activities if we take into account the explanations brought by Barnabé (1990) about the mariculture that he considered it as the "Cultivation, management and harvesting of marine or amphidromous organisms in the sea in specially constructed rearing facilities e.g. cages, pens and long-lines. For the purpose of FAO statistics, mariculture refers to the cultivation of the end product in seawater even though earlier stages in the life cycle of the concerned aquatic organisms may be cultured in brackish or freshwater or captured from the wild. This definition includes farmed fish released in the marine environment for mariculture-based capture fisheries and the weight increments gained by the wild-caught organisms through capture-based aquaculture activities". As said above, the traditional purpose for the marine aquaculture has been always the food consumption. Hence, the context for the new legal framework in the kingdom of Morocco since 2012 was the proposal of a new national act on the marine aquaculture which ultimate purpose is to present an alternative to ease the pressure on the fisheries stocks of Morocco by promoting and developing a marine aquaculture for the only purpose of enhancing the food security. But what if we think outside the box at both the legal and technical levels for building a new sector and industries?

WHAT IF WE THINK DIFFERENTLY?

The main branches of the marine aquaculture are fish-cultivation, shellfish farming and seaweed farming. And, many others exist.

Many might see in the marine aquaculture as a pollutant activity particularly coming from the fish cultivation because of the use of antibiotics and the chemical inputs that might be introduce into the environment

1 Le Haut-Commissariat aux Eaux et Forêts et Lutte contre la Désertification. (http://www.eauxetforets.gov.ma).

2 National Agency for the Development of Aquaculture (ANDA). (https://www.anda.gov.ma)

3 Definition of the FAO: "Aquaculture is the farming of aquatic organisms, including fish, molluscs, crustaceans and aquatic plants. Farming implies some form of intervention in the rearing process to enhance production, such as regular stocking, feeding, protection from predators, etc. Farming also implies individual or corporate ownership of the stock being cultivated. For statistical purposes, aquatic organisms which are harvested by an individual or corporate body which has owned them throughout their rearing period contribute to aquaculture, while aquatic organisms which are exploitable by the public as a common property resources, with or without appropriate licences, are the harvest of fisheries".

adding to the possibility of escape of alien species harming the whole balance of the ecosystem particularly if using both the extensive and intensive system of cultivation without any previous activity planning and management (Roderburg, 2011).

In addition to that the specific trait of the shellfish as bio-filter make of them extremely vulnerable to the quality of waters where they are cultivated. That if the quality of waters and the classification of the areas is not taking into account may lead in case of anarchic shellfish farming to intoxication endangering human health if directed to the only purpose of food consumption.

Also, many have pointed the sustainability challenges and impact on climate change of the marine aquaculture on the environment, particularly for offshore aquaculture.

But what if we see in the limits an opportunity of developing the activity differently? So, where there is a limit, there is a benefit elsewhere.

The new trend in the countries is to take into account all the benefits that the production from the aquaculture might provide. Each country is, in fact, experiencing one or another of the multiple uses that the aquaculture may have as output other than the only one purpose of food security ((Baraillé, B. (2018);(Mayer, 2017 (1;2)); (Person & al., 2011)). That leads to experience many areas such as waste recovery from shellfish as organic cement, producing organic sand for the reconstruction of the coasts, as agriculture inputs as organic fertilizer, or for feeding animals. This may also help the mitigation of water pollution or as waste water treatment by using the cultivation of micro-algea or shellfish, then using always the principal of waste recovery that may only be developed if there is an effective and efficient program of research & Development in such areas.

So through these objectives, marine aquaculture can ensure the sustainable development of the sector. Indeed, it is an intrinsic lever for the development of the blue economy and the green economy at the national level (Bogdan & al, 2013). This is achievable through food production for humans and animals, and the possibility of enabling ecosystem protection through the improvement of environmental conditions. It can also be used for the reconstruction of marine ecosystems and ecological construction through the treatment of aquaculture waste for a clean economy and respectful of the environment. Also, many countries look for new sources of energy. In fact, new biofuels markets are growing and more than 30 countries have adopt programs for biofuels (Jull & al. 2007). So in this context, marine aquaculture can also participate in the diversification of the biofuels supply of biofuel from an environmentally friendly source of algae production, known as the "third-generation of biofuels" used for land maritime and air transportation, which reduces dependency on fossil fuels and increases energy self-sufficiency while being low in carbon emissions and presenting an alternative to both the 1st and 2nd generations of biofuels (Alam, 2014; Mayer, 2017; Person & al. 2011; Slade, 2013). This, without having the same impacts of the "first generation" from agricultural sources that compete with food security and increases the price of agricultural raw materials and increases the pressure on agricultural land and water resources (Caputo, 2014; Persillet, 2012). Thus, through its sectors, marine aquaculture can serve as a tool for mitigating the factors that lead to climate change.

So the new trend for the multiple uses of the biotechnology in aquafarming lead to a diversification of the product on a different spheres going from food security to mitigation of the climate change effect and this by introducing plenty principles such as low CO2 and Toxic pollutants, to adopt the approach of the bio-economy and energy security, blue and green economy in an area which was traditionally considered for the only purpose of food security (Scarlat & al. 2015).

THE NEW SECTOR OF AQUACULTURE IN MOROCCO: DIVERSIFIED PURPOSE

The future legal framework set a marine aquaculture of different kind of scale, from marine aquaculture of subsistence to artisanal one and from specialized to industrial one.

Potentially strategic, the aquaculture sector in Morocco can develop several production sectors and cross-cutting areas where marine aquaculture will be considered of public utility notably through: The chain of food and feed production; The cosmetics, pharmaceutical, chemical and ornamental production sector; The agricultural inputs sector of fertilizers and bio-pesticides; The production line of ecological component of building materials; The third-generation biofuels production chain from algae sources; The aquarium industry. The same is true of cross-cutting areas relating to: restocking and rebuilding biodiversity; environmental protection for the mitigation of carbon emissions, the protection and reconstruction of the coastline and the fight against marine pollution; and finally the transversal field of training, research and development and technological progress.

DEVELOPMENT OF A MARINE AQUACULTURE SECTOR WITH DIVERSIFIED INDUSTRIES IN ACCORDANCE WITH THE 2030 UNSDGS

The aquaculture sector, with the development of its various sectors, is fully in line with Morocco's commitments to its partners and national and international environmental policy guidelines, particularly the respect of the FAO guidelines and approaches and the 2030 United Nations Sustainable Development Goals Agenda, such as contributing to the preservation of water quality, participating in the protection of the environment, and providing mitigation and adaptation impact of climate change on the environment in all its dimensions (Thornley & al. 2015; UN, 2015).

STRINGENT RESPECT FOR THE ENVIRONMENT

This new outlook adopted about the marine aquaculture has created a new situation where the need for provisions addressing the situation correlated to these industries lead to the adoption of stringent environmental provisions such as the protection of the ecosystem by adopting a risk approach to it or the adoption of a multi-trophic approach at a large scale to safeguard the environment. Or the adoption of provisions that help protecting from the escapes or the prohibition to introduce new species (aliens) that are foreign to the environmental area of the aquafarming etc.

THE MAIN PRINCIPLES SETTING THE FRAME OF THE NEW NATIONAL ACT PROPOSAL FOR THE MARINE AQUACULTURE

Thus, the provisions of the said draft text include new principles and approaches and concern inter alia:

- The definition of aquaculture in the national legal arsenal, and the determination of its scope;
- The principle of granting prior authorization, which allows the competent authority to assess the viability of the aquaculture project and set the conditions for the aquaculture farm. And on the other hand for the operator, the stability and legal security of the authorization;
- The adoption of the sectoral and spatial planning approach to marine aquaculture and the Regulation of Environmental Impact Assessment: This represents a major instrument of the policy followed for marine aquaculture planning respecting the participatory approach of public authorities and stakeholders in the aquaculture sector and coordinating their actions. This principle is adopted in order to ensure

a sustainable, environmentally friendly aquaculture in compliance with the multi-trophic approach integrated on a large scale in the maritime areas, while subjecting aquaculture management plans to an evaluation of aquaculture. Impact on the environment, taking into account cumulative impacts, guaranteed by the environmental and protective risk approach to its marine ecosystem

— Access to space and activity in compliance with the rules of competition and transparency through the establishment of provisions relating to the conditions, forms and methods of exercise of these activities. Therefore, a law organizing this sector and policies that support its development, the control of its environmental effect and the quality of its production, can only ensure the economic sustainability of Moroccan marine aquaculture.

REFERENCES

Alam, F., Mobin, S., & Chowdhury, H., (2014). Third Generation Biofuel From Algae. Procedia Engineering, pp. 763-768.

Baraillé, B. (2018). De nouvelles pistes pour valoriser déchets conchylicoles : Le bassin de Thau est le premier à avoir lancé une filière de collecte et de traitement de ses coquilles d'huîtres et de moules. Retrieved from : http://thau-infos.fr/index.php/commune/echos/24081-coquilles-d-huitres-et-de-moules-nouvelles-pistes-de-valorisation-le-bassin-de-thau-est-le-premier-a-avoir-lance-une-filiere-de-collecte-et-de-traitement-de-ses-dechets-conchylicoles-plusieurs-milliers-de-tonnes-de-dechets-coquilles-sont-traitees-chaque-a

Barnabé, G. (1990) Aquaculture. Chichester, UK, Ellis Horwood. Vol.1, 528p. Vol.2, 584p. Transl. by L.M. Laird.;

Bogdan, A, Istudor, N., Gruia, R. Toba, G. F., Bulz, N., Gâf-Deac Ion, Chelmu, S., Gâvan, C., Pricâ, I., Pasalau, C. (2013). New holistic approach of bioeconomics and ecoeconomics theories, practical bridging from the green economy to blue economy, through new integrated and innovative paradigm about “bio-eco-geoeconomy. Procedia Economics and Finance, pp. 83-90.

Caputo, A. (2014). Trends in European bioenergy law: problems, perspectives and risks. Glocalism: journal of culture, politics and innovation. 24 pp.

FAO. (2016). The State of World Fisheries and Aquaculture 2016. Contributing to food security and nutrition for all. Rome. 200 pp.

Job, S. (2005). Integrating marine conservation and sustainable development: Community-based aquaculture of marine aquarium fish. SPC Live Reef Fish Information Bulletin

Jull C.; Redondo P.C.; Mosoti V. ; Vapnek J. (2007). Recent trends in the law and policy of bioenergy production, promotion and use, FAO Legal Papers Online.

Mayer, N. (2017) 1. Peut-on fabriquer du biocarburant à partir d'algues ? (can we produce biofuels from algea ?). Retrieved from : https://www.futura-sciences.com/planete/definitions/ocean-biotechnologie-bleue-15590/

Mayer, N. (2017) 2. Biotechnologie bleue. Retrieved from : https://www.futura-sciences.com/planete/definitions/ocean-biotechnologie-bleue-15590/

Persillet, V., (2012). Les biocarburants de première génération : un bilan mondial mitigé. INRA Sciences Sociales.

Person, J. Mathieu, D. Sassi, J-F. Lecurieux-Belfond, L. Gandolfo, R. Boyen, C. Lépine, O. Pruvost, J. Deslandes, E. Potin, P. Chagvardieff, P. Findeling, A. Legrand, J. Cadoret, J-P. & Bernard, O. (2011). Livre Turquoise: Algues, filières du future. Ed. Adebiotech. Romainville.

Scarlat, N., Dallemand, J-F., Monforti-Ferrario, F., Nita, V., (2015). The role of biomass and bioenergy in a future bioeconomy: Policies and facts. Environmental Development. Pp. 3-34.

Slade, R. and Bauen, A. (2013). Micro-algae cultivation for biofuels: Cost, energy balance, environmental

impacts and future prospects. Biomass and Bioenergy. Pp 29-38.

Thornley, P. Gilbert, P. Shackley, S. Hammond, J. (2015). Maximizing the greenhouse gas reductions biomass: The role of life cycle assessment. Biomass and Bioenergy, pp. 35-43.

UN. (2015). UN GA of the 25/09/2015, Transforming our world: the 2030 Agenda for Sustainable Devlopment. A/RES/70/1.

LEGAL CONCERNS VIS-À-VIS MARITIME BOUNDARIES DELIMITATION

Mr. Ermal XHELILAJ
Albania (2008)

Notwithstanding the existence of a particular legal literature of international maritime nature, the legal foundation upon which the maritime boundaries delimitation decisions are based, including here multilateral treaties and customary norms, is considered disparate and quite significant. In spite of political, economic and national factors, the main issue which has exerted great influence towards the development or resolution deficiency of international disagreements in respect to maritime boundaries delimitation, is probably caused similarly from the law of the sea regime, represented by considerable number of international conventions, which it appears that is characterized by a legal system lacking legal priorities and therefore reflecting many ambiguities and issues in its relevant provisions. The most fundamental impact regarding the development of international disagreements on maritime delimitations was probably caused by the adoption and legal formulation of UNCLOS (1982). During the final proceedings of the III UNCLOS Conference, the international practice had shed light on the existence of more than 375 bilateral or regional conflicts on maritime boundaries delimitation, among which only 90 of these disagreements were in process of intermediation or negotiations between coastal States in respect of the particular legal dispute resolution (Smith, 1982).

While many maritime delimitation cases have been successfully reached an agreement, mainly through international; and national courts' rulings or intermediation process, a considerable number of disagreements on maritime boundaries demarcation are yet unresolved. Moreover, in light of recent developments in international relation system, predominantly in the international maritime law regime reflected mostly on the continental shelf delimitation issue, the number of international disagreements has been dramatically increased. This issue is caused as a result of the adoption of UNCLOS new legal norms, which have introduced a new 350 miles continental shelf, in contrast to 200 nautical miles continental shelf set of rules reflected in Geneva Convention on Continental Shelf (1958). Coastal States worldwide now have to engage in new negotiations or to solve possible tensions and disagreements among each other regarding the overlapping exclusive economic zones in different parts of the world. This situation has brought ambiguity and confusion among coastal States creating thus new conflicts or escalating old ones. The delimitation of new continental shelf by coastal States have now to be implemented only after a formal request is forwarded to the Continental Shelf Delimitation Commission, which under the provision 76 of UNCLOS undertakes the inquiry process and decides whether the States' request is in conformity of international maritime law. In this context, it is apparent that in many ways the law of the sea vis-à-vis maritime delimitation is dynamic and yet in evolving and changing process, influencing therefore towards the instability of international relations.

UNCLOS has dramatically changed the fundamental legal elements on the capability and rights of coastal States upon the exploitation of natural maritime resources. With regard to this issue, the most profound legal notion is considered the EEZ dwelling up to 200 nautical miles, in which coastal States exerts jurisdiction on the exploitation of natural resources, as well as to a certain legal extent on scientific research and environmental protection (UNCLOS, Part v). The second legal notion reflects norms and regulations under which States exert sovereignty rights upon continental shelf (seabed) area with the purpose of exploiting its natural resources

(UNCLOS, Part VI). The fundamental importance of maritime delimitations sheds light on the perspective that conflicts regarding the overlapping maritime boundaries delimitation, as mirrored in the delimitation cases of EEZ during the last decades, are considered the furthermost crucial conflicts due to the direct linked that this issue provides with States' national sovereignty (Klein, 2005). The significance of national interests involved in maritime delimitation issues hinders coastal States to unconditionally delegate decisions on maritime boundaries demarcation during legal proceedings and international conferences. In this respect, throughout the international negotiations at the UNCLOS III Conference, the most important debates, multilateral disputes and controversial disagreements were focused on the legal provisions in connection to maritime boundaries delimitation.

Basically, there are two essential legal provisions in UNCLOS dealing with maritime boundaries delimitations. The first provision found in Article 15 on the delimitation of territorial waters between States with opposite or adjacent coastline. The fundamental notion of this legal provision reflects on the international cooperation between States on the delimitation of territorial waters, which extends up to 12 miles from the States' baseline. In case of a potential disagreement vis-à-vis this issue, the delimitation must occur based on equidistant principle which is defined from the nearest point on the baselines from which the breadth of territorial seas of each of the two States is measured. On the other hand, Article 74 sets the legal principle for the delimitation EEZ, following logically by Article 83 which lays down the delimitation of continental shelf between States with opposite or adjacent coastline. In light of these considerations, it may be submitted that both the aforementioned provisions are regarded as legally ambiguous. This ambiguity has resulted from generic legal terms utilized as well as limited wording reflected in both relevant provisions. Notwithstanding that Article 74 on EEZ, and Article 83 on the delimitation of continental shelf share similar wording, and the delimitation process is based on identical legal principle, the terminology and the legal notion reflected in both provisions is considered ambiguous and complicated legally and practically, offering ground for creation of disagreements and potential conflict among States. Although the delimitation notion and wording appears similar in both provisions, yet they represent two distinct maritime zones which reflect different purpose and usage, and moreover are subject of diverse jurisdiction.

The fact that according to these provisions the delimitation process of relevant maritime zones reflects equitable solution as well as contains similar wording of technical nature, makes it more difficult for States to reach an acceptable or successful agreement in respect to this issue. A maritime delimitation which may be appropriate of EEZ purpose and objectives might not be righteous or suitable for the determination of continental shelf matter. This has resulted due to distinctive considerations, characteristics and variations which reproduce each maritime zone in order to achieve a just and equitable resolution (Churchill & Law, 1999). Nevertheless, the central principle behind both provisions provides for international or bilateral cooperation in order to promote compromise towards equitable delimitation of relevant boundaries. When a EEZ and continental shelf delimitation international disagreement emerges, within a reasonable time period, parties based on Article 74(2) and 83(2) have the responsibility to implement conflict resolution procedures consistent with UNCLOS Part XV provisions. Mandatory dispute resolution's mechanisms according to Section 2, Part XV, deal with States' disagreements on delimitation of territorial sea, continental shelf and EEZ. When party States have explicitly rejected this particular legal dispute settlement mechanism, based in Article 298 (1)(a), they are not bound by it.

The adoption of contemporary legal principles on maritime boundaries delimitation appears to mirror severe issues due to the ambiguous and problematic interpretation of UNCLOS' legal provisions terminology (Rothwell and Stephens, 2010). There are concerns on disorientation and problematic effects of Article 15 of UNCLOS regarding territorial sea's equidistant delimitation notion among coastal States, which may create

issues or bilateral disagreements, as occurred during Nicaragua vs Honduras (Caribbean Sea) legal case, when Article 15 wording and terminology generated serious debates among parties during ICJ 2007 legal proceedings (Rothwell & Stephens, 2010). Similar issues in respect to maritime boundaries delimitation have been experienced also during Qatar vs Bahrain conflict in 2001, both of which filed legal cases against each other to ICJ for the specific dispute resolution (Mendelson, 2001). Furthermore, the legal case Ukraine vs Rumania (2009) related to EEZ and continental shelf delimitation dispute on the Black Sea was characterized by the same fundamental legal issue. In this context, it must be noted that the legal principles of maritime delimitation, which are found on Article 15 of UNCLOS and Article 12 of Geneva Convention (1958) have been interpreted to some extent by international courts and arbitrage with uncertainty and obscurity. For this reason, it is hard to present a clear and comprehensive situation regarding the legal notion of maritime boundaries delimitation, as well as of the international conflicts characterized by these important issues. Apart from inherited generalization and legal ambiguity which reflect maritime delimitation legal principle, each maritime delineation process involves a specific practical, legal and theoretical situation which contains per se its particular and distinct features, which have to be taken under consideration during the designation and delimitation of maritime zones (Churchill and Law, 1999).

The developments on the European political, diplomacy and military field are characterized traditionally by regional conflicts regarding national jurisdiction over particular maritime zones. The adoption and entry into force of UNCLOS by coastal States have resulted in the eruption of many conflicts in respect to maritime boundaries delimitation. One of these conflictual situations related to sovereignty issue and maritime boundaries delimitation on the Aegean Sea is reflected on the controversial bilateral relations between Turkey and Greece, which are characterized as quite dangerous and problematic during the last decades to date. Notwithstanding that both States are NATO allies, their maritime boundaries delimitations disagreements during the years 1974, 1976, and 1986-1987, have almost been resulted in an open conventional military conflict (Keesing's Contemporary Archives). The international crises between these States is characterized by the escalation phase, reflected mostly via matters such as political issues, nationalistic manifestation, military demonstrations, ultimatums and even isolated military incidents which have resulted in loss of life and military hardware from both sides. This specific conflict of maritime nature, which is still active in nowadays, have had negative impact on international relations system, of both regional and global consequences, increasing dramatically the threat for a potential military conflict in the entire region. Another serious disagreement on maritime delimitation boundaries on Ionian Sea has also revealed recently between Albania and Greece, which has created political, economic and diplomatically tensions, obstructing the bilateral and regional relations, encouraging thus extreme nationalism and destabilizing the political situation in that particular region.

The UNCLOS legal provisions on the delimitation of maritime boundaries, as well as the natural resource management located in the Mediterranean Sea, revealed the considerable jurisdiction difference between the legal right to possess and legal obligations not to exert jurisdiction, reflecting as a consequence the controversial interests as well disagreements among Mediterranean coastal States. In this context, national legal practice on the boundaries delimitation and exploitation of maritime resources by these States, based on their interests, is considered diverse and controversial. France, Libyan, Malta, Morocco, Spain and Tunisia historically have adopted distinct national legislation for their maritime zones. A 100 miles EEZ for the purpose of maritime resources exploitation is designated earlier in time by Egypt and Morocco in Mediterranean, as well as by Franc, Spain and Morocco in Atlantic Ocean (Kliot, 1989). Nevertheless, the adoption of the new UNCLOS 200 miles legal right for the EEZ in Mediterranean Sea, has compromised the status quo situation in the entire maritime region because has encouraged the formation of a overlapping EEZ and maritime boundaries system, which

normally have increased the number and frequency of disagreements among Mediterranean States. The absence of a common legal standard on the delimitation of maritime boundaries delimitation and maritime resources exploitation in the Mediterranean Sea based on UNCLOS, consequently has negatively influenced towards the development or aggravation of international disagreements in the context of international relation system.

Maritime arbitration between present and future

Mr. Mohamed Shawki Mohamed EL KHADRAWI
Egypt (2017)

The emergence of maritime disputes is generally related to global trade; therefore; it is considered a situation per se inevitable. At present, arbitration has become widespread international practice, particularly in the maritime industry. The reason being most maritime transactions and contracts include the arbitration clause due to its advantages, which are unobtainable in the courts, including confidentiality, specialization, flexibility and the parties' sole discretion for selecting the procedures governing the dispute.

The downsides of the current system and the need for a new model.

Notwithstanding, these undeniable advantages of maritime arbitration, there are many constraints and flaws because of its nature.

- Firstly, the antiquated and the outdated laws that were not streamlined or updated in line with the requirements of current issues, especially in the maritime lawsuits which need very fast procedures.
- Secondly, there is a huge gap between the legislative systems, which are responsible for the enactment of the laws and the judicial systems, which handle the application of the law.
- Thirdly, one of the most important disadvantages of the cases of maritime disputes is the delay of procedures. In some cases, this delay of procedures is due to the arbitrators themselves. In the fact, the increasing number of international maritime and commercial disputes with the small number of the qualified and trusted experienced arbitrators have led to the accumulation of cases and sometimes to the delay of the arbitral procedures.
- Fourthly, apart from the delayed procedures, there are other problems due to the arbitration process itself, such as the arbitrators lack of coercive power by which they can enforce the arbitration awards. Consequently, they resort to courts or need an intervention of national justice to enforce the arbitral decisions, specially the interim procedures, collection of evidence and hearing the witnesses.

Despite all the aforementioned, arbitration still has its own benefits which are unavailable in ordinary litigation but can be rendered useless because of these problems. To continue the leading role of the arbitration in the resolution of commercial and maritime disputes, international arbitration institutions should seek to change their traditional arbitration rules, or they ought to at least adopt an innovative system to catch up with the fast increase of the maritime trade and the increase in resorting to arbitration as a means of resolution of maritime disputes.

Comparison between various types of arbitration in the modern world

By 2006, the emergency arbitration procedures began looming on the horizon at the level of the international leading commercial arbitral institutions in the form of "interim procedures before the arbitration" or "so called pre-arbitral relief". Such novel mechanism enables the parties to apply for interim relief in the framework of the arbitration during this critical phase before the establishment of the arbitration tribunal which will discuss the subject matter of the dispute later.

Though emergency arbitration is considered one species of maritime commercial arbitration; nonetheless, it differs from the other types of arbitration whether it is the classic model of arbitration or the fast/short/small arbitration for various causes.

It is noteworthy that emergency arbitration, due to its intrinsic nature, has its own peculiarities. It differs from typical arbitration from several aspects. Perhaps the most important of these differences are;

- the time for the application,
- the time speed for the appointment of emergency arbitrator,
- the limited authority of the emergency arbitrator, and
- the provisional nature of emergency relief.

The next table highlights the major differences between the three prominent systems of arbitration, namely emergency arbitration, typical arbitration, and the fast/short/small arbitration. It could be concluded that emergency arbitration has its own uniqueness owing to its nature per se, which treats merely the urgent situation.

Table1: Comparison of the major differences between the various types of arbitration

	Pre-agreement	Amount of the claim	Time for Application	Parties' discretion to name Arbitrator	No. of Arbitrators	Issues which are handled	Time for Appointment of Arbitrators	The Oral hearing	Power of Arbitrators	The Decision
Traditional Arbitration	Always parties express agreement to the arbitration clause	Unlimited	At any time	**Always** the parties have the freedom of choice or name their arbitrators	A sole or more arbitrators as the parties agreed beforehand.	All substantive issues before the arbitrators	sometimes take several months.	Typically oral hearing	Unlimited powers	Always final Award. Provisional decision may be obtained.
Fast/Short/ Small Arbitration	The parties may agree in advance on a monetary limit for short/fast procedures	Often limited with the amount of the claim	At any time	Parties often has the freedom of choice their arbitrators	Often a sole arbitrator	All substantive issues while often dealing with small claims	Speed/Brief procedures more than Traditional Arbitration	No oral hearing unless in exceptional circumstances	All powers as tribunal	Often render a final Award.
Emergency Arbitration	It is **NOT allowed** for advance agreement	Unlimited	**Just, Prior to the institution of the tribunal**	Could choose the institution. **But, NOT allowed** to name the arbitrator.	Always a sole arbitrator	Merely, the urgent matters.	As short a time as possible, normally within **one or two** days.	Depending on the arbitrator's discretion	Limited power **just for** issue interim relief.	Solely, **Provisional decision** valid until the constitution of the tribunal.

Source: elaborated by the author

The advantages of emergency arbitration over urgent state litigation

Many litigators rather choose emergency arbitration through the arbitration institutions as an urgent mechanism to settle the disputes than the urgent litigation through the national courts due to many reasons.

First - the simplicity of the emergency arbitration procedures

It is clearly evident that the emergency arbitrator has a wider freedom than the summary judge in the national court. Undoubtedly, the emergency arbitration, as much as possible, stays away from the formal procedures, which take, in most cases, a long time before the courts.

Second – the confidentiality of the emergency arbitration procedures

In general, the arbitration procedures are originally confidential among the disputing parties and their representatives. In contrast with the litigation procedures, as a general principle, anyone can attend these sessions. It is worth noting that traders and employers often prefer confidential rather than public procedures in order to preserve the confidentiality of their transactions, related different details and involving persons' names as much as possible.

Third – Specialization

Most national courts in several different countries are not specialized in commercial maritime cases. Therefore, the national judge sometimes lacks the sufficient knowledge of maritime laws and related general principles. In contrast, the emergency arbitration allows the parties to select arbitrators who have not only perception and balanced sense but also the specialized experience and skills in the maritime commerce sector.

Forth – Freedom in selecting the arbitration institution

The option to select the arbitration institution provides the parties with some kind of safety and psychological relief as the person contributes in selecting the judge who will consider the dispute. The arbitration institution often selects efficient arbitrators with the jurisdiction of the contract, which is the subject matter of the dispute.

Fifth: The wider authority to use the contemporary technology means

The unlimited emergency arbitrator's power to use modern technology means such as electronic announcement, submitting documents via e-mail, online pleading or video conference for hearing witnesses. There is no doubt that these modern mechanisms contribute to accelerating the procedures and minimizing the time and cost on the parties.

Historical insight into the issue of unfair treatment of seafarers after maritime accidents

Collision of Imo and Mont Blanc

Ms. Anete LOGINA
Latvia (2009)

Introduction

Since the late 1990s and the early 2000s, the international maritime community has been highly concerned about the unfair treatment of seafarers after maritime accidents. It has been argued that seafarers are detained for prolonged periods, without clear grounds, without access to legal advice and without interpretation services, that they are held as "material witnesses" and as hostages pending the resolution of a financial dispute, that they are convicted without proving their criminal intent or based on political motivations etc. Some scholars argue that such practice is a new phenomenon. However, it is not true. Similar unfair treatment of seafarers can be found in history as well, for example, in the case of collision of ships *Imo* and *Mont Blanc* at Halifax harbour (Nova Scotia, Canada) in 1917.

Collision and events before and after it

In 1917 the First World War was raging in Europe. Halifax harbour was the main departure point for troops and war supplies and the main reception point for the injured coming home. Thus, it was usually crowded with war time shipping.

On the 3rd of December *Imo*, Norwegian 5,043-ton ship, chartered by the American charitable foundation, arrived at Halifax harbour. She was without cargo, bound to New York to load relief supplies for Belgium.

On the 5th of December Mont Blanc, French 3,121-ton cargo ship, arrived at the entrance of Halifax harbour to join a convoy to France. She was fully laden with highly explosive cargo – 2,300 tons of picric acid, 200 tons of trinitrotoluene (TNT), 35 tons of benzol and 10 tons of gun cotton.

At first light on the 6th of December *Mont Blanc* proceeded through the harbour to join a convoy gathering in Bedford Basin, the inner most part of the harbour. At the same time *Imo* set off from the Basin.

Mont Blanc entered harbour keeping along the Dartmouth shore, as the rules dictated. She moved slowly and blew her whistle occasionally. *Imo* came out of the Basin along the Halifax shore. She travelled at a speed which exceeded the harbour limit and, due to the presence of other vessels, was forced towards the Dartmouth side, that is, in Mont Blanc's path.

Mont Blanc signalled to indicate desire to claim her proper channel, but Imo's whistles indicated apparent intent to keep heading toward the same water. As a last desperate measure Mont Blanc, unable to go any closer to shore, attempted to pass starboard to starboard. Briefly it seemed the ships might pass safely. However, almost at the same moment *Imo* threw her engine into reverse, which caused her bow to swing to starboard. As a result, Imo's bow sliced into Mont Blanc, ripping a hole near her bow.

Within seconds *Mont Blanc* was on fire. The crew and the pilot of *Mont Blanc* speedily lowered lifeboats and rowed for the Dartmouth shore, while the flaming ship drifted toward Halifax. At 9:05, twenty minutes after the collision, massive blast occurred – the explosion with the one sixth the power of the first atomic bomb.

Consequences

Concussion of the explosion and the fires that followed left around 2 000 dead, 9 000 injured, 6 000 homeless and 19 000 without adequate shelter. On Imo, most of those above deck, including the captain and the pilot were killed, while most people below deck survived. Mont Blanc's crew was largely safe. Just four were injured by flying debris and a single gunner died from his injuries.

Blaming and fixing responsibility

The city's newspapers, publishing again within hours, revealed the distress and then rushed to find someone to blame for this horror.

Authorities moved quickly to set up a Wreck Commission Inquiry, presided over by a judge of the Admiralty Court. Investigation by the Commission was intended to determine the sequence of events and to gather evidence on navigation decisions, particularly any deviations from accepted rules of the road. The Commission had no authority to conduct a trial, and yet the atmosphere became stormy with accusations and unpleasant hints, which the press published as facts.

Decision of the Commission followed with astonishing speed – it was delivered on the 4th of February 1918. The Commission placed the total responsibility for the collision on Mont Blanc, her captain Le Medec and pilot Mackey, and recommended their criminal prosecution. In addition, the Commission recommended cancelling Mackey's pilot licence. All this was done despite the fact that seasoned mariners and informed legal sources were of the opinion that actions of *Imo* caused the disaster.

There were many questions that needed answers in the wake of the explosion. Why, for example, was Mont Blanc, loaded with such an obviously volatile cargo, allowed to pass through the inner harbour when it could have anchored safely near the harbour entrance, away from where anyone lived? Why was there other traffic moving in the harbour when such dangerous traffic was passing through? None of these questions were dealt with by the Commission.

It fell to Nova Scotia's crown prosecutor to decide whether to act upon Commission's recommendation to start criminal prosecution of the captain and the pilot. Again, there was no lengthy deliberation. It was decided to start the prosecution. Both men were arrested and charged with manslaughter.

Captain Le Medec was able to post bail but pilot Mackey was imprisoned. However, his lawyer quickly brought forward an application for judicial review of the detention. Judge Benjamin Russell reviewed the application, found that there is absolutely no evidence to support charges against Mackey (basically, that the collision was caused by the conduct of Imo) and released him from custody as well as from the prosecution in general. Ultimately, thanks to the efforts of Judge Russell, also Captain Le Medec was set free. Public did not like it; Judge Russell was castigated in the press and on the streets for his decisions to release the seafarers.

Captain Le Medec went home to France and resumed his career. Pilot Mackey stayed in Halifax, near the people who experienced the terrible disaster and were still looking for "the villain" who caused it. Provincial and city officials made several subsequent attempts to have the pilot hauled into court again. Parallel to that Mackey was forced to spend the next four years on his life savings, as he could not regain his pilot licence.

Pilot Francis Mackey

Conclusions

Collision of *Imo* and Mont Blanc, among other things, is the example of:

- Public outcry after a large-scale accident – it is evident from the press rushing to blame somebody for the disaster, from people castigating Judge Russell for the release of seafarers as well as from the desperate attempts of the officials to have the pilot hauled into court even after it was found that there is absolutely no evidence to support charges against him.
- Inappropriate technical investigation of the accident – the Wreck Commission Inquiry was hasty and biased, it did not act within the limits of its competence, it did not answer many important questions related to the cause of the accident and it came to the wrong conclusions regarding the guilt of Mont Blanc.
- Unfair accusation of seafarers and violation of their right to liberty – it was eventually acknowledged that there was absolutely no evidence to support criminal charges against the captain and the pilot of Mont Blanc. It means that there were also absolutely no bases to accuse and arrest them in the first place. Despite that, they were accused and arrested.
- Destroyed career due to the unfair accusation – despite the fact that pilot Mackey was found not guilty for causing the collision, for the next four years he could not regain his pilot licence and was forced to live from his savings.

Today's judges and prosecutors must follow the footsteps of Judge Russell and not allow their professional decisions to be influenced by the public outcry. Today's institutions which carry out technical investigations of maritime accidents must write their reports with utmost care, among other things keeping in mind that these reports may influence life of people. Today's governmental and non-governmental organisations must do even more than they have done so far to eliminate unfair accusations of seafarers and violations of their right to liberty. All this, and more, must be done to minimise the severe negative consequences the unfairness against seafarers brings both to individual seafarers, their health and careers, and to the shipping sector in broader terms, its image, and the ability to recruit and retain a sufficient number of qualified seafarers to the sector.

Sources of information:

1) Haine, Edgar A., Disaster at sea, New York: Cornwall Books, 1983, pp.70-71.
2) Maybee, Janet, "The Persecution of Pilot Mackey", in The Northern Mariner, XX, No.2 (April, 2010), pp.149-173.
3) Scanlon, Joseph, "Source of Threat and Source of Assistance: the Maritime Aspects of the 1917 Halifax Explosion", in The Northern Mariner, X, No.4 (October, 2000), pp.39-50.
4) Logina, Anete, "Criminal procedures and sanctions against seafarers after large-scale ship-source oil pollution accidents: a human rights perspective", PhD dissertation, World Maritime University, 2016, pp.1-3.
5) Causes of the Halifax Explosion, https://tc2.ca/sourcedocs/history-docs/topics/world-war-i.html.
6) Halifax Explosion – story map, https://museum.novascotia.ca/blog/halifax-explosion-story-map.

Closing Session

WMU Sasakawa Fellows' Network Meeting
in the East European, Middle Eastern, and North African Regions

Closing Remarks

Tsutomu AKITA
(Senior Specialist, Ocean Policy Research Institute, the Sasakawa Peace Foundation)

In closing the WMU Sasakawa network meeting, I would like to thank you for your cooperation on behalf of Secretariat.

We have been able to have such lively discussions. It is because you all have had the opportunity of studying at WMU and accordingly have a shared outlook on the world.

I am very satisfied that mutual agreement on the next step has been formed at this meeting. In the exchange of information on maritime affairs of each country during the meeting, I learned that you all have been struggling with nation building.

In returning to your home country, one thing that I would like to remind you is that our final goal is sustainable development of the maritime society and the ocean.

As you may know, a large number of senior WMU Sasakawa Fellows have been contributing to the maritime societies in the world with the mind of friendliness.

I would like you to work together with them.

Last but not least, the meeting would not have been realized without the support from the NIPPON Foundation and Mr.Sasakawa, whose major activity is bringing up of persons around the world. Bearing this in mind, I would like to join you in expressing our sincerest thanks to The Nippon Foundation and Mr. Sasakawa.

In closing, I wish all of you here success in your careers and future activities.

Thank you for your kind attention.

Country Report

WMU Sasakawa Fellows' Network Meeting
in the East European, Middle Eastern, and North African Regions

COUNTRY REPORT

A L B A N I A

1. Country Overview

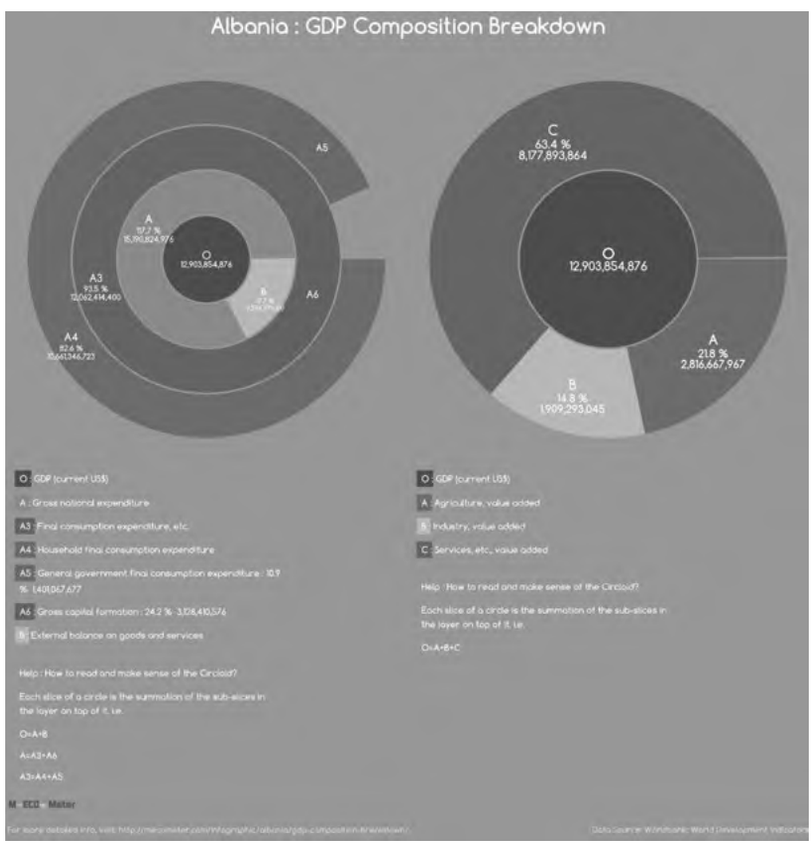
Republic of Albania is situated in South-Western Balkans, in Europe, bounded by Montenegro to the northwest, Kosovo to the northeast, Macedonia to the east, Greece to the southeast and south, and the Adriatic and Ionian seas to the west and southwest, respectively. Albania's immediate western neighbor, Italy, lies some 80 km across the Adriatic Sea. Albania has a length of about 340 km and a width of about 150 km. Its geographic coordinates are 41 00 N, 20 00 E. The total territorial area of Albania is 28,748 square km, out of which land is 27,398 square km and water 1,350 square km. The coastline length of Albania is 362 km. Population: 3,047,987.

2. Economic activities categorization

Stretching along the Adriatic coast over a distance of nearly 200 km and penetrating some 50 km into the interior are the low, fertile plains of western Albania. This is the most important agricultural and industrial region of the country—and the most densely populated. At the beginning of the 21st century, Albania was recording modest annual growth in GDP. Remittances from Albanians working abroad account for a significant amount of revenue. Although more than four-fifths of the economy has been privatized since the 1990s, the transformation process has been slow and uneven. About half of the economically active population is employed in agriculture, which contributes about one-fifth of Albania's GDP. Only one-fourth of the total land area is arable, yet the country meets nearly all its food needs from domestic production. The main crops are wheat, corn (maize), sugar beets, and watermelons. Apples, plums, grapes, walnuts, and chestnuts are also grown. Citrus fruits are cultivated on the southern coast, as are figs and olives wherever there is sufficient irrigation. Major livestock are sheep, goats, cattle, and pigs. Forests cover about one-third of Albania.

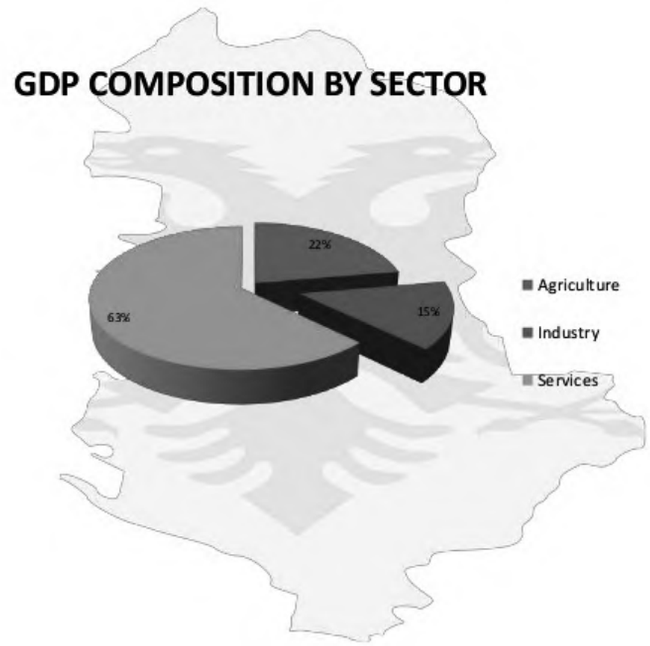
The country has lost much of its forest area, however, due to clearance for agriculture, pasture, and fuel wood, which occurred mainly in the early 1990s. In the mid-1990s the Albanian government joined with Italy and the World Bank to implement a forestry project, which included the strengthening of Albania's environmental institutions and the introduction of sustainable forestry methods.

With access to both the Adriatic and Ionian seas, the Albanian fishing industry has great potential; however, due to a lack of professional fishermen and the use of antiquated equipment, it has not been fully developed. The catch in the Ionian Sea includes carp, trout, sea bream, mussels, and crustaceans. The country's main fishing ports are at Sarandë, Vlorë, Shëngjin, and Durrës, the last of which is the country's largest and most important. Port facilities have also been developed on inland lakes. The government has attempted to ban fishing of the letnica trout (known as koran in Albania), an endangered pink-meat fish found in Lake Ohrid. Family-run trout farms have increased in importance, as have shrimp farms and hatcheries. Anchovies imported from other Mediterranean countries are canned for export.



Albania GDP Composition Breakdown

Albania in June 2014 became a candidate for EU accession. Albania in November 2016 received a European Commission recommendation to open EU accession negotiations conditioned upon implementation of a judicial reform package passed earlier the same year. Although Albania's economy continues to grow, it has slowed, and the country is still one of the poorest in Europe. A large informal economy and a weak energy and transportation infrastructure remain obstacles.



Albania

3. Government

Government Type: Parliamentary democracy. Branches: Executive--President (chief of state), Prime Minister (head of government), Council of Ministers (cabinet). Legislative--140-seat unicameral People's Assembly or Kuvendi Popullor elected by regional proportional vote; all members serve 4-year terms.Judicial--Constitutional Court, High Court, multiple district and appeals courts. Political parties: Main--Democratic Party of Albania (DP); Albanian Socialist Party (SP); Socialist Movement for Integration (LSI). Others--Albanian Republican Party (PR); DemoChristian Party (PDK); Union for Human Rights Party (PBDNJ); New Democracy Party (PDR); Social Democratic Party (PSD); Social Democracy Party (PDS).

4. Economic issues

Albania, a formerly closed, centrally-planned state, is a developing country with a modern open-market economy. Albania managed to weather the first waves of the global financial crisis but, the negative effects of the crisis caused a significant economic slowdown. Since 2014, Albania’s economy has steadily improved and economic growth is projected to increase to 3.8% in 2017. However, close trade, remittance, and banking sector ties with Greece and Italy make Albania vulnerable to spillover effects of possible debt crises and weak growth in the euro zone.

Remittances, a significant catalyst for economic growth, declined from 12-15% of GDP before the 2008 financial crisis to 5.8% of GDP in 2015, mostly from Albanians residing in Greece and Italy. The agricultural sector, which accounts for almost half of employment but only about one-fifth of GDP, is limited primarily to small family operations and subsistence farming, because of a lack of modern equipment, unclear property rights, and the prevalence of small, inefficient plots of land. Complex tax codes and licensing requirements, a weak judicial system, endemic corruption, poor enforcement of contracts and property issues, and antiquated infrastructure contribute to Albania's poor business environment making attracting foreign investment difficult. Since 2015, Albania has launched an ambitious program to increase tax compliance and bring more businesses

into the formal economy. In July 2016, Albania passed constitutional amendments reforming the judicial system in order to strengthen the rule of law and to reduce deeply entrenched corruption.

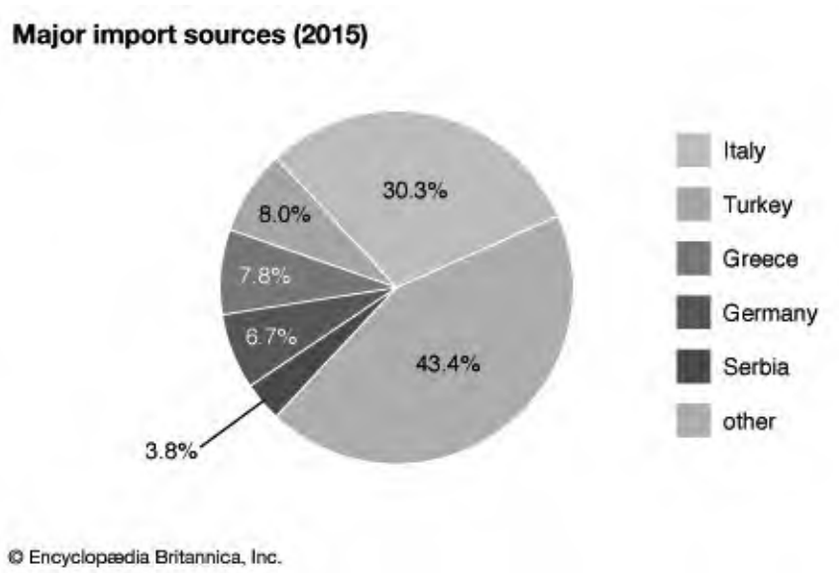
Inward FDI has increased significantly in recent years as the government has embarked on an ambitious program to improve the business climate through fiscal and legislative reforms. The government is focused on the simplification of licensing requirements and tax codes, and it entered into a new arrangement with the IMF for additional financial and technical support. Albania's three-year IMF program, an extended fund facility arrangement, was successfully concluded in February 2017. Albania's 2017 budget aims to reach a small primary surplus, which the Albanian Government plans to achieve by strengthening tax collection amid moderate public wage and pension increases. The country continues to face high public debt, exceeding its former statutory limit of 60% of GDP in 2013 and reaching 71% in 2016.

5. National natural resources

For a small country, Albania is endowed with considerable resources. The southwestern part of the country is rich in petroleum and natural gas. The northeastern and central mountain regions have substantial reserves of metallic mineral deposits, including chromium, copper, and iron-nickel. Deposits of lignite (soft coal) are found near Tirana, and natural asphalt is mined near Selenicë, by the southwest coast. In the 1980s Albania was a world leader in chromium production, but output fell precipitously in the early 1990s during the political transition from communism. Despite increased output by the mid-1990s, mining in all sectors fell again by the century's end because of the poor recovery methods, obsolete machinery and equipment, lack of technical expertise, and poor organization that have characterized Albania's efforts to exploit its resources. significant hydroelectric potential. These were exploited quite effectively at the end of the communist era, making the country an energy exporter. A number of huge hydroelectric power plants were built, mainly on the Drin River, and more than half of the country's arable land was irrigated, largely from the artificial reservoirs created upstream of the dams.

6. Main trading & trading partners

Albania had a growing trade deficit in the early years of the 21st century. Its major trading partners include Italy, Greece, Turkey, Germany, and China. It exports textiles, footwear, and base metals. The principal imports are food products, machinery and equipment, spare parts, textiles, and minerals and metals.



7. Albanian coastline and main ports

Fig. Albanian coastline

Albania shares maritime border with Greece to the south, Montenegro to the northwest and Italy in west. Western Albania lies along the Adriatic and Ionian Sea coastline which is in total 362 km long. Albania has 12 miles territorial waters and claims continental shelf 200-m depth or to the depth of exploitation. Albania's primary seaport is Durres, which handles 90% of its maritime cargo and Vlora Seaport in les extent, as well as two small ports of Saranda and Shengjin. Albania situated in the southwestern region of the Balkan Peninsula; Albania is predominantly mountainous but flat along its coastline with the Adriatic Sea. Major cities are Capital--Tirana (600,000), Durres (200,000), Shkoder (81,000), Vlore (72,000) etc.

8. Maritime Administration

Albania has its Maritime Administration, which is an integral maritime structure of the Ministry of Transportation, Energy and Infrastructure. The respective minister is the highest maritime authority of the Albanian Maritime Administration. Main maritime authorities which operate under the jurisdiction of the Albanian Maritime Administration are: General Maritime, Directory, State Authority of Port Security, Harbour Master Authority, Port State Control, Flag State Control, Ship Registry, Seafarers Registry, The implementation of the appropriate maritime policies, legal norms and the main principles of the international law of the sea, represented mainly by the Law of the Sea Convention (1982), for ensuring the quality of global shipping industry and seafarers, maritime environment protection, maritime safety and security, along with an effective economic management of maritime functional areas, are considered the main responsibilities of the maritime administration in Albania.

Albanian Maritime Administration is concerned with the policy making, regulatory and service provision functions of the government, as well as the effective implementation of the law of the sea that contribute to ensure that national maritime interests are effectively protected, and international relations between the appropriate state and other international actors are implemented in a way that ocean resources and exploitation is implemented according to international law. Therefore, its main responsibility is the implementation of the political, social and economic philosophies and policies of the national Government, as well as the requirements of the international maritime conventions and the law of the sea towards an effective administration of the national maritime affairs.

Albanian Maritime Administration`s main task is the implementation of appropriate maritime policies for ensuring the quality of shipping industry and seafarers, maritime environment protection, maritime safety and security, along with an effective economic management of maritime functional areas. In this respect, the Albanian Maritime Administration implements maritime strategies covering its purpose and duties prescribed by the national and international maritime legislation, which are as follows: 1) Registration of ships. 2) Inspections and Certification of ships. 3) Manning of ships. 4) Prevention and combat of marine pollution. 5) Detention of unsafe ships. 6) Port state control. 7) Investigation into shipping casualties. 8) Registration of seamen. 10) Maritime training and education. 11) Issuance of the Certificates of Competency. 12) The adoption and implementation of International Maritime Conventions. 13) Advice to government on maritime matters. 14) Wrecks. 15) Crew matters. 16) Legal Affairs. 17) Maritime Transportation. 18) Vessel Inspection.

9. Legal framework

The significance of the Albanian Maritime Administration and the implementation of the law of the sea is paramount for Albanian maritime industry because it promotes the progress and prosperity of the national shipping industry and seafarers, and also the sustainable use, development and optimization of the ocean policy issues such as; living marine resources, exploitation of mineral and energy resources, and

environmental protection The legal framework within which Albanian Maritime Administration operates is based on the constitutional law, and on the international maritime conventions adopted by the United Nations and the International Maritime Organization (IMO). The legal authority of Albanian Maritime Administration is characterized the most, as regulatory power to control certain activities by setting conditions, constraints, and limitations with regard to the sustainable use and development of the maritime property. The constitutional law and international maritime legislation are the main legal platforms of Albanian Maritime Administration in performing its tasks.

With regard to international maritime legislation, the Albanian Maritime Administration`s ocean policy derives mainly from the doctrine of the United Nation Convention on the Law of the Sea 1982 (UNCLOS). Among the international maritime conventions which are ratified by Albania and implemented through maritime administration are: United Nations Convention on Conditions for Registration of Ships 1986, International Convention for the Safety of Life at Sea (SOLAS) 1974, International Convention for the Prevention of Pollution from Ships (MARPOL) 73/78, The International Convention on Standard of Training, Certification and Watch Keeping for Seafarers (STCW) 1978, The International Convention on Load Lines (LL) 1966, The International Convention on Oil Pollution, Preparedness and Co-operation (OPRC) 1990, The Intervention Convention 1969, International Convention on Collision Regulation (COLREG) 1972, Search and Rescsue Convention (SAR) 1979, Internationl Convention on the Surppression of Unlawful Acts Against the Safety of Navigation 1988, Maritime Labour Convention (MLC) 2006, FAL Convention 1965, Ballast Water Convention. Although Albania has made great progress in being a party to all the significant maritime convetions adopted bu IMO and UN there many serious issues regarding the implementation of the provisions of these legal instruments in the maritime industry. The lack of financial budget and specialized human resources in the maritime sector, are the main causes for this issue.

10. Maritime Transport and Seaports

Albaniawith four main seaports and 362 km long coastline has favorable natural condition, strategic geographical position and abundant natural resources for the development of all maritime actitvities such as maritime transport, fisheries, exploitation od natural resources, turism industry with all coastal countries of Meditaerranean and Adriatic Sea. Maritime transport and seaports are the main maritime sectors not only for the development of the transport system but also for economic and turism industry development. In this regard, Albania has made possible recently the improvement of the infrastructure and superstructur of Durres, Vlora, Shengjin and Saranda seaports, increasing thus their transport, logistic and cargo handling capacities as well as enheacing their effectiveness in relation to passanger shipping industry and maritime tursim sector. The commercialization, port service privatization as well as the presentation of new maritime technology in seaport and shipping has been also one of the main objectives of the Albanian Maritime Administration. Main maritime transport is being carried out in four central seaport of Durres, Shengjin, Vlora, Saranda and Pertolifera Industrial Port.

Durres Seaport:

The main and biggest Port in Albania and the gateway of Corridor VIII. It is situated in SW part of the city of Duress and 36 km East of Tirana. Durres Port Authority is a joint stock Company Where 100% of shares belongs to the government.

- The port has 11 berths.
- Water area: 67 Ha
- Land area: 80 Ha

- Length of the quay: 2.2 km
- Water Depth in the basin: 7.5 - 11.5 m
- Cargo volume over: 3 Mln Ton/Year

Maritime transport development objectives in Durres Seaport:

- Improve legal framework
- Privatize port services
- Improve port infrastructure
- Improve cargo handling facilities
- Adopt new technologies
- Increase cargo handling capacities
- Improve safety and security of ports
- Protect maritime environment from pollution

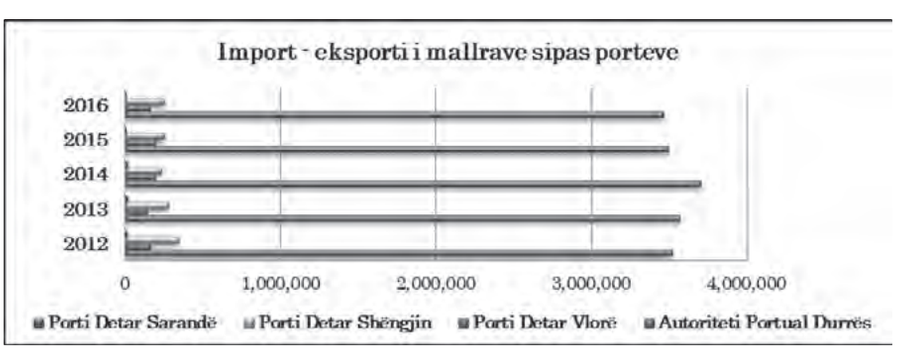
Marititme Transport Data Information in Seaports

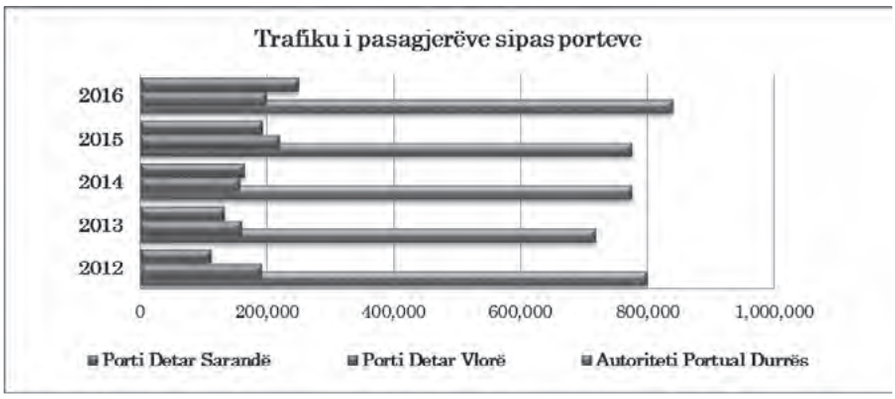
Passangers Volume for Main Seaports

Seaports	Unit	YEAR				
		2012	2013	2014	2015	2016
Durrës	nr	798,524	717,399	774,702	774,411	839,598
Vlorë	nr	190,015	159,623	156,422	219,516	198,079
Shëngjin	nr					
Sarandë	nr	111,681	132,152	163,662	192,114	248,814

Cargo Import-export for Main Seaports

Seaports	Unit	YEAR				
		2012	2013	2014	2015	2016
Durrës	ton	3,516,446	3,566,942	3,702,366	3,495,360	3,462,473
Vlorë	ton	164,620	139,369	191,691	195,745	158,689
Shëngjin	ton	341,904	273,172	230,438	249,146	253,134
Sarandë	ton	13,307	15,738	16,584	6,105	8,387





11. Shipping

In Albania all passenger, fishing and commercial ship with Albanian flag belong to the private sector which plays a significant contribution in the effectiveness od the Albanian shipping industry. All the ships under Albanian flag are invoved in handling various shipping activities such container and passenger shipping, as well as cargo and bulk shipping. Currently, flying the Albanian flag there are 15 commercial ships of different tonnage (in total 99076 GRT), in which three of them are passenger ships which carry out passenger transportation between main Albanian seaports. All the other ships are characterized mainly as cargo, contenier and bulk ships which cayy out navigation trips in neigbouring countries such as Italy, Croatia, Greece, Slovenia, Montenegro and rarely in China, Spain, Egypt, Tunizia, France, Lybia etc. Although Albania has three lakes they are all small lakes and serve only for small passenger and turism ship or boats.

The main shipping companies that operate in Albania are totally private owned namely Global Container Shipping Company MSC Albania, ZIM Albania International Shipping Company, Dedja Shipping, INTERMED Shipping, Arba Shipping, Pelikan Transport Shipping etc.There are two main state shipyards in Albania. One is located in Pashaliman Naval Base and the other one is located in the Durres Seaport. Pashaliman shipyard, which has also a drydock, in cooperation with the Dutch Shipping Company Damen Shipyard until 2012 had the capacity to build small commercial vessels including high speed passenger catamarans, containers as well as bulk and dry cargo vessels and small patrol vessel. It also serves currently as a maintenance and repair facility for small ships. Durres Port Authority has a small drydock yard for repair and maintenances for water craft with low GRT. It consists of a boat slipway with two rails and two-rail lifting systems, boat shed, woodwork and machine shop, plate shop, and a service jetty

12. Safety and security

The growing volume of freight and maritime traffic in Albania, means that there is an increasing demand for specialized safety and security services operated by a specialized national authority. The challenge facing port operators and ship crews is to find the optimal security plan that not only matches budget and operational requirements but also complies with the International Ship and Port Facility Security Code (ISPS Code) and other regulatory requirements, including SOLAS Convention, which are ratified and started to be implemented in Albanian from September 2004. Within the Albania Maritime Administration structure is included the Maritime Security and Safety Directorate which is the main authority along the Port Security Authorities in Albanian Seaports dealing the maritime security issues in Albanian seaports and ships flying Albanian flag. Directorate's main tasks are security threats, security management, incident management, port and ship security levels, civil emergencies and so forth.

Maritime Safety and Security Directorate services in Albania in cooperation with ICTS Albania include:. Operations Setup: recruitment and training of operational staff, writing manuals and security plans, developing procedures, Port and Ship Security Assessments: vulnerability assessments, security surveys and advice on counter-measures, Financial Arrangements, including provision of equipment on lease, Screening of people and their personal effects: cruise ship passengers, crew and visitors, and at entry to port facilities when required; use of hand search, metal detectors and X-ray machines, including advanced techniques such as Threat Image Projection, Landside and Seaward Protection for ships and port facilities, including counter-piracy advice, measures and equipment, Monitoring of CCTV and Intruder Detection Systems (e.g., Smart Fence): security patrolling, with guard dogs if required, Manning of access control points to port facilities, Vehicle screen/search on entry to port facilities: screening of freight, stores and vehicles using ICTS Europe's unique RASCargO™ product, for ship's stores, cargo containers and lorries, coaches and cars on ferries, Emergency Planning, including crisis management and business continuity , Vehicle screen/search on entry to port facilities: screening of freight, stores and vehicles using ICTS Europe's unique RASCargO™ product, for ship's stores, cargo containers and lorries, coaches and cars on ferries, Emergency Planning, including crisis management and business continuity.

Matters of maritime security are a concern not only in Albania but also all around the world. Nevertheless, security issues such as piracy, maritime terrorism, maritime organized crimes, shipjacking, and stoways have not been presented in Albanian ships and seaports during the last two decades. No major incident has been present during this period of times in the Albanian Maritime Industry. The main security issue for Albanian Maritime Administration and national security services has been drug trafficking by sea. However, this illegal activity has not been found to be transportet by commercial or passenger ships but from small fast boats which are not under the authority of Albanian Maritime Administration but under the jurisidiction of Border Police.

13. Marine environment protection and preservation

Albania has ratified the United Nations Convention on the Law of the Sea 1982 as well as MARPOL and OILPOL Convention. The Ministry of Transportation, Energy and Infrastructure, Ministry of Environment and Albanian Maritime Administration cooperate and work together to make sure the protection and preservation of marine environment of the Albanian National Waters, Seaport s and the Albanian coastline. National maritime policy and legislation protecting marine environment have been also introduced in Albania in order to protect sensible marine and coastal areas. There has been no major incident regarding oil spills in Albanian coastline but there are concerns for minor and constant pollution in major seaport of the country and in same touristic areas along the coastline.

14. Registration of ships

Albanian Registry of Shipping, under the jurisdiction of Albanian Maritime Administration, is the main national authority wherein all commercial and passenger ships are registered, holding Albanian shipping documentation and flying Albanian flag.

Ships registered in Albania are of small GRT and as of 2015 available data present a total of 15 registered ships by Albanian Registry of Shipping with a total registered tonnage of 99076 GRT. On the other hand, fishing vessels are registered in another shipping registry, Fishing Vessel Registry, which is under the jurisdiction of the Ministry of Agriculture.

15. Seafarers and Maritime Education and Training

The only Albanian higher educational institution which offers bacherol and master degree in nautical sciences is the Univeristy Ismail Qemali Vlore, under the jurisdiction of which is the Department of Nautical Sciences. This department offers education and training of seafarers in accordance with relevant IMO Convention.

In 2017 the Department of Nautical Sciences started to give IMO courses as well for the future navigation officers. In recent years there are a number of competent Albanian seafarers working ashore as well as at sea, within and outside Albania, mainly in European shipping companies.

16. WMU Graduates

There are only 5-6 Albanian nationals who have graduated from WMU since 1991 but the absence of proper data base has made it impossible to gather information for these graduates (in my knowledge).

Currently, I am the only WMU Sasakawa fellows working as a professor at Department of Nautical Sciences in the Univeristy Ismail Qemali Vlore. Another WMU graduate from Albania is currently working in Albanian Maritime Administration.

17. Comments

There are a number of issues reflecting the Albanian Maritime Industry currently. First, the are shortages of maritime professionals and experts which are need it to work in maritime sector. Secondly, the implantation of IMO international requirements in Albanian maritime sector is not in the satisfactory level due to buracratic matters, lacks of logistics, absence of appropriate finance and budget and lack of political priorities regardin the maritime sector. More needs to be done to harmonize the national legislation with IMO international requirements and UNCLOS. There are still legal instruments regarding maritime matters which date back in 1970 and need to be amended. Moreover, an efficient maritime strategy need to be developed whch will include the legal philosophy of all the IMO main international conevention and law of the sea convention.

COUNTRY REPORT

A L G E R I A

1. Country Overview

Algeria (Al Jazair in Arabic), officially People's Democratic Republic of Algeria, is located in North Africa between latitudes 36.5 – 19 North and longitudes 11 East – 28 West. Its total area of 2,381,741 Km^2 makes it the tenth-largest country in the world and the largest in Africa and the mediterranean region.

Algeria shares 6734 Km of land boundaries with seven (07) countries: 1034 Km with Tunisia in the northeast, 989 Km with Libya in the east, 1900 Km with Morocco in the west, 41 Km with Western Sahara, 460 Km with Mauritania and 1359 Km with Mali in the southwest, and 951 Km with Niger in the southeast, whereas it is bounded to the north by the mediterranean sea with a1200 km coastline.

Algeria may be divided into two distinct geographic regions. The northernmost, generally known as the Tell, is subject to the moderating influences of the Mediterranean and consists largely of the Atlas Mountains, which separate the coastal plains from the second region in the south. This southern region, almost entirely desert, forms the majority of the country's territory and is situated in the western portion of the Sahara.

The population of Algeria was estimated to 40,969,443 in July 2017 with a Population growth rate of 1.7%. The vast majority of this populace is found in the extreme northern part of the country along the mediterranean coast. More than three-fourths of the country is ethnically Arab, though most Algerians are descendants of ancient Amazigh groups who mixed with various invading peoples from the Arab Middle East, southern Europe, and sub-Saharan Africa.

Most Algerians, both Arab and Amazigh, are Muslims and Arabic is the official national language in Algeria. Most Algerians speak one of several dialects of vernacular Arabic. These are generally similar to dialects spoken in adjacent areas of Morocco and Tunisia. In addition to the Arabic language, many Algerians speak and use the French language as the country was a French colony for more than 130 years.

2. Economic activities categorization:

Algeria's economy remains dominated by the state. In recent years the Algerian Government has halted the privatization of state-owned industries and imposed restrictions on imports and foreign involvement in its economy.

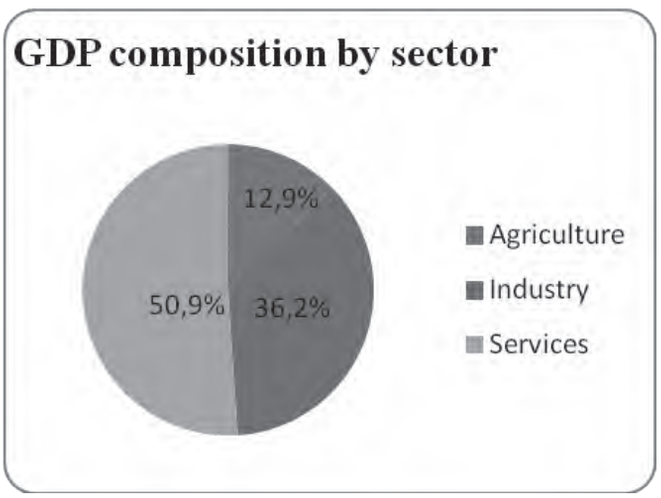
Hydrocarbons have long been the backbone of the Algerian economy, accounting for roughly 30% of the country's Gross Domestic Product (GDP), 60% of budget revenues, and nearly 95% of export earnings. Algeria has the 10th-largest reserves of natural gas in the world and is the sixth-largest gas exporter. It ranks 16th in oil reserves.

Agricultural production is a moderate contributor to the Algerian economy accounting for 12-13 percent of GDP. The sector's contribution to the economy has declined sharply since independence. Years of government restructuring, lack of investment, meager water resources, and dependence on rainwater for irrigation have contributed to this decline. The production of cereals as well as orchard and industrial crops has significantly dropped. As a result, Algeria today has become dependent on food imports, accounting for close to 75% of the food needs.

Even with the country's long coastline, the fishing industry is underdeveloped and lands only a portion

of its estimated potential catch. Refrigeration and canning facilities, necessary for transporting the catch inland, are limited. The government, however, has taken steps to develop the industry by constructing additional fishing ports.

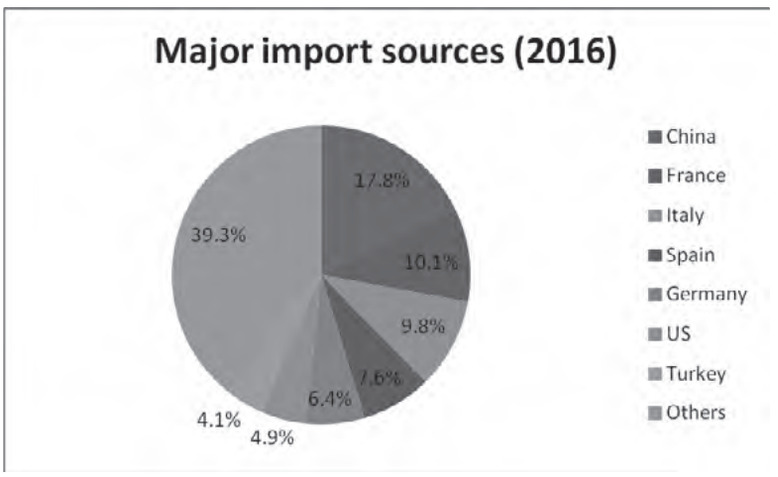
The Gross Domestic Product (GDP) of Algeria was worth UD$ 156.08 billion in 2016. It represents 0.25 % of the world economy. Services including Health and education services, financial services, legal and accountancy services and infrastructure services such as telecommunication and transportation contributed 50.9% of growth in Algeria in 2016, while industries related to petroleum, natural gas, mining, electrical, petrochemical and food processing contributed 36.2%. For its part, agriculture contributed only 12.9% to the total Algerian GDP with various products such as wheat, barley, oats, grapes, olives, citrus, fruits, sheep and cattle.



3. Main trading & trading partners

Virtually all of Algeria's foreign-exchange earnings are derived from the export of petroleum and natural gas products, both of which are refined domestically at an increasing rate. Other exports include phosphates, vegetables, dates, tobacco, and leather goods. The major imports are capital goods and semi finished products consisting mostly of industrial equipment and consumer goods, followed closely by foodstuffs.

About two-thirds of all trade is with countries of the European Union, and the United States is next in importance. In 2016, Algerian exports were estimated at UD$ 29.06 billions, whereas imports reached UD$ 49.3 billions.



4. Maritime Administration

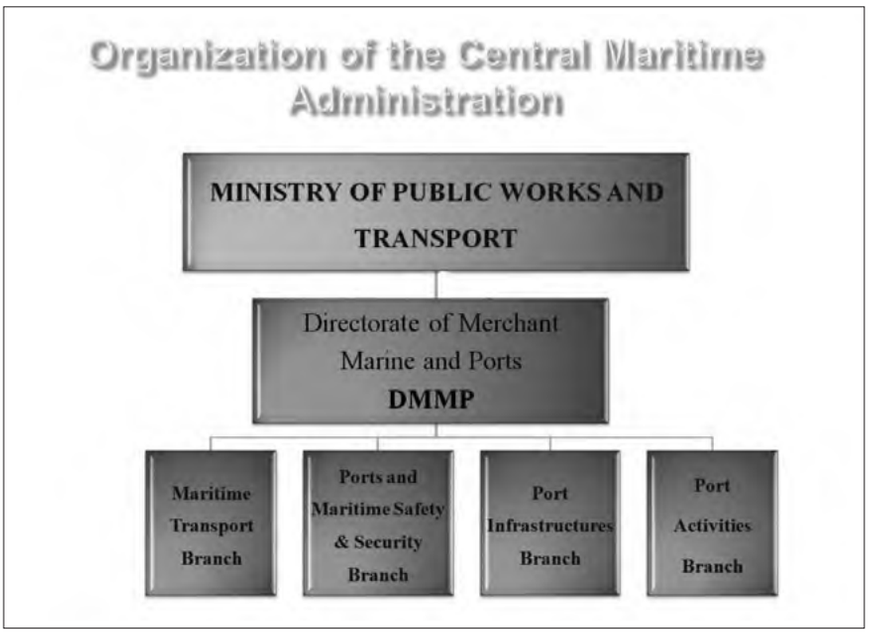
Algeria has two competent institutions that, working closely together, address matters related to the maritime sector within the country. On the one hand, The Central Maritime Administration, represented by the Directorate of Merchant Marine and Ports (DMMP) at the Ministry of Public Works and Transport, and on the other hand, the Local Maritime Administration represented by the Department of Maritime Issues (DMI) at the Ministry of National Defense.

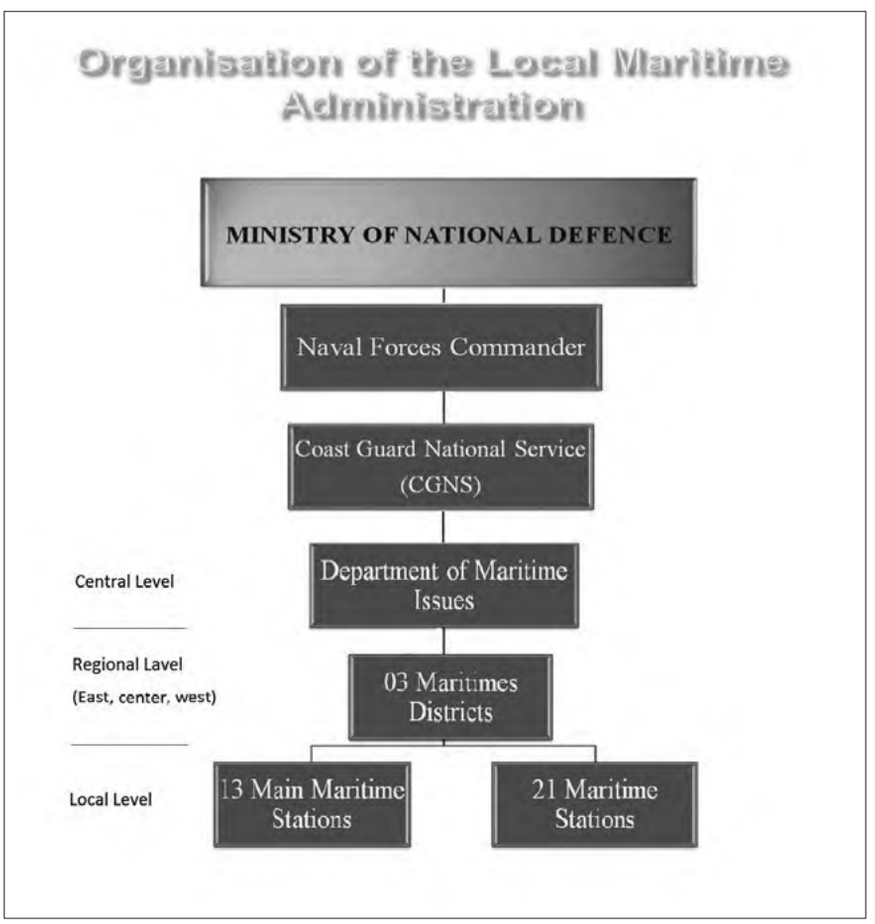
The Directorate of Merchant Marine and Ports (DMMP) is under the authority of the minister in charge of the merchant marine – the minister of public works and Transport. Its principal missions are to propose and implement policy measures related to the merchant marine and ports, to ensure the State's obligations under international maritime conventions and to define the procedures for implementing standards and regulations related to maritime navigation.

On the other side, the Department of Maritime Issues (DMI), under the authority of the Coast Guard National Service (CGNS), is in charge of three (03) maritime districts at a regional level, which themselves manage thirteen (13) Main Maritime Stations and twenty-one (21) Maritime Stations at a local level. The Department of Maritime Issues attends to ensure coordination and creates relations with other ministerial department in the maritime field.

Considered as local maritime administrative units, the Maritime Districts together with the Main Maritime Stations and the Maritime Stations are in charge of all local maritime administrative functions, fixed by national

and international maritime laws and regulations; in particular, the administration of seafarers, the maintaining of the Algerian Ships Registry, the delivery of seamen's books for seafarers, the issuing of navigation titles and ships safety certificates, carrying out safety inspections on board ships, ensuring protection of the maritime public domain and the marine environment, ensuring safety of life at sea and ensuring that health, working and living conditions standards are complied with and enforced on board vessels.





5. Legal framework

In order to promote maritime safety and security within the country, to protect the marine environment and to increase its participation in world trade and international maritime transport, Algeria as at November 2017, ratified a total of twenty eight (28) IMO conventions and protocols, including the "four pillar" of the international regulatory regime, namely, the International Maritime Organization (IMO) conventions SOLAS, STCW, MARPOL along with the International Labor Organization (ILO) consolidated convention, known as the Maritime Labor Convention (MLC 2006).

Besides those international maritime conventions, the Algerian Maritime Code (AMC) established in 1998, is referred to as an integral part of Algerian maritime legislation.

With its internationalist aspect, the AMC contains many articles derived from the existing international maritime conventions such as the IMO conventions and the United Nations Convention on the Law Of the Sea (UNCLOS), adopted in Montego bay in 1982.

The Algerian Maritime Code comprises three (03) main books, fourteen (14) titles, twenty-nine (29) chapters, thirty-two (32) sections and 955 articles. The first book deals with maritime navigation and seafarers matters. The second book addresses ships commercial operations, and the third book covers port operation services.

6. Maritime Transport

A. Shipping

In order to cope with the increasing demand for maritime transport, which remains the main mode for the transport of goods imported into Algeria, to ensure the transportation of passengers and to ensure transportation of hydrocarbon that are considered as the backbone of the Algerian economy accounting for nearly 95% of export earnings, three (03) leading maritime companies are operating within the country, respectively, the *Compagnie Nationale Algerienne de Navigation* (CNAN), *the Entreprise Nationale de Transport Maritime de Voyageurs* (ENTMV) and the Hyproc Shipping Company.

The Algerian Company of Navigation (CNAN)

The National Navigation Company (CNAN) was created in 1963 as a mother maritime company to fulfill the missions assigned by the Algerian Government related to the maritime industry. In 2014, two subsidiaries were founded, namely, CNAN Nord and CNAN Med.

CNAN, through its two subsidiaries CNAN Nord and CNAN Med, ensures the maritime transport of all kind of goods other than hydrocarbons. The company employs a total of 263 persons including 167 seafarers, and owns ten (10) Algerian flagged ships including seven(07) multipurpose heavy lift vessels managed by CNAN Nord, namely, M/V SAOURA built in 2012, M/V STIDIA built in 2011, M/V SEDRATA built in 2011, M/V KHERRATA built in 2012, M/V CONSTANTINE built in 2012, M/V TINZIREN built in 2016, M/V TIMGAD built in 2016, and three (03) container ships managed by CNAN Med, namely, M/V GOURAYA built in 2010, M/V TITTERI built in 2016 and M/V TAMANRASSET built in 2017.

The subsidiary CNAN Med covers the Mediterranean zones including France, Spain and Italy, whereas CNAN Nord ensures the transport of goods from the ports of Antwerp (Belgium), Hamburg (Germany), Istanbul (Turkey) and Charleston (United States).

The company for the passengers transport (ENTMV):

The *Entreprise Nationale de Ttransport Maritime de Voyageurs* (ENTMV) based in Algiers, the capital of Algeria, was created in 1987 with a mission of ensuring the transport of passengers and vehicles. ENTMV has a workforce of 1500 permanent employees including 900 seafarers. The company owns three (03) Algerian registered Car-Ferries, namely, M/V TARIQ IBN ZIAYD built in 1995, M/V TASSILI II built in 2004 and M/V EL-DJAZAIR II built in 2005. In summer season, ENTMV charters an extra ship, usually from Greece, to strengthen its fleet and cope with the high number of its passengers.

With an average of 700 voyages, 400 000 passengers and 150 000 vehicles per annum ENTMV serves the shipping lines between Algeria and Marseille (France), Alicante and Barcelona (Spain) and Genoa (Italy).

ENTMV has a newly created subsidiary to ensure urban maritime transport. Being the pioneer in this field within the country, this subsidiary is still under development. Currently, it owns two (02) monohull high speed vessels; each has a 206 passenger's carrying capacity and operates only during summer time between Algiers in the center and Bejaia in the east of the country.

HYPROC Shipping Company

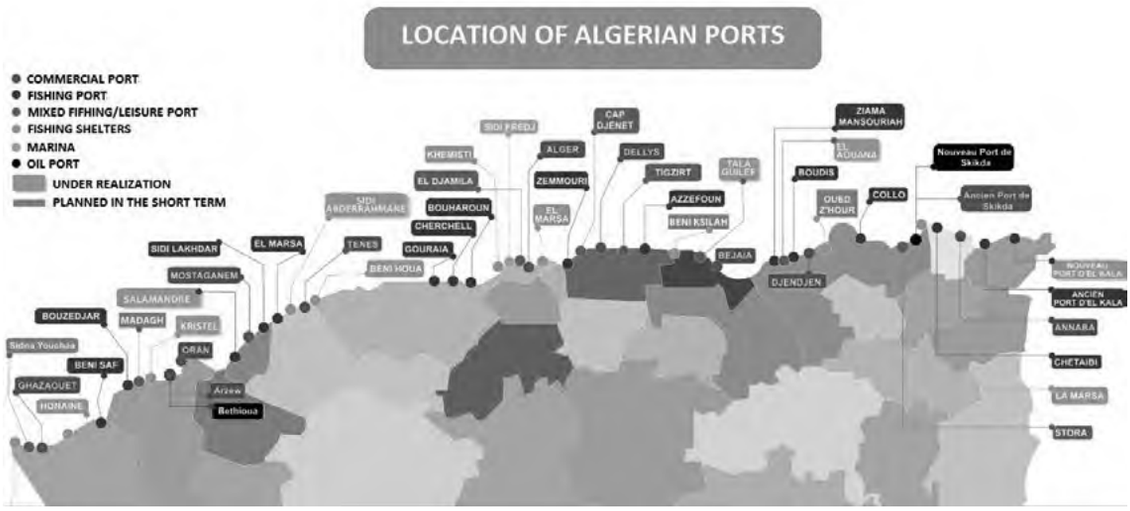
Hyproc Shipping Company engages in maritime transportation of hydrocarbons and chemicals. It was formerly known as SNTM-HYPROC and changed its name to Hyproc Shipping Company S.p.A. in 2003. The company was founded in 1982 and is based in Oran, in the west of Algeria.

To achieve its missions, Hyproc Shipping Company uses 1729 employees, of whom 1048 are seafarers. The company owns fourteen (14) Algerian flagged ships. Seven (07) LNG carriers, namely, S/V TESSALA with a capacity of 171.800 m^3, S/V OUGARTA with a capacity of 171.800 m^3, S/V LALLA FATMA N'SOUMER with a capacity of 145.445 m^3, S/V MOURAD DIDOUCHE with a capacity of 126.132 m^3, S/V RAMDANE ABANE with a capacity of 126.132 m^3, S/V CHEIKH BOUAMAMA with a capacity of 75.500 m^3 and S/V CHEIKH EL MOKRANI with a capacity of 75.500 m^3, five (05) LPG carriers that ensure deliveries both in national cabotage and international traffic, namely, M/V BAROUDA with a capacity of 6.525 m^3, M/V RHOURD EL ADRA with a capacity of 22.500 m^3, M/V RHOURD EL HAMRA with a capacity of 22.500 m^3, M/V RHOURD EL FARES with a capacity of 35.000 m^3, M/V BERGA II with a capacity of 35.000 m^3, and two (02) Bitumen carriers, namely, M/V AIN ZEFT with a capacity of 4.577 m^3 and M/V RAS TOMB with a capacity of 4.577 m^3.

The transport of Liquefied Natural Gas (LNG) represents the main activity of HYPROC shipping company, both in terms of volume transported and turnover. The LNG transport capacity of the company's fleet is 892,309 m^3 and the main countries delivered are France, Spain, Belgium, Turkey, Greece, United Kingdom, Portugal, Netherlands, Japan, South Korea, China, India, and Chile.

B. Ports

Currently, Algeria counts thirty-eight (38) ports spread across its 1200Km coastline, including eleven (11) commercial ports, fourteen (14) existing fishing ports and two (02) currently under construction, four (04) mixed fishing/leisure ports, two (02) currently under construction and two (02) planned in the short term, one (01) marina, two (02) oil ports, six (06) existing fishing shelters, two (02) currently under construction and two (02) others planned in the short term.

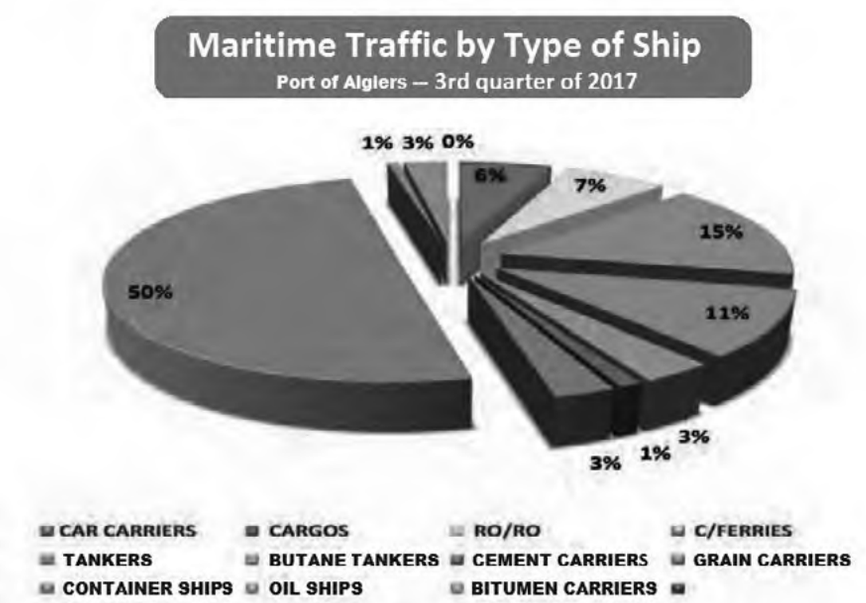


The Algerian port infrastructures includes more than fifty-three (53) Km of jetties, more than fifty-nine (59) Km of quays, more than 1500 Ha of water surface, more than 790 Ha of land surface and thirty-one (31) oil and gas wharves.

All Algerian commercial ports are equipped with a whole range of handling equipment, naval equipment and piloting equipments. For instance, the commercial port of Oran, in the west of Algeria, owns three (03) tugs, two (02) pilot boats, six (06) mooring boats, one (01) unit for cleaning water surface, fourteen (14) harbor cranes, thirteen (13) auto cranes, fifty-nine (59) Forklift trucks, seven (07) Ro/Ro tractors, nineteen (19) road tractors, four (04) gantry cranes, five (05) backhoe loaders, four (04) dump trucks and one (01) hydro-cleansing truck.

Among the eleven Algerian commercial ports, the Port of Algiers, with its advantageous geographical position, is one of the most important seaports in North Africa and it is a key economic, financial and commercial centre for the whole country.

For the third quarter of 2017, the port of Algiers welcomed a total number of 528 ships with a total of 6,905,954 gross registered tonnages (GRT).



Gross Regisstred Tonnage by Type of Ship
Port of Algiers – 3rd quarter 2016/2017

	3rd quarter 2016		3rd quarter 2017	
	Number	G.R.T (1.000 tx)	Number	G.R.T (1.000 tx)
CARGOS	43	297	32	180
RO/RO	24	266	36	305
C/FERRIES	76	2 367	81	2 500
TANKERS	61	1 068	56	992
BUTANE CARRIERS	18	149	18	158
CEMENT CARRIERS	8	54	6	23
GRAIN CARRIERS	21	385	15	271
CONTAINER SHIPS	298	2 555	265	2 319
OIL SHIPS	2	8	4	74
BITUMEN CARRIERS	16	83	15	84
TANKER (alcool)				
CAR CARRIERS				
TOTAL	567	7 233	528	6 906

C. Dry dock and Ship Yards

Currently in Algeria there is one national leading company ensuring dry docking and ship repairs services - the *Entreprise de Réparations Navals* (ERENAV). It was founded in 1987 on the purpose of ensuring technical assistance to national ship-owners and to provide services for foreign vessels calling at the Algerian ports.

ERENAV employs 1050 employees, of whom 715 are assigned to the production sites. ERENAV has three (03) shipyards located in the east, the center and west of the country, respectively, URNAB in Bejaia, URNAL in Algiers and URNO in Oran.

The company owns a floating dock of 15 000 tons in Bejaia, two (02) dry docks in Algiers and three (03) slipways, one of 800 tons and two of 200 tons in Oran for the dry docking works. In addition ERENAV has numerous workshops for Mechanics, machining, hydraulics, regulation-injection, turbochargers, boilermaking, piping, electricity, joinery-tapestry, surface treatment and foundry.

In 2016, ERENAV performed fifty (50) interventions on board ships and carried out seventy (70) technical stops on various types of vessels, including car-ferries, tags, navy vessels, and bunkering barges.

7. Search and Rescue

Besides ensuring the compliance of Algerian flagged ships and foreign vessels calling at Algerian ports, with national and international rules and regulations related to safety, security and environment protection standards, through Port state and Flag State Controls, the Algerian Coast Guard National Service (CGNS) is in charge of the Search and Rescue (SAR) operations throughout the country.

For this purpose, a Maritime-SAR Committee was created together with SAR central and regional operational centers, known as *Centre National des Opérations de Surveillance et de Sauvetage* (CNOSS) and *Centre Regional des Opérations de Surveillance et de Sauvetage* (CROSS), hierarchically placed under the

authority of the national Coast Guards.

Maritime-SAR committee is and interdepartmental committee in charge of the leadership and the coordination of maritime SAR operations. Chaired by the Minister of National Defense at the naval forces command, the committee includes two (02) representatives of the Minister of Public Works and Transport, one at the merchant marine and ports department, and one at the civil aviation and meteorology department; one (01) representative of the Minister of Foreign Affairs; Two (02) representatives of the Minister of the Interior, one at the General Directorate of Civil Protection and one at the National Security Department; one (01) representative of the Minister of Finance at the General Directorate of Customs; one (01) representative of the Minister of Health and population and Three (03) representatives of the Minister of National Defense, one at the Air Force Command, one at the command of continental air defense and one at the Command of Gendarmerie.

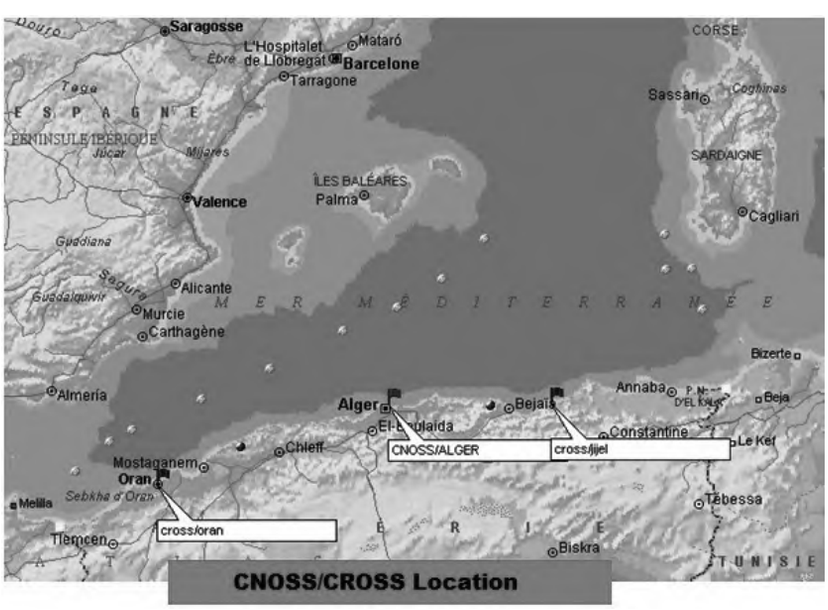
The responsibilities of the Maritime SAR-Committee are to:

- Define the area of responsibility for maritime SAR search and rescue;
- Establish response and emergency plans and ensure training for the benefit of the coordination center and agencies involved in the SAR operations;
- Coordinate with the authorities concerned about the use of facilities and services needed for operations;
- Harmonize the relation with similar SAR organization in neighbor countries;
- Considerate the proposals of the CNOSS and CROSS related to the conduct and the improvement of SAR operations.

Algerian Maritime SAR Regions

The Algerian coastline is divided into three main maritime regions; an eastern region, a central region and a western region. Each of those regions is divided into sub-regions (maritime zones) corresponding to the territory shared by several provinces, as follows:

- Central Maritime Region including the sub-regions Alger, Boumerdes, Tipaza, Tizi-ouzou and Chelif. CNOSS Alger is in charge of SAR operations within this region.
- Eastern Maritime Region including the sub-regions Béjaia, Jijel, Skikda, Annaba and Taref. CROSS Jijel is in charge of the SAR operations.
- Western Maritime region including the sub-regions Tlemcen, Ain Témouchent, Oran and Mostaganem. CROSS Oran is in charge of the SAR operations.



Search and Rescue Plan

Each operational center has a comprehensive plan for the conduct of SAR operations within its region. This plan covers the whole Algerian SAR region and sets the details of SAR at the operational level. Furthermore, it indicates precisely the organizations responsible for the mobilization of means and the methods of communication between these organizations.

Missions of CNOSS/CROSS:

- Maritime search and rescue;
- Monitoring and fighting against all forms of marine pollution;
- Monitoring the maritime traffic;
- Monitoring of marine fisheries;
- Receiving and processing distress calls from ships or coast stations or via the space segment of the COSPAS-SARSAT system.
- Ensuring the delivery of alert data related to SAR operation to national and international organizations concerned;
- Triggering the appropriate emergency phase
- Requesting and coordinating all the means and resources at their disposal, whether from military forces or civilian service such as port companies and civil for SAR operation.
- In the case of pollution of the sea, immediately alert the national, regional and local committee "Telbahr ".

Means and resources of CNOSS / CROSS

From a SAR point of view, CNOSS / CROSS are primarily transmissions bodies; they receive alerts, analyze, implement, direct and coordinate the necessary means and resources for interventions. To do so, each CNOSS/CROSS has several Phone lines, Fax and Telex as well as a radio network (VHF, UHF, MF and HF). In this context, a national agency for maritime radio navigation (ANRM) was recently created for ensuring via coastal maritime radio stations and INMARSAT station of Lakhdaria, the permanent monitoring of all maritime distress call, and for participating in SAR operations.

It should be noted that the Algerian law provides the CNOSS / CROSS with the entire national means and resources required for SAR operations, available within the navy, the Air Forces, the National Gendarmerie, the Police Departments, the Civil Protection, the SAMU, etc. In this regard, the CNOSS Algiers, for its national area of responsibility, exploits more than eighty (80) coastguard patrol boats of different types, about fifteen (15) tugs of the port companies, three (03) sea-going salvage tugs of the Algerian navy, along with six (06) helicopters AgustaWestland EH101 and four (04) Super Lynx 130 .

8. Marine environment protection and preservation

According to the Ministry of regional planning and environment of Algeria, there are various contaminants resulting from Land-based activities that pollute the Algerian marine environment.

For instance, it has been stated that pollution by heavy metals including mercury, zinc, lead copper and chromium exceed the standards within five (05) ports in Algeria; as well as by hydrocarbons that contaminate almost all major ports. In addition, many sites are banned from swimming because of poor bacterial water quality: 135 bathing beaches are prohibited over 409 beaches which have been analyzed in 1996. Nevertheless, the major source of marine pollution that Algeria faces is sewage.

It has been estimated that the 1 000 000 m^3 of untreated wastewater (domestic and industrial sewage) enters port and coastal areas each day. This may have a serious impact on the public health and the environment

(various diseases such as typhoid, closure of beaches, water unsuitable for crop watering).

It should be noted that the sanitation sector has undergone a major transformation with the creation in 2001 of the National Sanitation Office (ONA), whose remit covers the whole of Algeria.

The ONA is in charge of: 18 operating treatment plants; 21 plants under construction; 20 plants out of service; 32 000 km of sewage network. However, although 80% of the population is connected to the sewage network, only 7% are actually connected to the network of 18 operating treatment plants. Moreover, the older treatment plants are not productive enough and pose a number of problems, including: the variety of operating processes which complicate specification of the qualifications for operators who are still sometimes inadequately trained; the out-of-date or poor quality of operating manuals; the inadequacy of financial and operating resources.

Outdated and often unreliable, the sewage network is rarely of the level required and quantities of sewage discharged are only estimated by local services with no way of validating the data communicated.

Faced with these problems, the ONA is having difficulty coping with the overall management of the sewage system and waste treatment and has developed a survival strategy to deal with emergency breakdowns and operating incidents.

To deal with such threats and in order to modernize the Algerian sewage system, an ambitious national programme 'WATER II' has been launched with an indicative budget of EUR 30 millions. This programme includes the introduction of treatment system in every town with a population of more than 100 000; the construction of 62 treatment plants over the next few years; availability of technically and commercially suitable management systems to sanitation bodies; training for staff in sanitation occupations; introduction of a maintenance system that allows uninterrupted operation; mapping of the state of the sewerage network including downstream components (anti-eutrophication and pollution measures, recycling of sewage); knowledge of quantitative and qualitative aspects of waste management in order to adapt treatment; regulations on the use of treated water.

9. Seafarers and Maritime Education and Training

There are currently two maritime training centers and one high maritime institute providing maritime courses and training in Algeria.

The High Maritime Institute located in Bou Ismail, in the west of Algiers, was created in 1974. Then in 2009, the Institute status changed into a National graduate School under the name of *Ecole Nationale Supérieure Maritime* (ENSM) with the main mission of providing higher education, scientific research and technological development in the maritime and port sectors.

The ENSM is placed under the supervision of the Ministry of Public Works and Transport whereas the Ministry of Higher Education and Scientific Research provides educational supervision.

To fulfill its mission, ENSM is equipped with simulators dedicated to the bridge: maneuvering, navigation and a radar ARPA-ECDIS simulator. In addition, ENSM includes an Electronics lab, an Ectrotechnical labs, an Automation lab, a Multimedia lab and a Mechanical engineering lab equipped with a whole marine propulsion installation, donation from the Japan International Cooperation Agency (JICA), which includes a Diesel engine, a reduction gear and a propeller shaft with bearings.

As an STCW certificate of competency issuer, the ENSM is also equipped with a pool, a lifeboat on its roller gravity davits, and firefighting facilities and equipment.

It should be noted that ENSM ensures the maritime training and issue STCW certificate of competency for seafarer and port Officers only. Besides the ENSM, there are two maritime training centers, namely, the *Ecole Technique de Formation et d'Instruction Maritime* (ETFIM) of Mostaganem in the west of the country and the *Ecole Technique de Formation et d'Instruction Maritime* (ETFIM) of Bejaia in the east, which provide training

and issues STCW certificate of competency for all seafarers other than Officers. In addition to maritime training for able seaman and STCW training, ETFIM Mostaganem and ETFIM Bejaia provide training in the sectors of fisheries, ship repair, hotels and hospitality, and civil protection.

10. WMU Graduates distribution

As at 2014, Algeria counted thirty-eight (38) World Maritime University graduates including one Sasakawa fellow, as listed in the table below.

Many of those graduates are lecturers at the ENSM preparing tomorrow's seafarers, whereas other WMU graduates are spread within the maritime industry throughout the country and abroad, managing ships and maritime companies and even more, the whole Algerian Marine Merchant Department, as the former Director in charge is also a WMU graduate.

NO.	NAME	YEAR OF GRADUATION	REMARKS
1.	Mr. Larbi AHMED YAHIA	1986	Manager Quebec Maritime Institute
2.	Mr. M'hamed AIMEUR	2009	
3.	Mr. AIT-MOKHTAR Ramdane	1998	Lecturer at ENSM
4.	Mr. AMGHAR Ali GMA	1986	
5.	Mr. Said AMROUCHE	1990	
6.	Mr. AZOUAOU Ali	1989	Senior Lecture at ENSM
7.	Mr. BAHLOUL Salah-Eddine	1991	
8.	Mr. BENAISSA Sadek	1990	
9.	Mr. Mounir BENCHAMMA	2007	Merchant Marine Deck Officer
10.	Mr. BENCHEIKH Djamal	1986	
11.	Mr. Toufik BENSARI	2009	officer on a merchant ship
12.	Mr. BERNOU Omar	1987	
13.	Mrs Rachida BOUDIA	2013	Deck Officer
14.	Mr. Mohamed BOUHI	1987	VTS Officer
15.	Mr. Djelloul BOURAS	2000	Lecturer at ENSM
16.	Ms. Ghania BOUSSAHA	2004	Assistant Fleet Purchaser (DUBAI)
17.	Mr. Azzam DJEDIDI	1986	Head of the Manning Department (retired)
18.	Mr. FEDILA Mokrane	2007	Lecturer at ENSM
19.	Mr Redouane HERMOUCHE	1995	Lecturer at ENSM
20.	Mr. HINI Abdelhamid	2008	Lecturer at ENSM
21.	Mr. KADDOUR Abderrezak	1990	Lecturer at ENSM
22.	Mr. KERMA Azzeddine	1998	Lecturer at ENSM
23.	Mr. Abderrahmane LADJ	1989	Lecturer at ENSM
24.	Mr LAHYANI Lounes	1985	Lecturer at ENSM
25.	Mr. Semir Tarek MAKSEN	2007	Lecturer at ENSM
26.	Mr. Zaki Nabil MEDJDOUB	1989	
27.	Mr. MOKAREM Yahia	1991	Maritime Expert
28.	Mr. Mohamed MOUFFOK	1987	
29.	Mr. NEMDILI Amar	2002	Administrator of maritime affairs
30.	Mr. Hamou OUADAHI	1992	Lecturer at ENSM
31.	Mr. Hakim RAHMOUN	2008	Lecturer at ENSM

32.	Mr. REZAL Abdelkrim	1985	Former Director of Merchant Marine
33.	Mr. Bernard RITTER (formerly DJEBAILI)	1985	Deceased
34.	Mr. SEMANE Mohamed-Said	1992	
35.	Mr. Mohamed TAALBI **(Sasakwa fellow)**	2014	Second Engineer (seafarer)
36.	Mr. Lies TAHRI	1987	
37.	Mr. Fodil TIGHILT	2006	Lecturer at ENSM
38.	Mr. ZERIZER Youcef	1992	

11. Comments

With its 1200 km coastline, its 11 commercial ports and 95% of the tonnage of its trade carried by sea, Algeria remains far below its real capacity of goods transport. The Algerian government must put more interests into the maritime sector and bring things back to regain market shares and reduce the import bill of the country.

In this regard, An overall strategy to strengthen the maritime transport capacities has been set up by the Minister of Public Works and Transport for ensuring the transport of goods by national means in order to reduce the cost very significantly and to no longer depend on foreign ship owners who want to impose their law. The strategy is based on three priorities:

Firstly, regain market shares. Currently the Algerian merchant marine has ten (10) vessels four carrying goods other than hydrocarbons, and intends to acquire 18 others along with a high-capacity car-ferry of 1800 passengers and 700 vehicles within the horizon 2021. This would ensure a rate of 25% of international trade to which the Algerian fleet is currently contributing to barely 2%.

The second priority is about the realization of a port center based on network, with a wide industrial area of 2000 ha and a logistics area of 350 ha. Its main purpose is container transshipment with a processing capacity of more than 6 million containers and more than 23 million tons of goods. It will be managed by a first-class technology operator and would bring Algeria to the international alliances (networks) that decide on traffic, destinations and ports of landing. The first-class technology operator will also have to manage the international transshipment of goods. That is to say that the port center will be able to receive goods both for Algeria and for other countries that do not have ports or whose ports cannot accommodate ships of very large tonnage. The Port center will be built in El Hamdania in the west of Algiers for a budgetary envelope of more than UD$ 3.3 billions within a delay of seven years.

Lastly, the third priority regards the maritime training. According to the Minister of Public Works and Transport, Algeria has a large deficit in terms of seafarers and maritime experts, especially since the current seafarers and maritime experts are about to get retired or already got retired. Hence a programme has been put in place to train at all levels and at least, meet the needs of new ship acquisitions in terms of management and maintenance. In the one hand, the capacities of the current training centers are very limited, especially since the need for qualified personnel is already being felt with the acquisition of new vessels, and on the other hand, ENSM is providing only post baccalaureate 5-years programme for mechanical engineering and science of navigation bachelor degrees. It is for this reason that the Ministry of Public works and Transport is planning to open another graduate school specialized in port activities. Moreover, the ENSM is expected to launch, from the start of the next academic year, a postgraduate programme in shipping to provide students with techniques in terms of commercial management of ships.

COUNTRY REPORT

A Z E R B A I J A N

About

The Republic of Azerbaijan- which is located in the South Caucasus region, at the crossroads of Southwest Asia and South-eastern Europe and bound by the Caspian Sea to the east, Russia to the north, Georgia to the northwest, Armenia to the west and Iran to the south, Iran to the south and west, with Turkey in the north-west. **Coordinates:** 40 30 N, 47 30 E. Area: total: 86,600 sq km includes the exclave of Naxcivan Autonomous Republic and the Nagorno-Karabakh region; the region's autonomy was abolished by Azerbaijani Supreme Soviet on 26 November 1991:water: 500 sq km, land: 86,100 sq km. **Land boundaries:** total: 2,013 km border countries: Armenia (with Azerbaijan-proper) 566 km, Armenia (with Azerbaijan-Naxcivan exclave) 221 km, Georgia 322 km, Iran (with Azerbaijan-proper) 432 km, Iran (with Azerbaijan-Naxcivan exclave) 179 km, Russia 284 km, Turkey 9 km. **Population:** 8,177,717 **Age structure:** 0-14 years: 24.6% (male 1,061,318/female 947,607); 15-64 years: 68.6% (male 2,753,277/female 2,855,406);65 years and over: 6.8% (male 208,293/female 351,816) **Median age:** 27.9 years **Death rate:** 9.76 deaths/1,000 ;**Total fertility rate:** 2.46 children born/woman ; **Nationality:** noun: Azerbaijani(s); **Ethnic groups:** Azeri 90.6%, Dagestani 2.2%, Russian 1.8%, Armenian 1.5%, other 3.9%; **Religions:** Muslim 93.4%, Russian Orthodox 2.5%, Armenian Orthodox 2.3%, other 1.8%; **Languages:** Azerbaijani (Azeri) 89%, Russian 3%, other 6% ; **Literacy:** age 15 and over can read and write; **Country name:** Republic of Azerbaijan; **Government type:** Republic **Capital:** Baku (Baki); **Legal system:** based on civil law system.

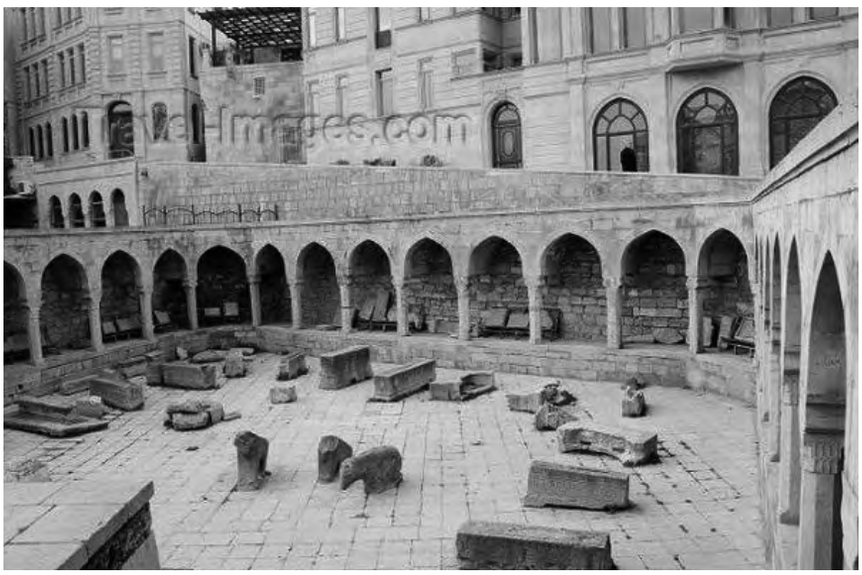
Many Azerbaijanis have some form of higher education, most notably in **scientific** and **technical** subjects. The **culture** of Azerbaijan has come about as a result of many influences. Nowadays, Western influences,

including globalized consumer culture, are strong. National traditions are well kept in the country. Some of the main parts of the Azerbaijani culture are: music, literature, folk dances and art, cuisine, architecture, and movies. **Music** of Azerbaijan builds on **folk traditions** that goes back nearly a thousand years. Among national musical instruments there are **14** string instruments, **8** percussion instruments and **6** wind instruments.

Mugham, meykhana and **Ashiq** are some of the many musical traditions of Azerbaijan. Azerbaijan was at the **Eurovision Song Contest** for the first time in **2008**. They will host the contest in **2012**, in Baku.

Azerbaijani **architecture** typically joins East and West. Many ancient treasures such as the **Maiden Tower** and **Palace of the Shirvanshahs** in the **Walled City of Baku** survive in modern Azerbaijan. Plans have been shown for the building of the **Azerbaijan Tower.** It will reportedly replace the **Burj Khalifa** as the tallest building in the world. The planned height is 1,050 metres (3,440 ft).

Maiden Tower



Palace of Shirvanshahs

The **movie** industry in Azerbaijan dates back to **1898.** In fact, Azerbaijan was among the first countries involved in making movies. **In 1991,** after Azerbaijan gained its freedom from the **Soviet Union,** the first **Baku International Film Festival East-West** was held in Baku. The traditional **food** is famous for many vegetables and greens used seasonally in the dishes. Fresh herbs, including mint, cilantro (coriander), dill, basil, parsley, tarragon, leeks, chives, thyme, marjoram, green onion, and watercress, are very popular. There are often served with main dishes on the table. National dishes show the variety of the landscape. They are based on fish from the Caspian Sea, local meat (mainly mutton and beef), and the many seasonal vegetables and greens.

Sport in Azerbaijan seems to be is very old. Even now, both **traditional** and **modern sports** are still practiced. **Freestyle wrestling** has been traditionally said to be Azerbaijan's national sport. The most popular sports in Azerbaijan are **football** and **chess.** The national football team does not do well in international competitions. On March 19, 2010, Azerbaijan won the bid to host the 2012 FIFA U-17 Women's World Cup. **Futsal** is another popular sport in Azerbaijan. Azerbaijan national futsal team got fourth place in 2010 UEFA Futsal Championship. **Backgammon** plays a major role in Azerbaijani culture. This game is very popular in Azerbaijan and is widely played by the local public.

Azerbaijan is divided into **10 economic regions; 66** rayons and **77** cities. **11** cities are under the direct authority of the republic. Azerbaijan includes the **Nakhchivan Autonomous Republic.** The President of Azerbaijan picks the governors of these units. The government of Nakhchivan is elected and approved by the parliament of Nakhchivan Autonomous Republic.

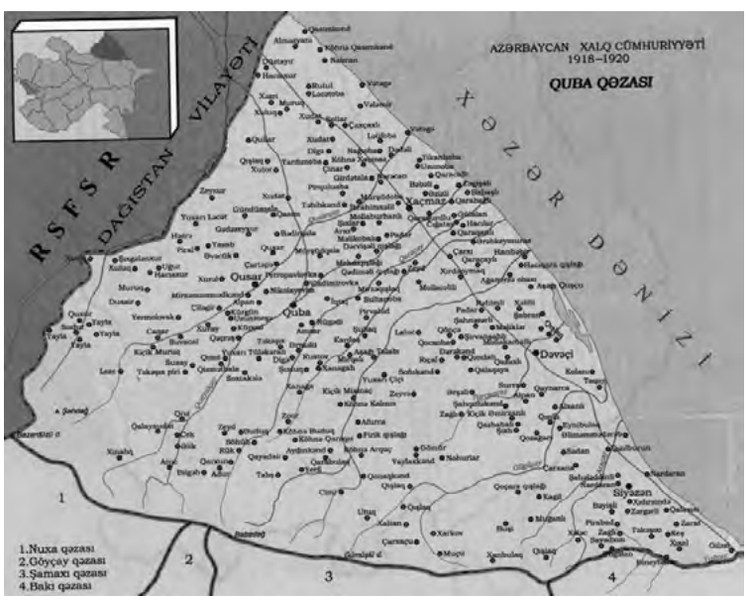
Out of **9,165,000** people (July 2011), nearly **52%** were **urban.** The remaining **48%** were **rural, 51%** of the people were **female.** About **3 million** Azerbaijanis, many of them guest workers, live in **Russia.** The biggest reason for death in **2005** was from respiratory diseases.

History

By proclaiming its independence in 1918 became the first democratic state in the Muslim-oriented world. Despite the fact that the country was incorporated into the Soviet Union in 1920 as the Azerbaijan Soviet Socialist Republic, but it proclaimed its independence on 30 August 1991, prior to the official dissolution of the USSR in December 1991. In September 1991, the Armenian majority of the disputed Nagorno-Karabakh region seceded to form the Nagorno-Karabakh Republic. The region and seven adjacent districts outside it became

de facto independent with the end of the Nagorno-Karabakh War in 1994. These regions are internationally recognized as part of Azerbaijan pending a solution to the status of the Nagorno-Karabakh, found through negotiations facilitated by the OSCE.

The Azerbaijan Democratic Republic (ADR) is a unitary semi-presidential republic, it is a member state of the Council of Europe, the OSCE and the NATO Partnership for Peace (PfP) program, and it is one of six independent Turkic states, as well as an active member of the Turkic Council and the TÜRKSOY community. Besides that Azerbaijan has diplomatic relations with 158 countries and holds membership in 38 international organizations. It is one of the founding members of GUAM, the Commonwealth of Independent States (CIS) and the Organization for the Prohibition of Chemical Weapons. A member of the United Nations since 1992 after its independence, Azerbaijan was elected to membership in the newly established Human Rights Council by the United Nations General Assembly on 9 May 2006. Its term of office began on 19 June 2006. Azerbaijan is also a member state of the Non-Aligned Movement, holds observer status in World Trade Organization, and is a correspondent at the International Telecommunication Union.



The Azerbaijan Democratic Republic also known as **"Azerbaijan People's Republic"** was the third democratic republic in the Turkic world and Muslim world, after the Crimean People's Republic and Idel-Ural Republic. The ADR was founded by the Azerbaijani National Council in Tiflis on 28 May 1918 after the collapse of the Russian Empire. It had a population of 2.86 million and Ganja was the temporary capital of the Republic as Baku was under Bolshevik control. The name of "Azerbaijan" which the leading "Musavat" party adopted for political reasons, and was prior to the establishment of the Azerbaijan Democratic Republic in 1918, exclusively used to identify the adjacent region of contemporary north-western Iran.

Under the ADR, a government system was developed in which a Parliament elected on the basis of universal, free, and proportionate representation was the supreme organ of state authority; the Council of Ministers was held responsible before it. "Fatali Khan Khoyski" became its first prime minister. Besides the Musavat majority, Ahrar, Ittihad, Muslim Social Democrats as well as representatives of Armenian Russian, Polish, Jewish and German minorities gained seats in the parliament. Some members supported Pan-Islamist and Pan-Turkist ideas. Among the important accomplishments of the Parliament was the extension of suffrage to women, making Azerbaijan one of the first countries in the world, and the very first majority-Muslim nation, to grant women equal political rights with men. Another important accomplishment of the ADR was the establishment of Baku State University, which was the first modern-type university founded in Azerbaijan.

Economy

The economy of Azerbaijan is based on **industry, agriculture,** and on services including **tourism.** The **energy** sector based on the large reserves of crude oil and natural gas, is the main source of economic growth in Azerbaijan today, though half of the Azerbaijani people earn their income directly or indirectly through services and a third earn their income through agriculture. The energy boom has led to massive foreign direct investment and the growth rate of the Azerbaijani economy is one of the worlds highest.

After gaining independence in **1991** with the end of the Soviet Union, Azerbaijan made the long and difficult change from a command economy to a market economy. The government has largely completed privatization of agricultural lands and small, medium and large state-owned companies. Azerbaijan is continuing making economic reforms, and old economic ties and structures have been slowly replaced. With independence, Azerbaijan became a member of the **International Monetary Fund,** the **World Bank,** the E**uropean Bank** for **Reconstruction and Development,** the **Islamic Development Bank** and the **Asian Development Bank.** Azerbaijan's currency is the Azerbaijani **manat (AZN)** which is divided into **100 qəpik.** It became the national currency in 1992 and replaced the old Soviet ruble. The Central Bank of Azerbaijan was created in 1992. **The Central Bank** serves as Azerbaijan's central bank, and is responsible for printing and distributing the national currency, the Azerbaijani manat, and to control all commercial banks.

Azerbaijan led the world as the top reformer in **2007/08,** with improvements on seven out of **10** indicators of regulatory reform. Azerbaijan started operating a one-stop shop in January **2008** that halved the time, cost and number of procedures to start a business. Business registrations increased by **40%** in the first six months. Azerbaijan also eliminated the minimum loan **cut-off of $1,100,** more than doubling the number of borrowers covered by the credit registry. Also, taxpayers can now file forms and pay their taxes online. Azerbaijan's extensive reforms moved it far up the ranks, from **97 to 33** in the overall ease of doing business. Azerbaijan is also ranked **57th in the Global Competitiveness Report** for **2010–2011,** above other CIS countries. By **2012** the GDP of Azerbaijan had increased 20-fold from to its **1995** level

Azerbaijan's high economic growth in **2006** and **2007** is attributable to large and growing oil exports. Azerbaijan's oil production declined through **1997,** but has registered an increase every year since. **Baku** has only recently begun making progress on economic reform, and old economic ties and structures are slowly being replaced. Several other obstacles impede Azerbaijan's economic progress: the need for stepped up foreign investment in the non-energy sector, the continuing conflict with Armenia over the Nagorno-Karabakh region, pervasive corruption, and elevated inflation. Trade with Russia and the other former Soviet republics is declining in importance, while trade is building with Turkey and the nations of Europe. Long-term prospects will depend on world oil prices, the location of new oil and gas pipelines in the region, and Azerbaijan's ability to manage its energy wealth.

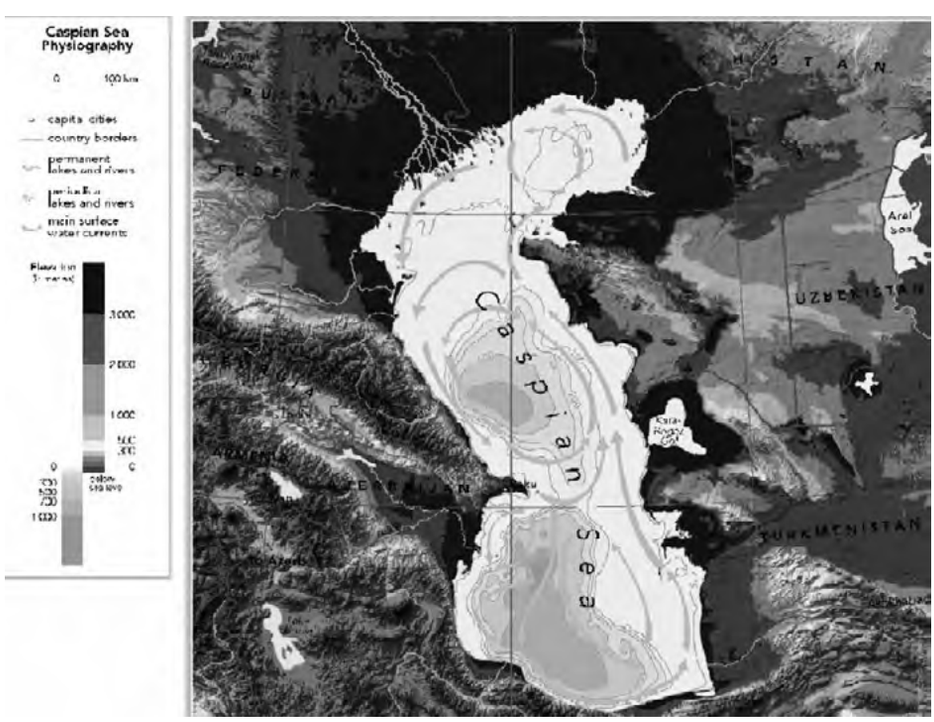
Government

Azerbaijan is a republic with a presidential form of government. According to the 1995 Constitution, Azerbaijan is a republic with a presidential government system. But the political system of Azerbaijan has been characterized since 1992 by the authoritarian leadership of Azerbaijan's presidents and undermined by corruption. Transparency International ranks Azerbaijan as one of many low-scoring countries in the region (#119 out of 167, where the least corrupt country ranks #1). Azerbaijan’s political rights rating at Freedom House declined from 6 to 7 due to an intensified crackdown on criticism and dissent; widespread violations in connection with the November 2015 parliamentary elections; and serious violations of the right to a fair trial.

Geography

Geographically Azerbaijan is located in the **South Caucasus** region of **Eurasia,** straddling **Western Asia** and **Eastern Europe.** It lies between latitudes **38°** and **42° N,** and longitudes **44°** and **51° E.** The total length of Azerbaijan's land borders is **2,648 km (1,645 mi),** of which **1,007** kilometers are with **Armenia, 756** kilometers with **Iran, 480** kilometers with **Georgia, 390** kilometers with **Russia** and **15** kilometers with **Turkey.** The coastline stretches for **800 km (497 mi),** and the length of the widest area of the Azerbaijani section of the **Caspian Sea** is **456 km (283 mi).** The territory of Azerbaijan extends **400 km (249 mi)** from north to south, and **500 km (311 mi)** from west to east.

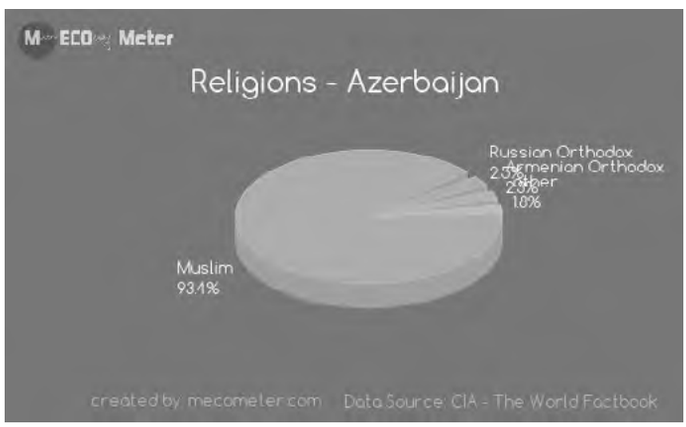
Three physical features dominate Azerbaijan: the **Caspian Sea,** whose shoreline forms a natural boundary to the east; the **Greater Caucasus** mountain range to the north; and the extensive flatlands at the country's centre. There are also three mountain ranges, the **Greater** and **Lesser Caucasus,** and the **Talysh Mountains,** together covering approximately **40%** of the country. The highest peak of Azerbaijan is mount **Bazardüzü (4,466 m),** while the lowest point lies in the **Caspian Sea (−28 m).**



Nearly half of all the mud volcanoes on Earth are concentrated in Azerbaijan, these volcanoes were also among nominees for the **New 7 Wonders of Nature.** The main water sources are surface waters. However, only **24 of the 8,350** rivers are greater than **100 km (62 mi)** in length. All the rivers drain into the Caspian Sea in the east of the country. The largest lake is **Sarysu (67 km²),** and the longest river is **Kur (1,515 km),** which is transboundary with Armenia. Azerbaijan's four main islands in the Caspian Sea have a combined area of over thirty square kilometers. Since the independence of Azerbaijan in 1991, the Azerbaijani government has taken drastic measures to preserve the environment of Azerbaijan. But national protection of the environment started to truly improve after 2001 when the state budget increased due to new revenues provided by the **Baku-Tbilisi-Ceyhan pipeline.** Within four years protected areas doubled and now make up eight percent of the country's territory. Since **2001** the government has set up seven large reserves and almost doubled the sector of the budget earmarked for environmental protection.

Religion

Around **98%** of the population are Muslims. **85%** of the Muslims are Shia Muslims and **15%** Sunni Muslims, and the Republic of Azerbaijan has the second highest Shia population percentage in the world.



Other faiths are practised by the country's various ethnic groups. Under article **48** of its Constitution, Azerbaijan is a secular state and ensures religious freedom. In a **2006–2008** Gallup poll, only **21%** of respondents from Azerbaijan stated that religion is an important part of their daily lives. This makes Azerbaijan the least religious Muslim-majority country in the world. Of the nation's religious minorities, Christians who estimated **280,000 (3.1%)** are mostly Russian and Georgian Orthodox and Armenian Apostolic (almost all Armenians live in the break-away region of Nagorno-Karabakh).

In **2003,** there were **250** Roman Catholics. Other Christian denominations as of **2002** include Lutherans, Baptists and Molokans. There is also a small Protestant community. Azerbaijan also has an ancient Jewish population with a **2,500-year history; Jewish** organizations estimate that **10,000–20,000** Jews remain in Azerbaijan. Azerbaijan also is home to members of the **Bahá'í, Hare Krishna and Jehovah's Witnesses** communities, as well as adherents of the other religious communities. Some religious communities have been unofficially restricted from religious freedom. A U.S. State Department report on the matter mentions detention of members of certain Muslim and Christian groups, and many groups have difficulty registering with the SCWRA.

Islamic Mosque

Culture

The culture of Azerbaijan has developed as a result of many influences. Today, national traditions are well preserved in the country despite **Western** influences, including globalized consumer culture. Some of the main elements of the Azerbaijani culture are: music, literature, folk dances and art, cuisine, architecture, cinematography and **Novruz Bayram.** The latter is derived from the traditional celebration of the **New Year** in the ancient Iranian religion of Zoroastrianism. Novruz is a family holiday.

The profile of Azerbaijan's population consists, as stated above, of Azerbaijanis, as well as other nationalities or ethnic groups, compactly living in various areas of the country. Azerbaijani national and traditional dresses are the **Chokha** and **Papakhi.** There are radio broadcasts in **Russian, Georgian, Kurdish,**

Lezgian and Talysh languages, which are financed from the state budget. Some local radio stations in **Balakan** and **Khachmaz** organize broadcasts in **Avar** and **Tat.** In Baku several newspapers are published in Russian, Kurdish (Dengi Kurd), Lezgian (Samur) and Talysh languages.[208] Jewish society "Sokhnut" publishes the newspaper **Aziz.**

Architecture

Azerbaijani architecture typically combines elements of **East** and **West.** Azerbaijiani architecture has heavy influences from **Persian** architecture. Many ancient architectural treasures such as the **Maiden Tower** and **Palace of the Shirvanshahs** in the **Walled City of Baku** survive in modern Azerbaijan. Entries submitted on the **UNESCO World Heritage** tentative list include the Ateshgah of Baku, Momine Khatun Mausoleum, Hirkan National Park, Binegadi National Park, Lökbatan Mud Volcano, Baku Stage Mountain, Caspian Shore Defensive Constructions, Shusha National Reserve, Ordubad National Reserve and the Palace of Shaki Khans.

Flame Towers

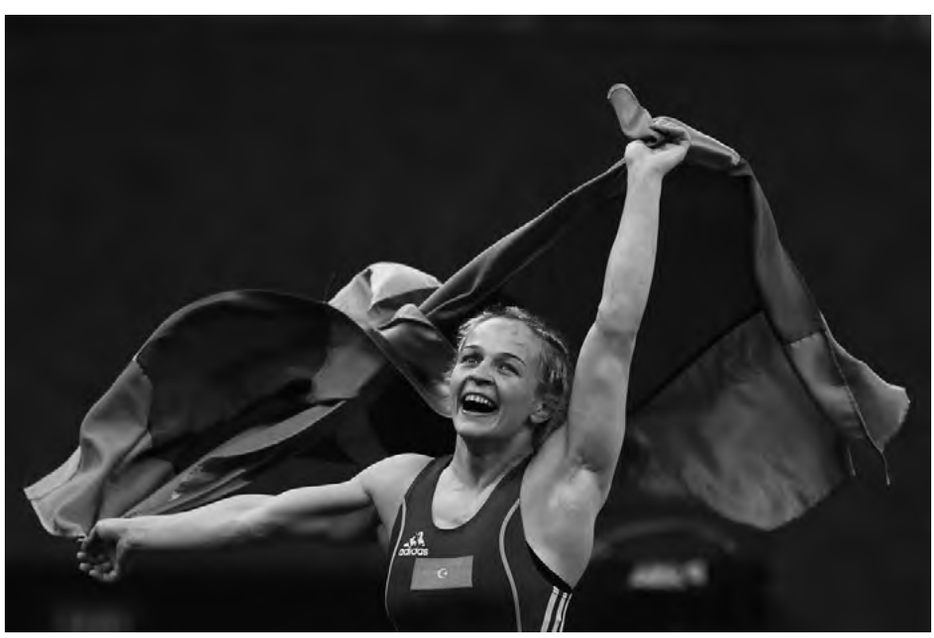
Among other architectural treasures are **Quadrangular Castle in Mardakan, Parigala in Yukhary Chardaglar,** a number of bridges spanning the Aras River, and several mausoleums. In the **19th and early 20th** centuries, little monumental architecture was created, but distinctive residences were built in Baku and elsewhere. Among the most recent architectural monuments, the Baku subways are noted for their lavish decor. The task for modern Azerbaijani architecture is diverse application of modern aesthetics, the search for an architect's own artistic style and inclusion of the existing historico-cultural environment. Major projects such as **Heydar Aliyev Cultural Center, Flame Towers, Baku Crystal Hall, Baku White City and SOCAR Tower** have transformed the country's skyline and promotes its contemporary identity.

Baku Crystal Hall

Sports

Freestyle wrestling has been traditionally regarded as Azerbaijan's national sport, in which Azerbaijan won up to **fourteen** medals, including four golds since joining the National Olympic Committee.

Currently, the most popular sports include football and wrestling. Football is the most popular sport in Azerbaijan, and the Association of Football Federations of Azerbaijan with 9,122 registered players, is the largest sporting association in the country.



The national football team of Azerbaijan demonstrates relatively low performance in the international arena compared to the nation football clubs. The most successful Azerbaijani football clubs are **Neftchi Baku, Qarabağ, and Gabala.** In **2012,** Neftchi Baku became the first Azerbaijani team to advance to the group stage of a European competition, beating **APOEL** of **Cyprus** 4–2 on aggregate in the play-off round of the 2012-13 **UEFA Europa League.** In **2014,** Qarabağ became the second Azerbaijani club advancing to the group stage of UEFA Europa League. In **2017,** after beating Copenhagen 2–2(a) in the play-off round of the UEFA Champions

League, Qarabağ became the first Azerbaijani club to reach the Group stage. **Futsal** is another popular sport in Azerbaijan. The Azerbaijan national futsal team reached fourth place in the **2010 UEFA Futsal Championship,** while domestic club Araz Naxçivan clinched bronze medals at the **2009–10** UEFA Futsal Cup and **2013–14** UEFA Futsal Cup. Azerbaijan was the main sponsor of Spanish football club Atlético de Madrid during seasons **2013/2014** and **2014/2015,** a partnership that the club described should 'promote the image of Azerbaijan in the world. **Backgammon** also plays a major role in Azerbaijani culture. The game is very popular in Azerbaijan and is widely played among the local public.There are also different variations of backgammon developed and analysed by Azerbaijani experts. **Baku National Stadium** was used for the first European Games in June **2015.**

Azerbaijan is one of the leading **volleyball** countries in the world and its **Azerbaijan Volleyball Super League** Women's is one of strongest women leagues in world. Its women's national team came fourth at the 2005 European Championship. Over the last years, clubs like **Rabita Baku** and **Azerrail Baku** achieved great success at European cups. Azerbaijani volleyball players include likes of Valeriya Korotenko, Oksana Parkhomenko, Inessa Korkmaz, Natalya Mammadova and Alla Hasanova. Other well-known Azerbaijani athletes are Namig Abdullayev, Toghrul Asgarov, Rovshan Bayramov, Sharif Sharifov, Mariya Stadnik and Farid Mansurov in wrestling, Nazim Huseynov, Elnur Mammadli, Elkhan Mammadov and Rustam Orujov in judo, Rafael Aghayev in karate, Magomedrasul Majidov and Aghasi Mammadov in boxing, Nizami Pashayev in Olympic weightlifting, Azad Asgarov in pankration, Eduard Mammadov in kickboxing, and K-1 fighter Zabit Samedov.

Azerbaijan has a **Formula One race-track** and the country hosted its first Formula One Grand Prix on **19 June 2016.**

Other annual sporting events held in the country are the **Baku Cup tennis tournament** and the **Tour d'Azerbaïdjan cycling race.** Azerbaijan hosted several major sport competitions since the late **2000s,** including the 2013 F1 Powerboat World Championship, 2012 FIFA U-17 Women's World Cup, 2011 AIBA World Boxing Championships, 2010 European Wrestling Championships, 2009 Rhythmic Gymnastics European Championships, 2014 European Taekwondo Championships, 2014 Rhythmic Gymnastics European Championships, 2016 World Chess Olympiad. **On 8 December 2012,** Baku was selected to host the **2015 European Games,** the first to be held in competition's history. Baku is also set to host the fourth **Islamic Solidarity Games in 2017.**

Cuisine

The traditional cuisine is famous for an abundance of vegetables and greens used seasonally in the dishes. Fresh herbs, including mint, cilantro (coriander), dill, basil, parsley, tarragon, leeks, chives, thyme, marjoram, green onion, and watercress, are very popular and often accompany main dishes on the table. Climatic diversity and fertility of the land are reflected in the national dishes, which are based on fish from the Caspian Sea, local meat (mainly mutton and beef), and an abundance of seasonal vegetables and greens. **Saffron-rice plov** is the flagship food in Azerbaijan and black tea is the national beverage. Azerbaijanis often use traditional armudu (pear-shaped) glass as they have very strong tea culture.

Saffron-rice plov

Popular traditional dishes include **bozbash** (lamb soup that exists in several regional varieties with the addition of different vegetables), **qutab** (fried turnover with a filling of greens or minced meat) and **dushbara** (sort of dumplings of dough filled with ground meat and flavor).

Folk art

Azerbaijanis have a rich and distinctive culture, a major part of which is decorative and applied art. This form of art is represented by a wide range of handicrafts, such as chasing, jeweler, engraving in metal, carving in wood, stone and bone, carpet-making, lasing, pattern weaving and printing, knitting and embroidery. Each of these types of decorative art, evidence of the endowments of the Azerbaijan nation, is very much in favour here. Many interesting facts pertaining to the development of arts and crafts in Azerbaijan were reported by numerous merchants, travellers and diplomats who had visited these places at different times.

The Azerbaijani **carpet** is a traditional handmade textile of various sizes, with dense texture and a pile or pile-less surface, whose patterns are characteristic of Azerbaijan's many carpet-making regions. In **November 2010** the Azerbaijani carpet was proclaimed a **Masterpiece of Intangible Heritage** by UNESCO.

Azerbaijan has been since the ancient times known as a centre of a large variety of crafts. The archaeological dig on the territory of Azerbaijan testifies to the well-developed agriculture, stock raising, metal working, pottery, ceramics, and carpet-weaving that date as far back as to the 2nd millennium BC. Archaeological sites in **Dashbulaq, Hasansu, Zayamchai,** and **Tovuzchai** uncovered from the **BTC** pipeline have revealed early **Iron Age artifacts.** Azerbaijani carpets can be categorized under several large groups and a multitude of subgroups. Scientific research of the Azerbaijani carpet is connected with the name of Latif Kerimov, a prominent scientist and artist. It was his classification that related the four large groups of carpets with the four geographical zones of Azerbaijan, Guba-Shirvan, Ganja-Kazakh, Karabakh and Tabriz.

Education

A relatively high percentage of Azerbaijanis have obtained some form of higher education, most notably in scientific and technical subjects. In the Soviet era, literacy and average education levels rose dramatically from their very low starting point, despite two changes in the standard alphabet, from **Perso-Arabic** script to **Latin** in the **1920s** and from **Roman** to **Cyrillic** in the **1930s.** According to Soviet data, **100 percent** of males and females (ages nine to forty-nine) were literate in **1970.** According to the United Nations Development Program Report 2009, the literacy rate in Azerbaijan is **99.5** percent.

State Baku University

Since independence, one of the first laws that Azerbaijan's Parliament passed to disassociate itself from the Soviet Union was to adopt a modified-Latin alphabet to replace Cyrillic. Other than that the Azerbaijani system has undergone little structural change. Initial alterations have included the reestablishment of religious education (banned during the Soviet period) and curriculum changes that have reemphasized the use of the Azerbaijani language and have eliminated ideological content. In addition to elementary schools, the education institutions include thousands of preschools, general secondary schools, and vocational schools, including specialized **secondary schools** and **technical schools.** Education through the **eighth** grade is **compulsory.**

Aynur Maharramova (20.01.1987) - is the first female student and the first **SASAKAWA FELLOW** from Azerbaijan who has studied in **World Maritime University** in Maritime Law and Policy (MLP) specialisation (2016-2017).

COUNTRY REPORT

E G Y P T

1. Overview

The Arab Republic of Egypt located in north-east Africa, bordered by Sudan from South, Libya from West, the Mediterranean Sea from thenorth, and the Red Sea from the East as shown in Figure 1. Egypt populated area 55367 km², mainly on the sides of the Nile River, which present 5.5% of the total area (total area 1,002,000 m²). Egypt climate influenced by several factors, the low-pressure areas, the location, the landscape, and the general pressure system, all works on dividing Egypt to distinguished climatic regions. Accordingly, that makes Egypt a dry arid region in general, while the north coast preserved by the Mediterranean climate. Climate mainly in Egypt is two seasons: a moderate winter from November to April, and a hot summer from May to October ("Location and Climate").

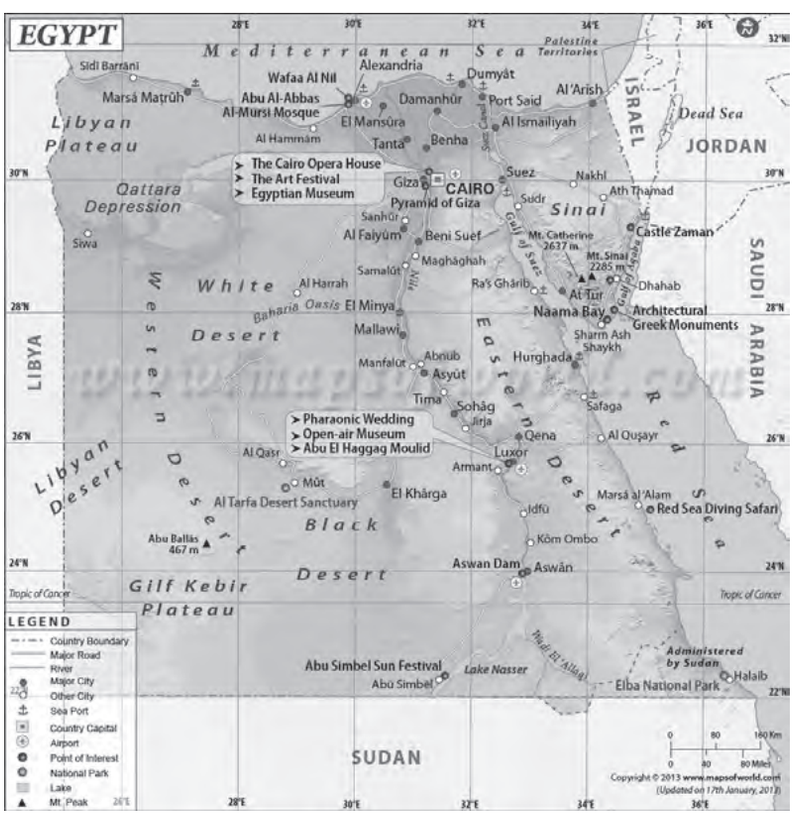


Figure 1: Egypt Map

Source: www.mapsofworld.com

According to "World Economic Forum Global Competitiveness report indicators 2016–2017." Indicated that Population 104 (millions), GDP 330.4 US$ billions(B), GDP per capita (US$)3,740.2, and GDP (PPP) as ashare of world total is 0.92%. Moreover, the country ranking out of 140 countries for elements that have a direct or indirect influence on the transportation system and its integration shown in Table(1). In addition to the most problematic factors for doing business which shown in figure(1).

Table 1: Ranking of Egypt

Element	Rank out of 140
Quality of overall infrastructure	108
Quality of roads	107
Quality of railroad infrastructure	73
Quality of port infrastructure	58
Quality of air transport infrastructure	52
Quality of electricity supply	102
Government budget balance, % GDP	132
Inflation, annual % change	130
Quality of primary education	134
Quality of the education system	135
Quality of math and science education	130
Quality of management schools	138
Internet access in schools	133
Availability of specialized training services	139
Extent of staff training	139
Intensity of local competition	128
Capacity for innovation	133
Quality of scientific research institutions	128

Source: The Global Competitiveness Report 2016–2017

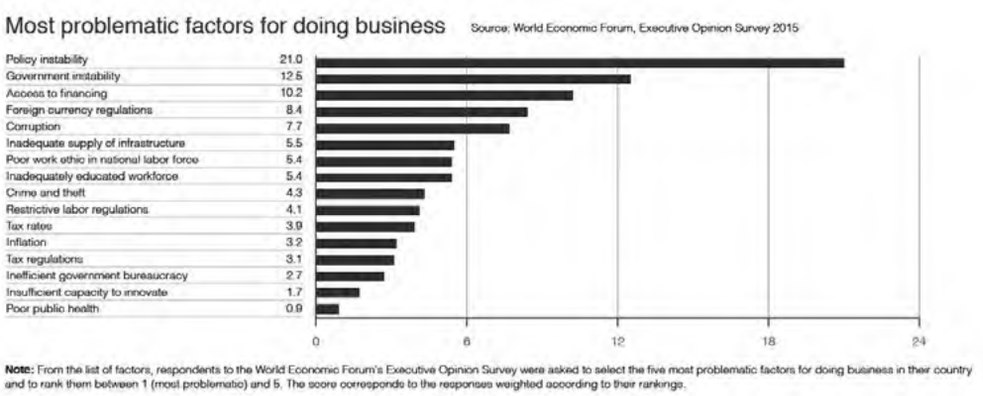


Figure 2: The Most Problematic Factors For Doing Business

Source: Source: The Global Competitiveness Report 2016–2017

The World Bank Logistics Performance Index (LPI), rank the countries from the perspective of logistics performance, this ranking depends mainly on combining data on six core [1] performance components using the qualitative analyses to produce a single aggregate measure. According to this index, Egypt ranked 49 in 2016 while it was 62 in 2014, which means that the logistic performance is improving. However, there is still a wide gap need to be covered and improvement needed in different contexts("World Bank Group").

Egypt has a trade deficit for a long period, from 2006 the gap between import and export increased continuously as shown in figure(2). Egypt ranked 62 as exporting economy and 71 as a complex economy,according to "the Economic Complexity Index(ECI)." In 2014, Egypt exported $33.2B and imported $82.4B. Table(2) show top commodities for Egypt trade.

1 The core six components are; the efficiency of border clearance and customs, quality of trade and transport infrastructure, quality and competence of logistics, ability to trace and track consignments; those components rated from "very low" to "very high". Then The ease of arranging competitively priced shipments, rated from "very difficult" to "very easy.", Moreover, the frequency of shipments reaches consignees within expected delivery times or scheduled, rated from "hardly ever" to "nearly always.".

Table 2: Top Commodities For Egypt Trade 2014

NO	Export	Value in USD	Import	Value in B USD
	Crude Petroleum	6.84 B	Refined Petroleum	7.47B
	Refined Petroleum	1.34B	($), Wheat	5.36 B
	Insulated Wire	996 Million (M)	Semi-Finished Iron	2.9 B
	Video Displays	757 M	Crude Petroleum	2.79 B
	Gold	667 M	Cars	2.27 B

Source: OEC

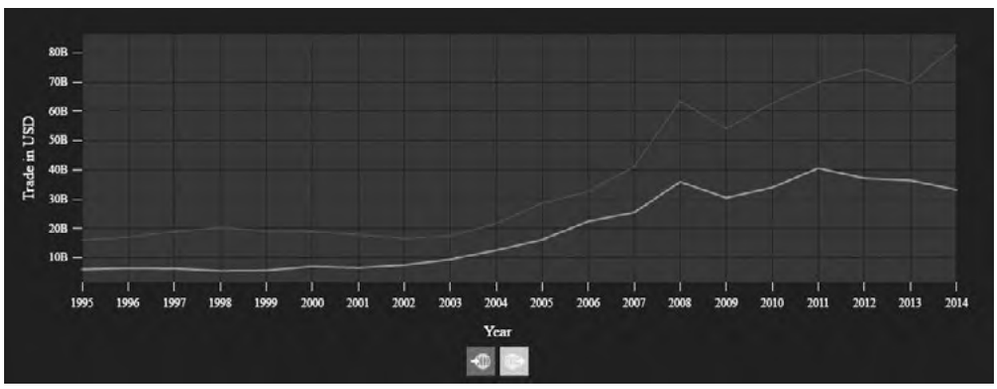


Figure 3: Egypt Trades Import & Export Trend

Source: OEC: "The Observatory of Economic Complexity."

2. Egyptian Ports

Egyptian Ministry of Transport (MOT) control port authorities and have the supervising of overall administration. Port Authorityis the landlord of the port and has the right to lease them to state-owned and privet companies to perform cargo handling operation and maritime transport services [2], under Resolution 30/1998 which approved the privatization of maritime transport companies. Moreover, responsible for the infrastructure of the port, planning, securing navigation, marine services, and security.

Egyptian ports distributed in the north and east coast. These ports are fourteen commercial, eleven petroleum, and seven mining ports. Alexandria port considered the largest in the amount that it handles in foreign trade, while port Damietta & East Port Said the largest in Container handling. Table (4) present the types of the Egyptian ports their and distribution.

Table 3: Egyptian ports

No	Port type	Port names	Location
1	commercial ports	Alexandria, El Dekheila, Damietta, Port Said, El Arish, East Port Said	North Coast Mediterranean sea
2	commercial ports	Suez, Petroleum Dock, Adabiya, Sokhna Port, Safaga, El Tour, Nuweiba, Sharm El Sheikh	East Coast Red sea
3	Petroleum ports	Ras Gharib, Wadi Ferran(Abu Redeis - El Nazazat), Ras Shukeir, Ras Sidr, El Hamra(El Allamin), Mersa Badran, Gabal Elzeit, Elzeit East, Petroget(GabalElzeit)	East Coast Red sea
4	Petroleum & LNG ports	Petroget (El Maadiya), Edco For Liquefied Gas	North Coast Mediterranean sea
6	Mining Ports	Abu Zenimah, Hamrawein, El Rasif El Bahari(Ras Hagariya), Abu Ghosoun, Al Qusayr, Safaga Mining Port(Abu Tartour), Safaga Mining Port(El Masriyeen)	East Coast Red sea

Source: Ministry of Transport

2 maritime transport services as stevedoring work for grains and general cargo, shipping agent, ship chandler and marine supplies, ship repair, maintenance and marine works, warehouse, and container handling

As mentioned before Egypt ports are ranked medium level by LPI. Concerning the cargo customs clearance, Egypt is ranked number 65 out of 160 in 2016. Because all cargo physically inspected and the process consumes six days, while in other countries need one day (LPI). Moreover, the commercial ports productivity and the maximum design capacity as shown in figure(3) indicate that some terminals are working in the capacity of 100% and over as port Damietta and Eldikheila, which is the reason behind the port congestion. Furthermore, most of the ports suffer from gate congestion.

Port	Area		Max. Capacity		Achieved Capacity During 2012			Containers Berths			Total no. of Berths (Including Containers Berths)			Total Areas of Warehouses and Yards (m^2)
	Total (Km^2)	Land (Km^2)	Cargo (Million Tons)	Containers (Million TEUs)	Cargo (Million Tons)	Containers (Million TEUs)	Passengers (Million)	No.	length (m)	Draught (m)	No.	length (m)	Draught (m)	
Alexandria	8.40	1.60	36.80	0.5	20.9	0.6	0.1	6	914.4	12.8	59	7624.7	12.8	544785.3
El Dekheila	6.20	3.50	22.10	0.5	24.3	0.8	0	6	1520	12.0	20	4586.0	20.0	1639380
Damietta	11.80	8.50	19.75	1.2	23.9	0.7	0	4	1050	14.5	19	5100.0	14.5	1115380
Port Said	3.00	1.30	12.78	0.8	5.03	0.5	0.03	3	350	13.2	32	4452.0	13.2	243253
El Arish	0.23	0.05	1.20	0	0.9	0	0	0	0	0	2	364.0	8.0	34000
East Port Said	72.10	70.60	12.00	2.7	28.6	3.0	0	4	2400	15.0	4	2400.0	15	1800000
Suez		2.30	6.60	0	0.5	0	0	0	0	0	14	2070.0	8.22	18615
Petroleum Dock	162.40	1.16	4.14	0	1.4	0	0	0	0	0	7	828.0	9.0	0
Adabiya		0.85	7.93	0	6.1	0.1	0	0	0	0	9	1840.0	12.0	37000
Sokhna Port	87.80	22.30	8.50	0.4	5.6	0.5	0.2	1	750	17	7	2350.0	17.0	11140
Hurghada	9.90	0.04	0	0	0	0	0.1	0	0	0	1	330.0	10.0	0
Safaga	57.00	0.6	6.37	0	2.5	0	0.7	0	0	0	6	1327.4	14.0	200159
El Tour	1.65	0.43	0.38	0	0	0	0	0	0	0	1	75.0	5.0	385600
Nuweiba	9.90	0.40	1.90	0	0.9	0	0.5	0	0	0	3	385.0	8.0	168500
Sharm El Sheikh	88.13	0.20	0	0	0	0	0.3	0	0	0	2	686.0	10.0	86857
Total	518.51	113.83	140.45	6.1	120.63	6.2	1.93	24	6984.9		186	34368.1		6284669

Figure 4: Egyptian Ports Capacity And Productivity

Source: MOT

The main ports as Alexandria, Damietta, and Port Said are suffering from congestion and lake of equipment and management. While the government in the last decade developed new ports as EL-Sokhna port. Which was established by Build–operate–transfer (B.O.T) system. Considered as "Third Generation ports" to serve container handling, general cargo, and bulk export and import operations ("Sokhna Port," 2016).

For the future planning for the Egyptian ports, The government planned to raise the total ports capacity from 120 million tons to 370 million tons by 2030. Table (5) present the project for the future planning.

Table 4: Egypt Ports Projects

Location	The current Investment Projects	The Medium-Term Investment Projects	The Long-Term Investment Projects
The Red Sea ports port authority	• Establishing the dry bulk terminal (grains) at the Adabia Port • Establishing, the main container terminal to serve the southern region of Safaga • Establishing, the general cargo terminal at Portafwik Port • The development project of El-tur Port • Establishing a container terminal at the Adabia Port	• establishing the Fifth Dock at Sukhna Port • establishing a berth at the back of the northern berth at the Suez Port	• The sixth dock project at The Port of Sukhna
Alexandria port authority	• establishing the container terminal CT3 at berth 100 • establishing, a grain terminal (berths- suction equipment - silos) • establishing, operating & administrating the unclean bulk terminal by a world environmental treatment, & transferring the coal terminal of Alexandria Port into it.	• The Project of establishing, operating & administrating a multipurpose terminal (containers – general cargo)	• The project of establishing the middle port which will contain. • Service Terminal of the Hydrocarbon liquid bulk • Container Handling Terminal • Agricultural Products Handling Terminal 1,2 • Dry Bulk Terminal 1,2 • Multipurpose Handling Terminal 1,2
Damietta port authority	• establishing a terminal dedicated to the storage & handling of grains,supplied with the related silos & suction equipment		• establishing a Multipurpose Cargo Terminal • Grains& Food Stuffs Projects • River Transport Projects
PortSaid port authority	• Establishing, operating & administrating the first phase of the multipurpose terminal no.1 • Agricultural bulk terminal • Establishing logistic centers	• East Port-said Port • Establishing storage yards & silos • Establishing the second phase of container berths • Establishing, the second phase of the multipurpose terminal no.1 • West Port-said Port • Establishing a container terminal dedicated to exporting the agricultural products • Establishing yards for ship maintenance • Upgrading & developing Port Berths • Upgrading & developing hinterland of the Port	• Establishing Container Berths east port said

Source:Investment in Ports 2014

2.1. LogisticsPerformance Index(LPI)

Year	LPI	
	Rank	Score
2007	100	2.37
2010	95	2.61
2012	60	2.98
2014	62	2.97
2016	49	3.18

Form the table above it is obvious that there is a marked improvement for Egypt in the LPI between the year 2007 and 2012 by 36 ranks but later declined 2 ranks in 2014 with almost steady score in 2014 where the Index recorded 2.97 instead of 2.98 but back with strong attitude in 2016 to record score 3.18 with global ranking 49.

LPI results across five editions (2007, 2010, 2012, 2014 and 2016) for Egypt were ranked 49 with score 3.18. The factors on which the report rating Egypt was customs, infrastructure, international shipments, logistics quality and timeline all of which possess a common factor, but low ranking compared with the countries which have the most successful ports for transshipment of containers trade.

3. Suez Canal Region

3.1. SWOT Analysis of Suez Canal Region Transport & Logistics Industry

STRENGTHS	WEAKNESSES
• Cheap labor comparing with the wages scale in the region. • Availability of land for future extension. • Strategic location. • Large domestic market size. • Deep draft. • Welcoming tax structure.	• With universal aspirations only a few global players. • Unstable social, economic & politics. • Poor Labour market efficiency. • Week physical infrastructure. • Poor macroeconomic environment. • High level of corruption. • Poor IT logistics. • Restrictions for capital flow. • Foreign currency regulations. • Poor work ethic in thenationallabor force. • The level of higher education & training is low.
OPPORTUNITIES	**THREATS**
• Strong growth expected in logistics in Mediterranean region. • Strong growth expected for transshipment of container trade in Mediterranean region. • Deepening Suez Canal will give anadvantage to the port to be able to handle 8th generation container ships. • The movement of the higher growth rates from the Far East to South East Asia will increase the chance of Port Said port to get a larger share of the market due to the preferable route via Suez Canal due to the shorter distance, in contrast, Panama Canal.	• Transfer of trade & distribution bases to new regional hubs. • The increase of piracy at the Arabian Sea will lead to areduction of traffic in Port Said port. • Serious steps by other countries in theMediterranean region to improve the logistics & marketing services for their ports to be logistic hubs & strong competitors for Port Said port. • Oil price is one of the major factors for calculating the voyage cost, as cheap oil price may lead the shipping lines to use analternative route which is the Cape route which will lead to areduction in Suez Canal traffic.

3.2. Recommendations

3.2.1. Port Said port authority role

i. Port managers should use the updated technology tools for loading and discharge.

ii. One of the most important factors that the port authority should take into account is the manpower; they should be trained continuously to improve their performance which will reflect on the port performance.

iii. Port managers should build a good reputation by reducing time delay in the port.

iv. With the cheap labors and the high value of the US dollars the port should offer a competitive price compared with other ports in the region.

v. Due to the strategic location, that possessed by proximity to the consumer markets in Europe, Middle East and East Africa the port authority should make marketing for Suez Canal region as a distribution center.
vi. Port Authority should build astrong cooperative relationship with customers and build new alliances with the shipping lines.
vii. The Authority of Suez Canal region should maintain a strong connection with the other ports around the world to build a database.

3.2.2. Egyptian government role

I. Infrastructure
   a. The government must continue to expand the size of the port in order to increase the maximum capacity of the port to follow up the rapid growth of transshipment of container trade especially as there will be no problem with the land available in the port vicinity.
   b. Continue deepening the draft of the port to follow up the rapid increase of the ships sizes.
   c. The nearest international airport located in the capital (Cairo); more than 200km from the port, therefore, it is required to build a new airport to the east bank of the Suez Canal.
   d. The nearest bridge or tunnel connecting the east bank of the Suez Canal with the west bank located distance more than 50km, therefore, it is recommended to build a tunnel or bridge more closely.
   e. Connecting the railway net with the port will improve the multi-modal connectivity.

II. Logistic services, one of the most attractive factors for the ships is the availability of services such as spare parts, technicians, provisions, bunkering and ease of signing on and off for the ship's crew therefore it is recommended to allow the international respectable logistics companies to work in Egypt and facilitate the ship's crew signing on and off.

III. IT, one of the most important factors that distinguish the fourth generation of ports, IT consider as a center of supply chain management (SCM). The key to attaining operational quality in global supply chains is to ensure that effective physical flow of goods is perfected by adept information flows. We propose positioning Port Said port as the preferred regional/global IT for Logistics Nerve Centre. The main strategy is to develop an end-to-end service model as an integrating framework and would address both the 'hard' and 'soft' aspects (Working Group on Logistics, 2002).

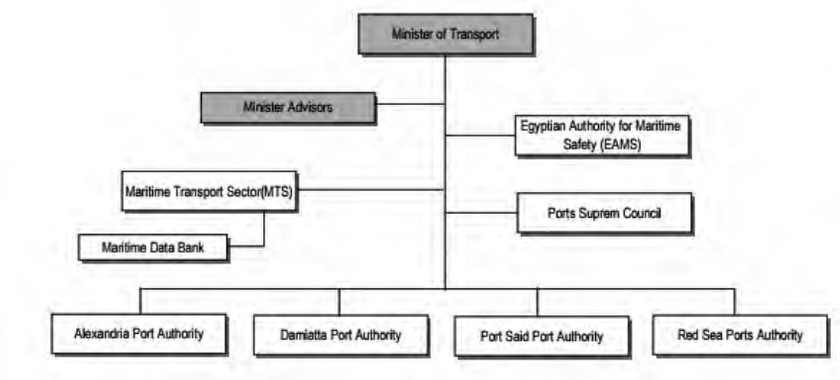
IV. The government should evaluate the performance of the agents and freight forward companies and stop the work permit to the companies which do not achieve the standard in order to enforce them to follow the global stander.

V. Secured hub, security is one of the most annoying factors for the Egyptian marine industry as declared by theinternational bank in the recent years. The researcher recommends that the Egyptian government should work hard to improve the security environment as a general in Egypt and in themarine sector by using the advanced technology capabilities and built a reputation for having strict security measures, Port Said port should be known for the shipping industry as a secured logistic hub. In addition, it is not practical for the security to do a physical inspection ofevery single container that will reflect negatively on the port performance. As such, a critical element in the success of the cargo security is the availability of advanced information to effectively flag out high-risk containers for inspection. The ability to exchange import/export data, then analyze that data through the various methods of electronic risk assessment prior to containers being transported, will help ensure the earliest possible detection of high-risk containers and allow countries to take appropriate measures on such shipments. If port Said port is able to put in place the essential security measures and by

securing preferential access/clearance to the major trading nations for shipments going through our ports, Port Said port will be more attractive for shippers to base their operations in Port Said port and capture more transhipment cargo (Working Group on Logistics, 2002).

VI. Education, thegovernment should give strong priority for education, the higher education and training will lead to workforce skilled enough to change the business environment in Egypt by having the ability to deal with high technology and business sophistication.In addition, the government should focus on maritime business education.

VII. Suez Canal authority must always maintain attractive fees for the shipping lines.



Organization Chart of Entities Related to Maritime Transport

4. Maritime Administration

4.1. Maritime Transport Sector(MTS)

Egypt is a maritime country that has a remarkable geographical location on the junction of three continents and has coasts up to 2000km on the Mediterranean and the Red Sea which allowed its connection with the foreign world since ancient ages. Moreover, a vital artery – Suez Canal- passes through its land linking the East to the West. The foreign seaborne trade volume of Egypt represents about 90% of the Egyptian foreign trade volume. Since the maritime transport process became a complicated industry it was indispensable to develop this industry through a well-defined strategic goal.

MTS is responsible for developing the general policy for the establishment and the development of ports through its strategy enabling raising its efficiency in order to cope with the world development in the framework of the country plan. MTS undertakes the following up of investment and development plan implementation as well as coordinating the ports Authorities efforts in order to provide the best services for the vessels calling at these ports.

MTS is responsible for Maritime bilateral agreements with several governments and the relationship with International and Regional Organizations, these agreements consolidate the relations between Egypt and other countries in the field of maritime transport

4.2. Egyptian Authority for Maritime Safety (EAFMS)

EAFMS has been established in 2004 by the Presidential Decree 399/2004 as an independent nominal Authority reporting to the Minister of Transport to replace "Ports and Lighthouses Administration" which was one of the first governmental facilities that dated back to 1830.

Before 2004, EAFMS was one of the departments of MTS. However, the presidential decree of 2004 gave it an anonymous status to be able to perform its duties of inspection and certification in an impartial way. the

responsibilities of EAFMS which can be summarized as:

1. To regulate and to manage thesafety of maritime navigation in accordance with the international conventions and regulations.
2. To represent Egypt in international Maritime organizations and those related to maritime safety.
3. To provide technical cooperation with all the international ports and countries and to provide maritime assistance and services to all ships in the Egyptian territorial water.
4. To exchange technical, professional expertise and researchers with the international and regional authorities in the field of maritime safety to upgrade the standards of securing ships and their navigation.
5. To plan, develop, install, monitor, upgrade and maintain lighthouses and navigational aids all over national coasts and to approve related permissions and certificates.
6. To monitor maritime safety standards and to apply the necessary procedures to guarantee the compliance of the requirements of safety and security.
7. To participate in search and rescue plans and fighting of maritime pollution.
8. To monitor the technical standards of Egyptian vessels and maritime units locally built or procured from abroad and issue registration certificates, seaworthinesscertificates, and navigational permissions.
9. To set tests and issue certificates of competency and marine passports and sea service certificates to seafarers.
10. To monitor the standards of Egyptian and foreign vessels calling at Egyptian ports and territorial waters and to issue related certificates and permissions in accordance with international standards and conventions.
11. To set the professional requirements and to provide work permissions for masters, officers, engineers, boilers, seafarers, fishermen, divers and other maritime professions.
12. To review the courses of the specialized institutes and centers qualifying ship crew in accordance with international standards
13. To set plans, implement means of navigational traffic and to identify waterways and passages and to issue navigational reports and alerts to maintain safety in territorial waters.
14. To operate, maintain, and make full use of radio and radar beacons to maintain the safety of navigation in territorial water.
15. To provide local or foreign training programs for the Authority's personnel.
16. To draft marine salvage and pollution laws, monitor their implementation and coordinate with related agencies.
17. To apply the necessary procedures and investigations in case of accidents and issue necessary reports.
18. To establish, with the consent of the Minister of Transport, joint companies to carry out tasks within its responsibilities.

EAFMS owns and operates M/S Aida IV, a fourth-generation modern vessel donated by Japan as a supply ship to remote lighthouses and training ship for the cadets of the Arab Academy for Science and Technology.

EAFMS operates the Gulf of Suez Vessel Traffic Information Management System (VTIMS), the Egyptian Regional Net for Differential Global Positioning System (DGPS) and the Gulf of Suez Search and Rescue System (SAR). EAFMS operates 18 manned and unmanned lighthouses in the Mediterranean and Red Seas.

5. Maritime Education & Training in Egypt

The Arab Academy for Science, Technology and Maritime Transport (AASTMT)

The Arab Academy for Science, Technology and Maritime Transport (AASTMT) is the lead Maritime Education and Training provider in Africa and the Middle East. Established in 1970 under the auspices of the Arab States League.

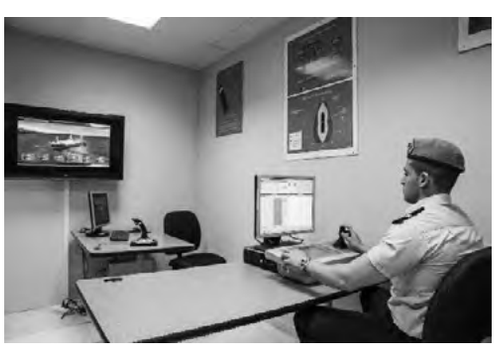
The Academy consists of a number of educational sectors in addition to the Maritime sector, it contains Engineering, Computing, Business Administration, Fisheries & Aquaculture, Management, International Transport and Logistics, Languages, and Communication. In addition to a secondary school and several institutes, Deaneries and centers specialized in specific areas. All are distributed in 8 branches in Egypt where the main campus is in the coastal city of Alexandria covering an area of over 25 Acers. In addition to 3 abroad branches in Cypress, Syria, and Kingdom of Saudi Arabia

The Maritime Sector of the Academy consists of four Main Sub-Sectors

5.1. Undergraduates

The faculty of Maritime Transport and Technology deliver Bachelor degree after 4 years of Nautical studies, including 1 year of guided or sea training (optional) on the Academy training vessel *AIDA IV* in accordance with the IMO convention on Standards of Training, Certification, and Watchkeeping (STCW 78).

At any given time, there are around 1200 students in the Faculty, the students join after secondary education to spend four years learning nautical science in English to prepare them for the international market, taught by highly skilled teachers and instructors using the state of the art educational tools.



The students are hosted in internal dorms ready to accommodate the full number of students in the faculty, the accommodation is supported by restaurants, a hospital, gymnasiums, sports courts, and recreation rooms.

5.2.After Graduation Studies

This sub-sector deal with the students after the bachelor degree to obtain the STCW Certificate of Compliance (COC) enabling the graduate to work on board ships. This sub-sector consists of four deaneries:

- Upgrading Studies Institute

Where graduates attend upgrading courses preparing them for exams issued by National Authorities in order to obtain the appropriate COC, either Deck Officers or Marine Engineers, both operational and management levels, including Electro-technical officers.

- Marine Safety Institute

Where graduates undertake STCW short mandatory courses required to be attended after passing the exams in the upgrading studies institute in order to fulfill National Authorities requirements to obtain the required COC.

Examples of these courses are firefighting, medical studies, and first aid, social responsibilities, boat survival, pollution combating, GMDSS Communication……etc.

- Integrated Simulator Complex

The complex introduces STCW courses and/or any other short courses that involves training using marine simulators. The complex contains bridge simulators, communication and GMDSS simulators, liquid cargo handling simulators, dynamic position ships simulator, Tug handling simulators, VTIS Simulators, Fast boat simulators, in addition to Radar/ARPA and Electronic charts (ECDIS) Simulators.

- Maritime Security Institute

This institute trains graduates on all Maritime Security issues related to the STCW requirements, focusing on anti-terrorism and anti-piracy techniques.

5.3. Postgraduate Studies

The Higher Maritime Education Institute offers Diplomas, M.Sc., and Doctoral degrees. The programs are offered to postgraduate students from all over the Maritime Industry.

5.4. Port TrainingInstitute.

In addition to Deck officers and marine engineers, the market needs support level workers, either on ships or in port. This institute prepares the support level to work as ABs/MM, Port Gangs, or crane operators.

For further details about the AASTMT please visit our website www.aast.edu

COUNTRY REPORT

I R A Q

1. BACKGROUND AND GENERAL DATA COLLECTION

1.1 Geography

Iraq borders Syria to the northwest, Turkey to the north, Iran to the east, Jordan to the west, Saudi Arabia to the south and southwest, and Kuwait to the south. Iraq has a narrow section of coastline measuring 58 km on the northern Persian Gulf. The following figure shows a location map of Iraq, its neighboring countries and the main cross-border points.

Iraq is composed of eighteen governorates, which are subdivided into 111 districts and 392 sub- districts. The sub-sequent figure illustrates the administrative boundaries of the Iraqi districts.

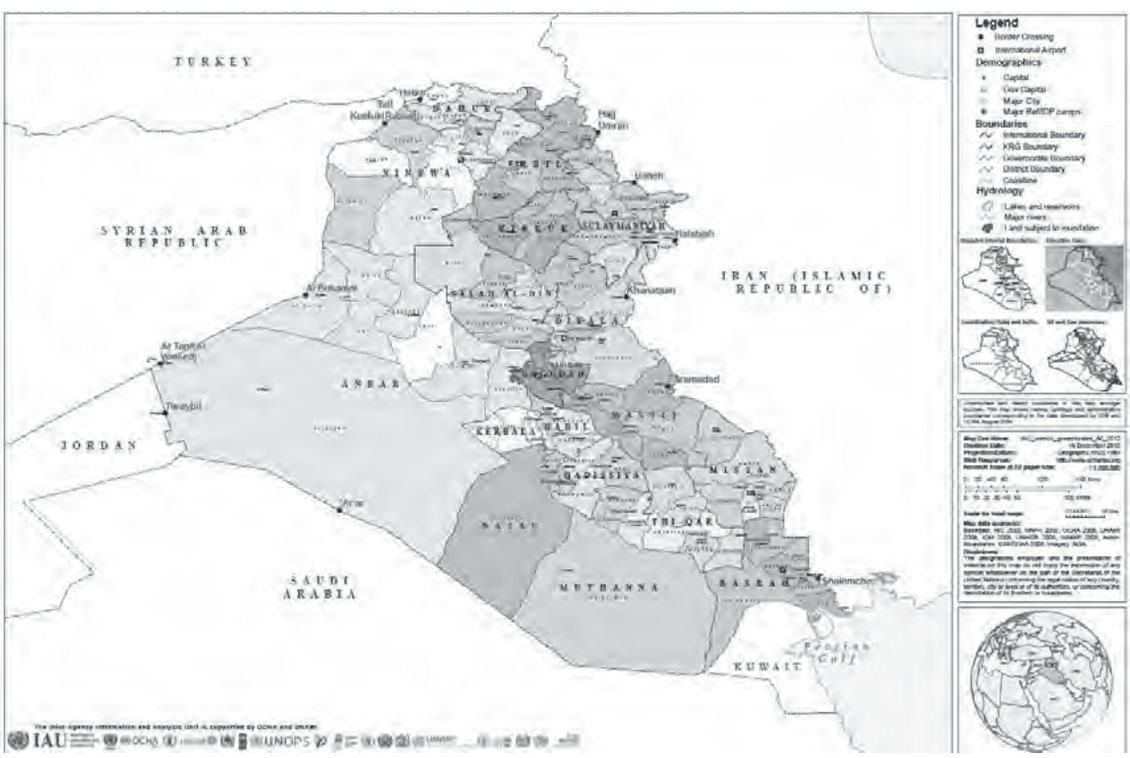


Figure 1: Iraq's Neighboring Countries and Main Cross Borders

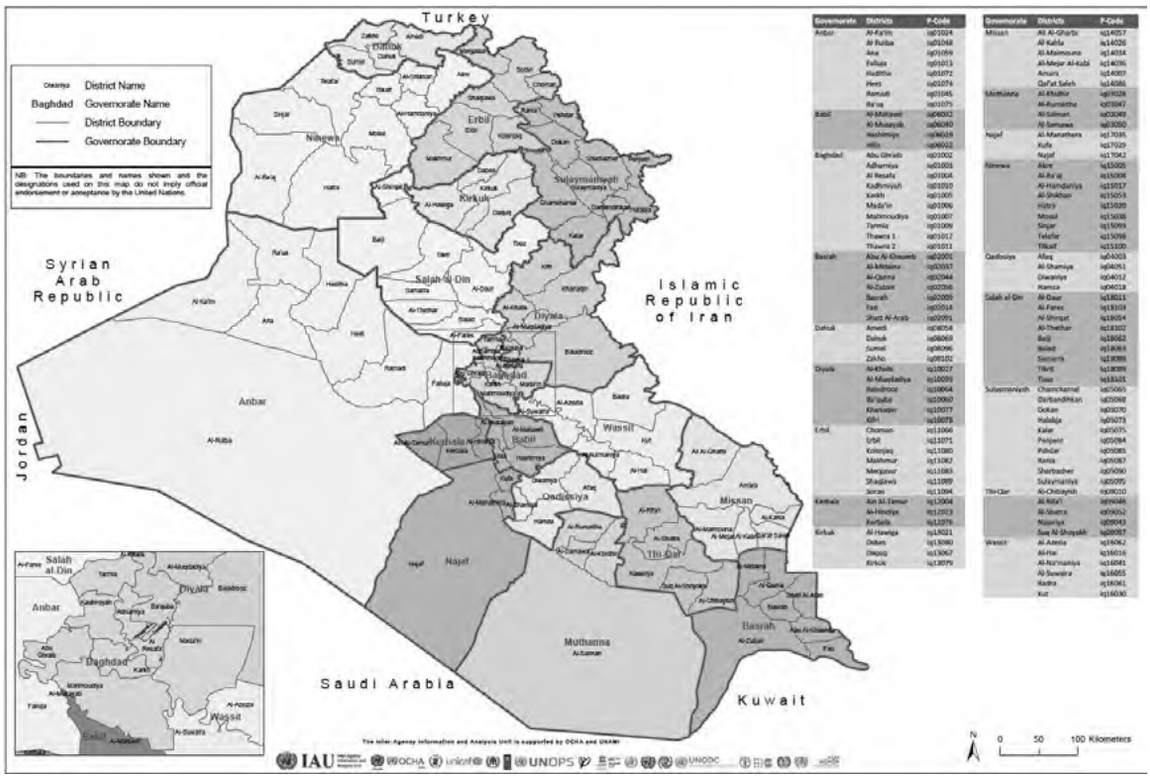


Figure 2: Iraq's District Borders

1.2 Economy

Iraq's largely state-run economy has, for a long time, been dominated by the oil sector, which has traditionally provided virtually all of the foreign exchange earnings. A succession of wars (e.g. Iran war, the first Gulf War, the second Gulf War) and international economic sanctions and embargos over the last decades, followed by the continuing internal unrest, have left Iraq's infrastructure dilapidated, its economy plummeting and has changed people's lives significantly, with an impact on all layers of society. It has also changed the way people and goods move throughout the country.

Iraq lies also on the path of several traditional trade routes, due to its strategic location bordering Syria, Turkey, Iran, Jordan, Kuwait and Saudi Arabia. The potential for economic benefit from its role as a trading corridor has also been hindered because of these conflicts.

The situation of Iraq has had a direct implication on various matters, such as:

- Socio-economic historical data are affected by discontinuities. Data reliability has been affected by a number of distortions over the last decades;
- The economic production structure and population distribution patterns have been deeply affected by the consequences of decades of wars;
- Broken trade connections and agreements with international markets. Import and export volumes have been affected by a series of embargos. Smuggling took place in different parts of the economy but this could not be accounted for by official sources;
- Progressive impoverishment of the Iraqi people with its wide consequences for consumption and transport demand;
- Destroyed infrastructure which enables the transportation of people and goods.

Corruption, outdated infrastructure, insufficient essential services, skilled labor shortages and antiquated commercial laws stifle investment and continue to constrain growth in the private non- oil sectors. Broader

economic development, long-term fiscal health, and sustained improvements in the overall standard of living still depend on the central government passing major policy reforms. However, an improvement in security and foreign investment are starting to help to spur economic activity, particularly in the energy, construction and retail sectors.

The historical trends in annual GDP growth (measured in terms of the percentage real growth rate and adjusted for inflation) in Iraq are illustrated in the following figure, together with forecasts for future growth.

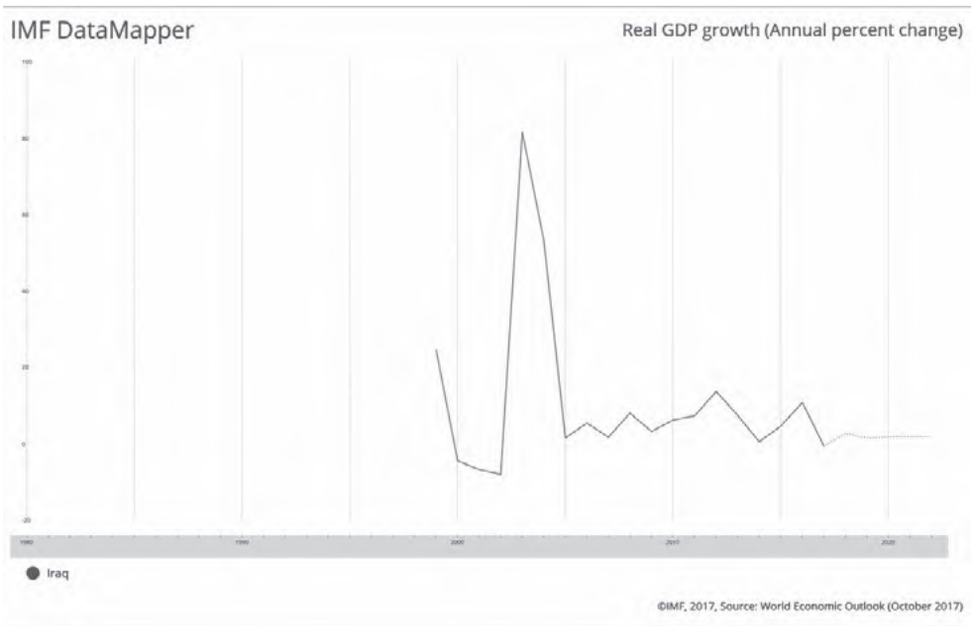


Figure 3: Historical and Forecast Real GDP Growth

1.3 Population

Historically, Iraq population has been constantly growing. However, the annual growth rate, although sometimes erratic, has generally fluctuated at around 2.5% per annum, where the population in Iraq in 2016 was estimated about 37.9 million according to report of Central Statistical Organization (CSO) that follow planning ministry in 2017.

Report of CSO in 2017, issued that the number of males in 2016 was about 19.1 million and number of females was about 18.8 million.

1.4 Households

The following table shows the changes in housing units, number of households and population in Iraq between 1997 and 2009. The sub-sequent table shows the distribution of the same indicators by district in 2009.

Table 1: Housing Indicators for Iraq

Indicators	1997	2009	Average Annual Growth Rate %
Total housing units	2,140,494	4,810,555	7.0%
Total households	2,494,307	4,696,265	5.4%
Total population	19,082,566	31,664,466	4.3%
Ave. Size of Household	7.7	6.7	-1.2%

Source: Central Statistical Organization, Annual Abstract of Statistics 2010-2011

Note: There is no official population census so far but just expectations. Thus, we depend on data of 1997 and 2009 to compare.

It can be seen that housing units and households have grown at a higher rate than population during the period in question. Household size has reduced, as is the trend in other parts of the world, with families having fewer children.

Table 2: Housing Indicators per Iraqi District (2009)

Governorate	No. of Housing Units	No. of Households	Total Population	Ave. Size of Household
Baghdad	1,064,175	1,037,189	6,702,538	6.5
Ninevah	438,885	425,861	3,106,948	7.3
Basrah	327,185	338,232	2,405,434	7.1
Al-Sulaimaniya	365,717	365,959	1,784,853	4.9
ThiQar	220,910	214,554	1,744,398	8.1
Babylon	252,025	245,682	1,729,666	7.0
Erbil	302,457	293,353	1,532,081	5.2
Al-Anbar	194,096	178,283	1,483,359	8.3
Diala	214,024	202,171	1,371,035	6.8
Salah Al-Deen	204,309	180,542	1,337,786	7.4
Kirkuk	221,171	234,697	1,325,853	5.6
Al-Najaf	183,549	177,132	1,221,228	6.9
Wasit	157,905	152,777	1,150,079	7.5
Al-Qadisiya	146,733	140,848	1,077,614	7.7
Duhouk	147,578	152,127	1,072,324	7.0
Kerbela	157,990	149,408	1,013,254	6.8
Maysan	125,808	122,847	922,890	7.5
Al-Muthanna	86,038	84,603	683,126	8.1
Total	**4,810,555**	**4,696,265**	**31,664,466**	**6.7**

Source: Central Statistical Organization, Annual Abstract of Statistics 2010-2011

2. Investment in Iraq

Why companies and countries can to invest in Iraq?

According to the analysis that did by National Investment Commission (NIC) to the situation in Iraq and the demand to investment, it found some reasons that encourage the investors to invest in Iraq such as:

2.1 Superb strategic location — a gateway to the region

Iraq has historically occupied a pivotal position in the Arabian Gulf and Middle East region. It has strategically important ports and airports and can prove to be a cost-effective trading and distribution location.

2.2 Numerous green and brownfield opportunities across multiple sectors

There are investment needs across all sectors of the Iraqi economy. The Government of Iraq has identified hundreds of investment opportunities throughout Iraq in a variety of sectors. These include construction, manufacturing industry, agriculture, tourism, housing, telecommunications and healthcare. Most of these are immediately available and further details can be obtained by contacting the National Investment Commission.

2.3 Unmet needs of a diverse domestic market

Iraq's strategic position, availability of people and competitive cost base make it an excellent location from which to export to the region and to the world. However, given that the majority of goods sold now in Iraq are imported, Iraq's domestic market of 36 million people offers an obvious opportunity to produce and sell goods and service to provide import substitution.

2.4 Increasing middle class creating demand for new products and services

As Iraq's stability and security continues to improve, its displaced professionals are slowly returning home and re-entering the workforce. Iraq's expanding middle-class is proving to have the expendable income to demand better products and services.

2.5 Educated, talented and available workforce

The workforce in Iraq is well-educated. Over 21% are graduates or post-graduates and 14% have higher-level academic or technical qualifications. Iraq traditionally is strong in disciplines such as engineering, medicine and agriculture and has also abundant numbers of people with administrative and organizational skills. the number of youth people reached to 9.3 million.

Iraq's population of 38 million is one of the world's youngest with 71% under the 30 years of age and an astounding 83% under 40. Factors such as the current unemployment rate of 11% and high levels of underemployment clearly show the enormous capacity of the Iraqi workforce to provide a strong people solution to investors' needs.

2.6 Competitive wages and operating costs

Iraq's cost base is one of the most competitive in the region and globally. For example, an engineering professional is 89% cheaper than the UAE and a skilled operative 92% cheaper than the UK. Whilst wages rates are dramatically below those in the United States or Europe, this factor, combined with Iraq's availability of graduates and professionals means an overall excellent value for money investment proposition.

2.7 Strong investment incentives, tax exemptions and guarantees offered

Iraq offers investors a period of ten years free from all taxes, including corporation tax and fees. This period is extended to 15 years if the project is a joint venture with a majority Iraqi stakeholder. Additional incentives include the right to repatriate investment and profits from investment, the right to employ foreign workers when needed and three years exemption from import fees for required equipment. The Government of Iraq also guarantees that investments will not be nationalized or confiscated.

2.8 Low corporate tax rates

Even after the generous tax-free period has been completed, investors will continue to benefit from Iraq's company tax rate of only 15% - one of the most competitive in the region and globally. Both the tax-free period and the low ongoing rate help investors to become profitable more quickly and encourages reinvestment.

2.9 Ample opportunity for local partnerships

The Iraqi economy boasts a number of established companies, state-owned-enterprises and service providers. As the country continues to refine its investment environment and bring stability to its political, security and economic activities, local partners serve as good option to expedite and navigate the legal, regulatory and physical landscapes of Iraq. Local partners have access to vital market knowledge; navigate regulatory requirements; provide labor and other inputs at competitive rates; utilize pre-established sales network; and

maintain other necessary business relationships, i.e. banking, legal, and distribution, which are critical to the success of an operation.

While these companies maintain room for growth, many are poised to share in both the investment risk and long-term benefits. These companies and service providers span most sectors, industries and provinces throughout Iraq.

2.10 Abundant and untapped natural resources

Iraq holds one of the principal hydrocarbon reserves in the world. With proven reserves estimated at 144 billion barrels, Iraq's undiscovered oil reserve is considered to have the second largest reserve in the world — possibly 300 billion barrels. Iraq also has reserves of gas of 98 trillion cubic meters. Iraq is also rich in other minerals, including Sulphur, phosphate and iron.

3. Oil

Oil is considered the main natural resource for Iraq in providing the state budget and represents about 93% of Iraq's revenues according to the statistics of the Iraqi Ministry Oil.

Below tables are showing the quantities of oil that exported in 2017 and its financial value:

Crude Oil Exports

IRAQ CRUDE OIL EXPORTS – OCTOBER 2017

Released on : 25/11/2017
Next Release on : 25/12/2017

YEAR	MONTH	BASRAH CRUDE		KIRKUK CRUDE		TOTAL		AVERAGE PRICE (US$/BBL)
		QUANTITY MILLON BARREL	AMOUNT MILLION DOLLAR	QUANTITY MILLON BARREL	AMOUNT MILLION DOLLAR	QUANTITY MILLON BARREL	AMOUNT MILLION DOLLAR	
2017	OCTOBER	103.7	5,489	0.0	0	103.7	5,489	52.932

THE ABOVE MENTIONED QUANTITIES EXPORTED THROUGH BASRAH OIL TERMINAL, KHOR ALAMYA OIL TERMINAL AND SPM FROM ARABIAN GULF AND CEYHAN TERMINAL IN TURKEY FROM THE MEDETRRANIAN SEA BY THE FOLLOWING BUYERS:

HISTORICAL

YEAR	MONTH	BASRAH CRUDE		KIRKUK CRUDE		TOTAL		AVERAGE PRICE (US $ / BBL)
		QUANTITY MILLION BARREL	AMOUNT MILLION DOLLAR	QUANTITY MILLION BARREL	AMOUNT MILLION DOLLAR	QUANTITY MILLION BARREL	AMOUNT MILLION DOLLAR	
2017	JANUARY	101.5	4,934	1.4	59	102.9	5,092	48.510
	FEBRUARY	90.8	4,460	0.0	40	91.8	4,500	49,127
	MARCH	99.5	4,697	1.5	59	101.0	4,755	47.180
	APRIL	96.9	4,577	0.7	30	97.6	4,607	47.303
	MAY	100.4	4,591	0.7	32	101.1	4,623	45.727
	JUNE	97.5	4,117	0.7	27	98.2	4,144	42.200
	JULY	100.0	4,400	0.0	0	100.0	4,400	44.000
	AUGUST	99.7	4,639	0.0	0	99.7	4,639	46.530
	SEPTEMBER	97.2	4,866	0.0	0	97.2	4,866	50.062
	OCTOBER	103.7	5,489	0.0	0	103.7	5,489	52.932

4. Iraq trade with European Union

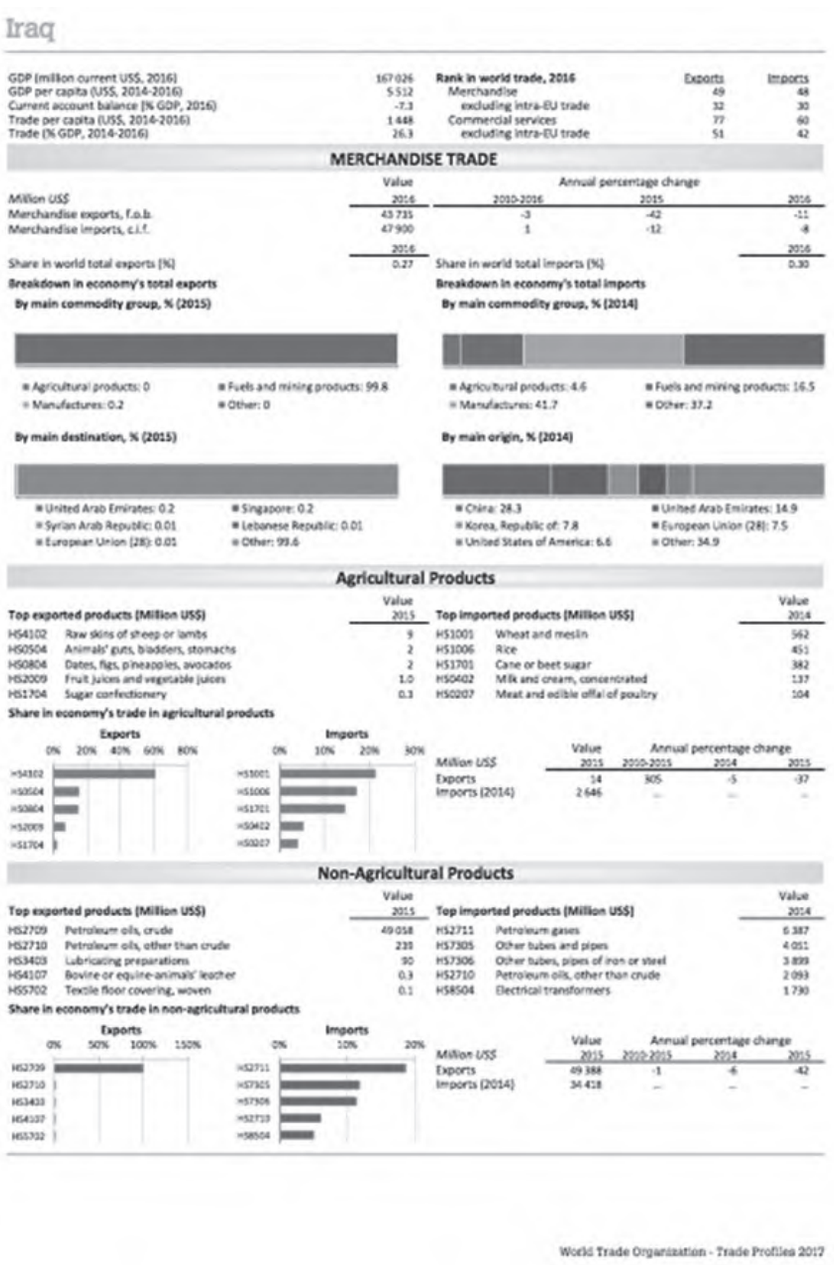
There is a report issued by European Commission in 17 Nov. 2017 shows a volume of trade between European Union and Iraq and can appear this report by click on the link below:

http://trade.ec.europa.eu/doclib/docs/2006/september/tradoc_113405.pdf

5. Economic activities categorization in Iraq

In 2017, world trade organization issued trade profiles provides a series of key indicators on trade in goods and services for 196 economies. The data are taken from a variety of sources, and each profile is presented in a handy two-page format, allowing for easy comparison between economies.

Below, two pages represent Iraqi economy and kinds of goods that exported and imported from and to Iraq.



Iraq

		Rank in world trade, 2016	Exports	Imports
GDP (million current US$, 2016)	167 026	Merchandise	49	48
GDP per capita (US$, 2014-2016)	5 512	excluding intra-EU trade	32	30
Current account balance (% GDP, 2016)	-7.3	Commercial services	77	60
Trade per capita (US$, 2014-2016)	1 448	excluding intra-EU trade	51	42
Trade (% GDP, 2014-2016)	26.3			

MERCHANDISE TRADE

	Value	Annual percentage change		
Million US$	2016	2010-2016	2015	2016
Merchandise exports, f.o.b.	43 735	-3	-42	-11
Merchandise imports, c.i.f.	47 900	1	-12	-8

	2016		2016
Share in world total exports (%)	0.27	Share in world total imports (%)	0.30

Breakdown in economy's total exports

By main commodity group, % (2015)

Agricultural products: 0 · Fuels and mining products: 99.8 · Manufactures: 0.2 · Other: 0

By main destination, % (2015)

United Arab Emirates: 0.2 · Singapore: 0.2 · Syrian Arab Republic: 0.01 · Lebanese Republic: 0.01 · European Union (28): 0.01 · Other: 99.6

Breakdown in economy's total imports

By main commodity group, % (2014)

Agricultural products: 4.6 · Fuels and mining products: 16.5 · Manufactures: 41.7 · Other: 37.2

By main origin, % (2014)

China: 28.3 · United Arab Emirates: 14.9 · Korea, Republic of: 7.8 · European Union (28): 7.5 · United States of America: 6.6 · Other: 34.9

Agricultural Products

Top exported products (Million US$)		Value 2015	Top imported products (Million US$)		Value 2014
HS4102	Raw skins of sheep or lambs	9	HS1001	Wheat and meslin	562
HS0504	Animals' guts, bladders, stomachs	2	HS1006	Rice	451
HS0804	Dates, figs, pineapples, avocados	2	HS1701	Cane or beet sugar	382
HS2009	Fruit juices and vegetable juices	1.0	HS0402	Milk and cream, concentrated	137
HS1704	Sugar confectionery	0.3	HS0207	Meat and edible offal of poultry	104

Share in economy's trade in agricultural products

Million US$	Value 2015	Annual percentage change 2010-2015	2014	2015
Exports	14	805	-5	-37
Imports (2014)	2 646	..	..	..

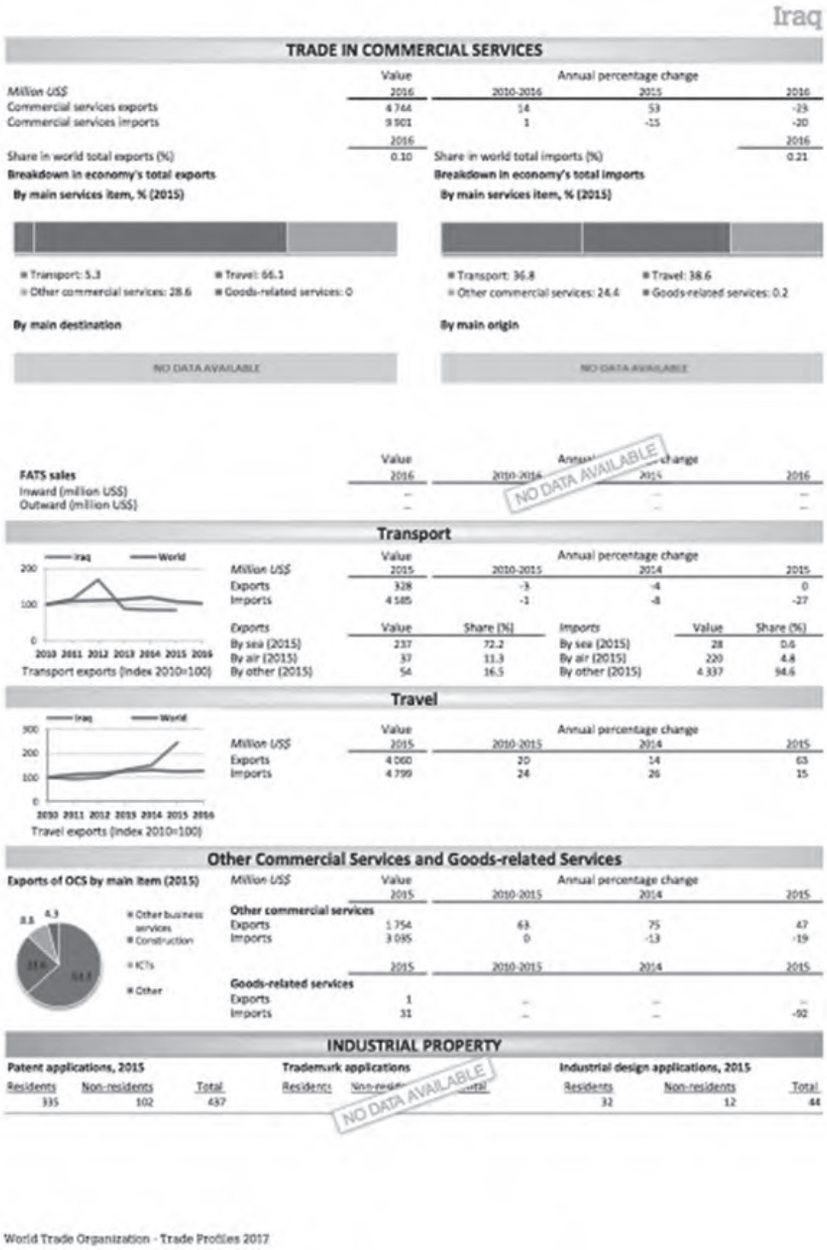
Non-Agricultural Products

Top exported products (Million US$)		Value 2015	Top imported products (Million US$)		Value 2014
HS2709	Petroleum oils, crude	49 058	HS2711	Petroleum gases	6 387
HS2710	Petroleum oils, other than crude	239	HS7305	Other tubes and pipes	4 051
HS3403	Lubricating preparations	90	HS7306	Other tubes, pipes of iron or steel	3 899
HS4107	Bovine or equine animals' leather	0.3	HS2710	Petroleum oils, other than crude	2 093
HS5702	Textile floor covering, woven	0.1	HS8504	Electrical transformers	1 730

Share in economy's trade in non-agricultural products

Million US$	Value 2015	Annual percentage change 2010-2015	2014	2015
Exports	49 388	-1	-6	-42
Imports (2014)	34 418	..	..	..

World Trade Organization - Trade Profiles 2017



Iraq

TRADE IN COMMERCIAL SERVICES

Million US$	Value 2016	Annual percentage change 2010-2016	2015	2016
Commercial services exports	4 744	14	53	-23
Commercial services imports	9 901	1	-15	-20
	2016			2016
Share in world total exports (%)	0.10	Share in world total imports (%)		0.21

Breakdown in economy's total exports
By main services item, % (2015)

Transport: 5.3 · Travel: 66.1 · Other commercial services: 28.6 · Goods-related services: 0

Breakdown in economy's total imports
By main services item, % (2015)

Transport: 36.8 · Travel: 38.6 · Other commercial services: 24.4 · Goods-related services: 0.2

By main destination

NO DATA AVAILABLE

By main origin

NO DATA AVAILABLE

FATS sales	Value 2016	Annual percentage change 2010-2014	2015	2016
Inward (million US$)	..	NO DATA AVAILABLE	..	..
Outward (million US$)	..		..	..

Transport

Transport exports (index 2010=100)

Million US$	Value 2015	Annual percentage change 2010-2015	2014	2015
Exports	328	-3	-4	0
Imports	4 585	-1	-8	-27

Exports	Value	Share (%)	Imports	Value	Share (%)
By sea (2015)	237	72.2	By sea (2015)	28	0.6
By air (2015)	37	11.3	By air (2015)	220	4.8
By other (2015)	54	16.5	By other (2015)	4 337	94.6

Travel

Travel exports (index 2010=100)

Million US$	Value 2015	Annual percentage change 2010-2015	2014	2015
Exports	4 060	20	14	63
Imports	4 799	24	26	15

Other Commercial Services and Goods-related Services

Exports of OCS by main item (2015)

Million US$	Value 2015	Annual percentage change 2010-2015	2014	2015
Other commercial services				
Exports	1 754	63	75	47
Imports	3 095	0	-13	-19
	2015	2010-2015	2014	2015
Goods-related services				
Exports	1	..	..	..
Imports	31	..	..	-92

INDUSTRIAL PROPERTY

Patent applications, 2015			Trademark applications			Industrial design applications, 2015		
Residents	Non-residents	Total	Residents	Non-residents	Total	Residents	Non-residents	Total
335	102	437	NO DATA AVAILABLE			32	12	44

World Trade Organization - Trade Profiles 2017

6. Maritime administration

To date of this report, no law has been issued that regulate the operation of maritime institutions in Iraq. Iraq has maritime companies such as General Company for Ports of Iraqi (GCPI), General Company for Maritime Transport (GCMT), Iraqi Oil Tanker Company (IOTC) and the Arabian Gulf Academy for Maritime Studies (AGAMS). GCPI and GCTM operate under control of the Iraqi Transport Ministry. IOTC operates under control of Iraqi Oil Ministry. AGAMS is an educational institution specialized in maritime training and education and operates under control of Iraqi Defense Ministry.

We note that all these institutions do not have one authority to organize their work and direct it to serve the maritime sector in Iraq generally. Therefore, Iraq needs to legislate a unified law regulating the work of these institutions as they all participate in serving the Iraqi maritime sector.

7. Arabian Gulf Academy for Maritime Studies

Iraqi Academy specialized in maritime studies, it was founded in 1975 and its location in southern Iraq, in Basra province. It is one of the oldest scientific edifices in the Arab region. It consisted of a number of educational institutes in its early stages, including Maritime College, Maritime Technical Institute, Maritime Vocational Training Center, Maritime School.

Now, it consists of (Maritime College, Maritime Vocational Training Center) where students were accepted from middle and high school graduates (secondary) according to special admission rules.

The Academy prepares, qualifies and develops the students' ability to be military or civilian naval specialists, whether officers or sailors, to work in Iraqi, Arab and international maritime and military maritime institutions. On the other hand, it also provides maritime basic courses and specialized courses and competency courses and renewing certificates for employees in the public or private maritime sector. The curriculum is prepared for the students and participants in the courses held by the Academy on the basis of scientific foundations and according to what is accredited in the international maritime academies and colleges and is committed to the methods and standards approved by the International Maritime Organization (IMO). Many Iraqi and Arab students have graduated from the academy since its inception and up to date, where they are now working in Iraq and in a number of Arab and foreign countries and in high positions. The Academy awards a number of internationally recognized degrees, both scientific and maritime. The Academy is also developing its relations with a number of scientific and maritime institutions, whether inside or outside Iraq, where the Academy participated in many conferences and meetings, internal and external, including meetings of International Maritime Organization.

8. Registration of ships

There is a law regulate the processes and procedures that have relation with registration of ships in Iraq. This law issued in 1942 and is carried the number of 19, and it is called the law of registration of ships in Iraq. The management that responsible to implement of this law is General Company for Ports of Iraq (GCPI) which is represented by *maritime inspection department* in this company.

Note: we could not find copy for this law in English language to attach it with report.

9. Legal framework

As we explained in maritime administration paragraph above, the Institutions that have relation with Maritime issues and problems such as GCPI, GCMT, IOTC and AGAMS under control different ministries. Therefore, the maritime problems or issues that are facing these institutions will be dealt with its according to law of these ministries. In most of the time, when the problems need to solve according to the judiciary, civil courts are used to resolve these problems. Sometimes, these courts use maritime experts in various disciplines to provide marine technical advice to solve problems.

10. Maritime sector in Iraq

The maritime sector in Iraq is represented by some maritime companies that have working in this sector either in ports or shipping activities. Ports represented by General Company for Ports of Iraq. Shipping represented by General Company for Maritime Transport. As for transport of oil is represented by Iraqi Oil Tankers Company.

Below some details about these companies:

A. General Company for Ports of Iraq

History:

In 1919 after the end of the First World War began the development of the port of Basra and turn it from a military port of the British forces to a commercial port and under the management of Iraqi cadres where the development of quay and bring full equipment to operate and the establishment of sheds and stores and this port called Al-Maqal port.

In 1997, the General Company for Ports of Iraq was established under the Companies Law No. 22 of 1997.

Vision:

The establishment of major and secondary ports to meet the needs of Iraq from import and export and is able to compete with the ports of neighboring countries and nearby and improve the level of service to citizens and enhance the role of the private sector in the implementation and operation of services according to the port activity.

Objectives:

1- Raising the capacity of the existing ports and their navigational corridors and exploiting the available capacities.
2- The establishment of major ports competing for the ports of neighboring countries.
3- Enhancing the role of the private sector in the implementation, operation and delivery of services.
4- Raising the efficiency of workers in the ports.

Ports:

Umm Qasr North and South port

The port is located near the Arabian Gulf, 75 km from the south-west entrance of Basra. Because of the increase in foreign trade and the congestion in AL Maqel port, there was a need to consider the establishment of a new port because the difficulty of passage of ships in Shat AL Arab channel and the depth of the Arabian Gulf region, which helps ships to enter with larger size and led to the construction of Umm Qasr port in 1964.

The design capacity of both ports is 8.5 million ton /year.

Khor Al Zubair Port

The port is located 60 km from the center of Basra and 105 km from the northern end of the Arabian Gulf and 12 nautical miles from the port of Umm Qasr.

In 1970, the construction of the port foundations was completed and a port was completed in 1989, but it ceased because of the first Gulf War.

The Khor Al-Zubair Channel (internal channel) was dredged with 24 km long to connect Khawr Abdullah channel with the port and thus connect the port with Arabian Gulf.

The port was established for industrial purposes but due to the stopping of these facilities, the port is currently used for alternative uses (commercial and oil products).

Abu Flus port

The port of Abu Flus is one of the commercial ports for general cargo.

Its construction was started in 1975 and completed in 1976.

The port is located on the Shatt al-Arab river in its western side and is faraway 20 km from the center of Basra city in the south and it consists of three steel berths.

AL Maqel Port

The port was established in 1919, and is the first port in ports of Iraq. The port is located on the banks of the Shatt al-Arab river, 135 km from the northern end of the Arabian Gulf.

Oil Ports

Our company (GCPI) provides maritime services, which include the pilotage, berthing and departure of the giant oil tankers that enter our oil ports in Basra port and deep port, which are under control oil ministry.

Handling activity in Ports (Umm Qasr, Khor- Al Zubair, Abu Flus, Al Maqel)

Schedule below includes total of import and export cargos for Ports in 2016 in comparison with 2015:

Details	2015		2016	
	Ton	No. of ships	Ton	No. of ships
Umm Qasr	10949157	995	12360377	1312
Khor- AL Zubair	5159101	696	5401871	676
Abu-Flus	353803	200	292496	128
AL Maqel	539242	374	74069	55
Total	17001303	2265	18128813	2171

Department of Shipyards and Maritime Industries

This division is responsible for the maintenance and repair of ships that under own our company (GCPI) in addition to ships of a public and a private sectors.

Our company owns two floating docks, namely Agnadin and Hitten floating docks.

Also, this department provides the services to our company tugs and dredgers. This section is consider important department in GCPI because of it provides activities that are expensive if we compared the cost of these activities outside Iraq.

Safety and security

With regard to maritime safety, there are two divisions in the General Company for Ports of Iraq responsible on this task.

The first section is the Maritime Inspection Section, which is responsible for inspecting vessels upon arrival at Iraqi ports and issuing safety certificates. Where the specialized committees of this section to detect the safety equipment onboard of the vessels and ensure their validity for use, and in case of incompetence, they direct a ship crew to take appropriate measures to return the equipment to work in a safe manner.

The second section is the Maritime Rescue Section, which is responsible for rescue and safety operations in case of any ship belonging to Iraqi Ports Company faced any incident. Also, it is responsible for lifting of ships that sunk in Iraqi territorial waters. In some cases, private sector companies use this section to lift their vessels, which may sink in Iraqi waters. This section is currently equipped with a crane with a lifting capacity of 2000 tons.

With regard to marine protection and security in Iraqi territorial waters, there are forces under the command of the naval force whose mission is to protect the Iraqi waters and the ships passing through them. These forces are the Iraqi Coast Guard, they have a highly trained force to face any threat that ports and ships may face.

B. General Company for Maritime Transport

The General Company for Maritime Transport is an Iraqi state-owned company specialized in maritime transport of all types except oil transport. The General Company for Maritime Transport was established under the name of (the Iraqi Maritime Transport Company) under Law No. 76 of 1952. The purpose of its establishment was to purchase and lease ships and to accept agencies for shipping companies. A branch was opened in Basra in 1959 to carry out the work of the maritime agencies for ships and tankers that coming to ports of Iraq. In the field of maritime agencies, the Maritime Agencies Law No. 46 of 1969 was issued, which was to transfer the activity of the maritime agencies in Iraq's ports (for ships and tankers) for this company.

C. Iraqi Oil Tankers Company

Iraqi Oil Tankers Company was established in 1972 after the Iraqi government realized the importance and impact of oil transportation in Iraq's oil industry.

After the establishment of the company in 1972, it has been received 7 tankers with a capacity (35000) tons for each one to be the beginning of the transfer of Iraqi oil by tankers fly the Iraqi flag.

In 1975, the fleet expanded, with more than 1 million tons being transported by Iraqi tankers.

In 1979, the number of fleet carriers reached 22 tankers of different sizes and purposes with total about 1.300.000 tons. The fleet reached its peak in 1982 with a total of 24 carriers.

In 1991, the fleet was destroyed by the events of the Second Gulf War.

In 2007, Iraqi Oil Tankers Company has announced a global tender for the construction of two new carriers and according to the requirements of the international classification agencies. One of these vessels was officially received in November 2007 (Tigris) to form the first tanker in the company's plan to renew its fleet.

Nowadays, the company has four tankers dedicated to selling the fuel oil product.

11. Maritime Organizations and WMU Graduates distribution

As we have already mentioned, there are several maritime institutions in Iraq. The number of graduates of Iraq from the World Maritime University (WMU) is 9 graduates in addition to a student that is still studying at the university and it is hoped to graduate in 2018.

Two graduates got on Sasakawa fellowship in addition to the student that is still studying at WMU.

The table below shows the graduates distribution according to Iraqi maritime institutions:

NO.	NAME	YEAR OF GRADUATION	REMARKS
1.	Salam Kadhim Baghdadi	2006	Retired – Arabian Gulf Academy for Maritime Studies
2.	* Safaa Abdulhussein Alfayyadh	2010	General Company for Ports of Iraq
3.	Harith Jamal Alani	2012	General Company for Maritime Transport
4.	Samir Abdali Marzooq	2013	General Company for Ports of Iraq
5.	Salim Jabar Alqarawi	2013	General Company for Ports of Iraq
6.	Mazin Dawood Alkaaby	2013	General Company for Ports of Iraq
7.	Farhan Muhaisen Alfartoosi	2013	General Company for Maritime Transport
8.	Kareem	2013	Ministry of Transport
9.	* Haitham Kadhim Hadi Al-jazaeri	2017	General Company for Ports of Iraq
10.	* Adel Ali Desher	He is still studying	General Company for Ports of Iraq

* Sasakawa fellows (graduates and student)

12. Relationship with Japan in the Maritime Field

After 2003, Japan provided loan for Iraqi government to help Iraq in its reconstruction that include the infrastructure in many fields and sectors. Also, this loan was included the maritime sector. In General Company for Ports of Iraq, a specialized department has been established to manage the Japanese loan and it called Japanese Loan Authority to benefit from the loan to reconstruction of ports and its infrastructure through completion of several projects at the port of Umm Qasr and building of some tugs and dredgers in the Netherlands and South Korea to serve the Iraqi ports.

In addition, the Japanese Loan Authority sent a group of port employees outside Iraq to obtain knowledge related to the work of ports through the Japanese International Cooperation Agency.

13. Comment

Education objectives concern the acquisition of skills, knowledge and the development of suitable affective disposition. For Iraqi maritime industry, an emphasis needs to be placed on the gaining of knowledge and skills. Due to hard times that Iraq is facing because of terrorism activities and frequent wars, most of national budget is spent on covering the wars cost. In other words, there is very limited chances to allocate sufficient budget for education and capacity building. Therefore, the generous donations from any organization will be highly appreciated such as The Nippon Foundation, the Sasakaw Peace Foundation and IMO.

COUNTRY REPORT

L A T V I A

1. Country overview

Latvia, officially the Republic of Latvia, is a country in the Northern Europe, on the eastern shore of the Baltic Sea. It is bordered by Estonia to the north, Russia to the east, Belarus to the southeast, Lithuania to the south as well as shares maritime boundary with Sweden to the west.

The total area of Latvia is 64 573 km^2 – 2 460 km^2 water and 62 113 km^2 land (48% forest land, 38% agricultural land and 14% urban areas).

Current population of Latvia is around 1 900 000 – 62% Latvians, 25.4% Russians, 3.3% Belarusians, 2.2% Ukrainians, 2.1% Poles and 5% others. Approximately one third of the population lives in the capital city – Riga.

Official language in Latvia is Latvian.

2. Economic activities categorization

In Latvia contributions to the national GDP are divided as follows: services contribute around 75%; industry – around 22%; and agriculture – around 3%.

Main segments of services are: trade; real estate operations; transport and storage; professional, scientific, technical and administrative services. Main segments of industry are: woodworking; food and beverage production; manufacture of metals and metal products; chemical industry. Main segments of agriculture are: within cropping – grain, rape and potatoes; within animal husbandry – milk, eggs and meat.

The Investment and Development Agency of Latvia (LIAA) has identified the following 8 sectors as those where Latvia has most potential and expertise: woodworking; metalworking and mechanical engineering; transport and storage; information technology; green technology; health care; life sciences; food processing. Detailed information on each of these sectors is available on the LIAA website: http://www.liaa.gov.lv/en/invest-latvia/sectors-and-industries.

3. Main trading & trading partners

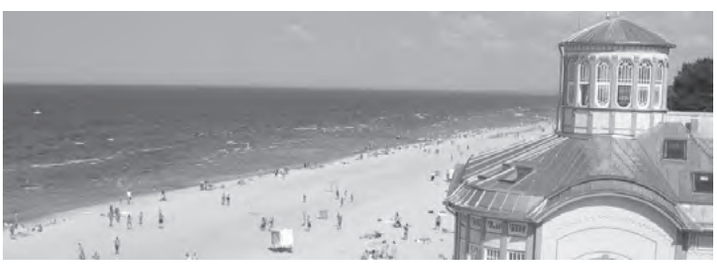
Latvian export by sector in 2016		Latvian import by sector in 2016	
17.94 %	machinery and mechanical appliances, electrical equipment	21.49 %	machinery and mechanical appliances, electrical equipment
17.18 %	wood and articles of wood	10.54 %	products of the chemical and allied industries
8.07 %	prepared foodstuffs	9.99 %	transport vehicles
8.05 %	base metals and articles of base metals	9.01 %	mineral products
7.77 %	products of the chemical and allied industries	8.29 %	prepared foodstuffs
7.03 %	vegetable products	7.63 %	base metals and articles of base metals
6.38 %	transport vehicles	5.59 %	plastic, rubber and articles thereof
4.95 %	mineral products	4.59 %	vegetable products
3.96 %	live animals and animal products	3.87 %	textiles and textile articles
3.55 %	miscellaneous manufactured articles	3.39 %	live animals and animal products
15.12 %	other	15.69 %	other

Latvian export by country in 2016		Latvian import by country in 2016	
18.19 %	Lithuania	17.62 %	Lithuania
12.04 %	Estonia	11.91 %	Germany
7.66 %	Russia	10.73 %	Poland
7.15 %	Germany	7.88 %	Estonia
6.00 %	Sweden	7.76 %	Russia
5.59 %	United Kingdom	4.50 %	Finland
5.10 %	Poland	4.16 %	Netherlands
4.64 %	Denmark	3.55 %	Sweden
2.85 %	Netherlands	3.28 %	China
2.32 %	Norway	3.15 %	Italy
28.48 %	other	25.45 %	other

Latvia is geographically well-located for the trade between the European Union (EU), the Commonwealth of Independent States (CIS) and the Far-East markets. Consequently, the transit sector is one of the strongest industrial sectors in Latvia. Nearly 90% of turnover in Latvian ports, more than 80% of rail cargo, and the major proportion of oil and oil products transported via pipeline systems is transit.

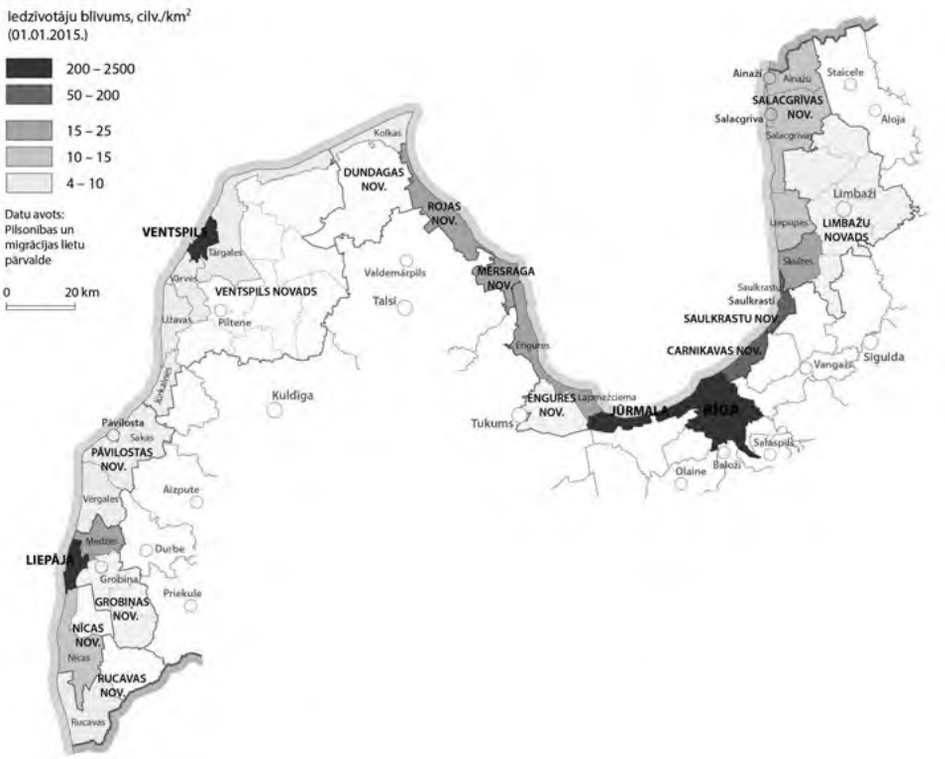
4. Coastal line

The length of Latvia's coastline is 498 km. Most of it is clean, sandy beaches – a perfect place for recreation!

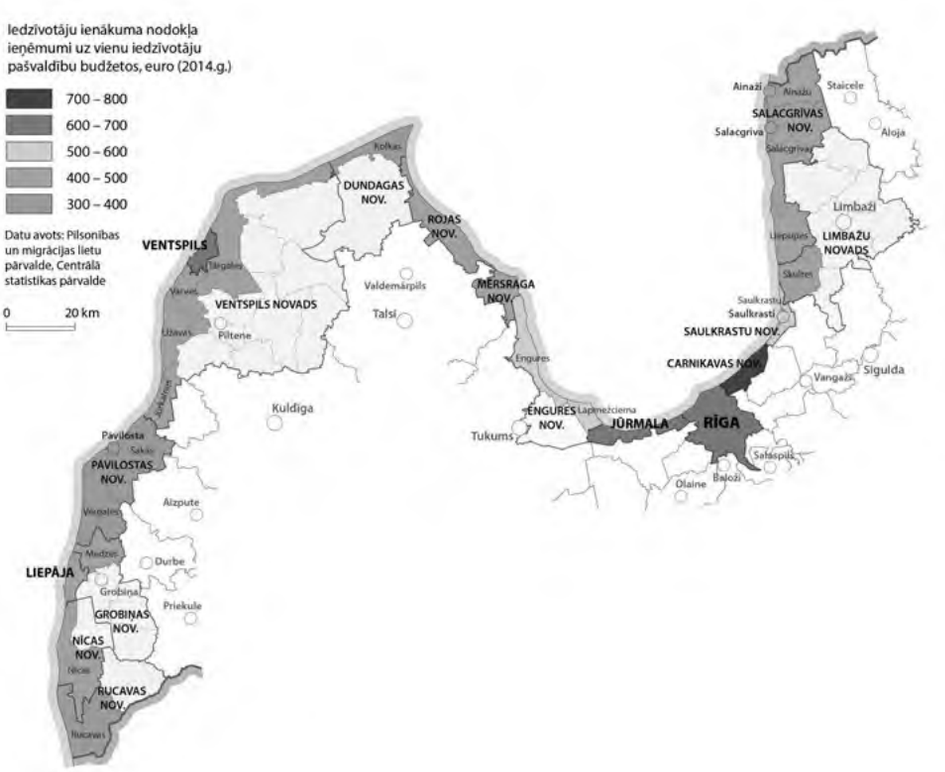


A large part of the coast (both the land and the sea) is part of one or another type of specially protected nature areas.

Almost half of the population of Latvia lives in the coastal municipalities. However, density differs significantly – in coastal cities, especially the capital city Riga, the density is relatively high, but in coastal towns and villages it is relatively low. The picture below reflects this difference, in dark red showing the areas with the highest density and in light orange showing the areas with the lowest density:



Also the wealth along the coast differs. The picture below reflects this difference, in dark red showing the richest municipalities and in blue showing the poorest municipalities:



5. Maritime administration

In Latvia maritime issues are administered by several institutions.

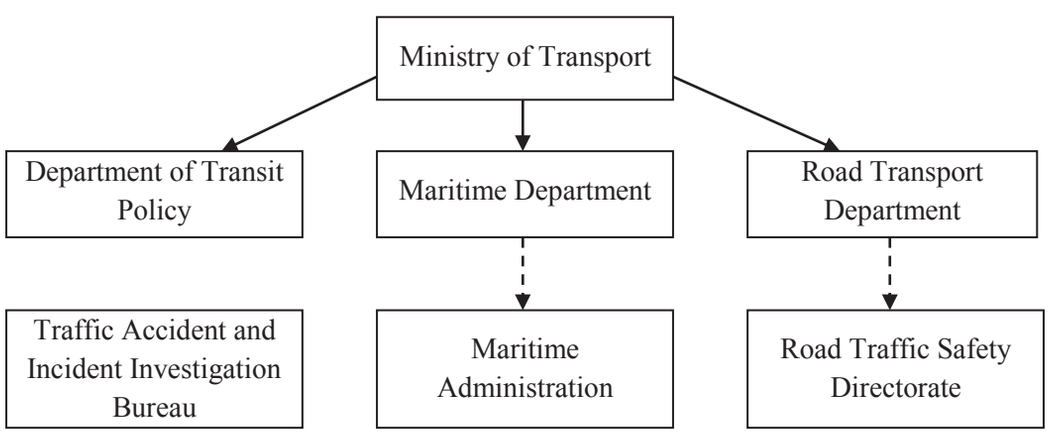
Ministry of Transport, particularly its Maritime Department, is one of the main institutions within the respective system. It is responsible for developing and implementing the policy regarding many fields of the maritime affairs. It is also responsible for supervising the work of the Maritime Administration of Latvia – the state joint-stock company to which law has delegated absolute majority of functions related to maritime administration, including but not limited to:

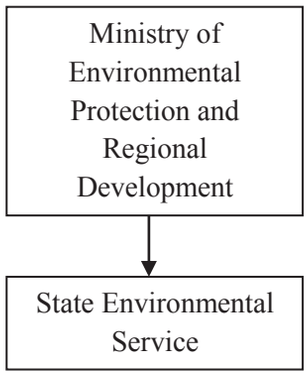
- registration of ships;
- flag State control;
- port State control;
- supervision of ship and port security;
- supervision of aids to navigation;
- hydrographic surveys;
- preparation, printing and distribution of navigation publications;
- supervision of professional training programmes and training courses for seafarers;
- examinations of seafarer qualifications and issuing of professional qualification documents for work on ships;
- maintaining of a seafarer certification database;
- supervision of crewing companies;
- preparing of corresponding draft national laws and regulations.

The registration of small size vessels as well as the certification of pleasure craft operators the law has delegated to another state joint-stock company – the Road Traffic Safety Directorate.

Under the Ministry of Transport umbrella functions also:

- Department of Transit Policy, which, among other things, deals with the transit through ports;
- Traffic Accident and Incident Investigation Bureau – the independent institution, which, among other things, carries out safety investigations of maritime accidents and incidents.

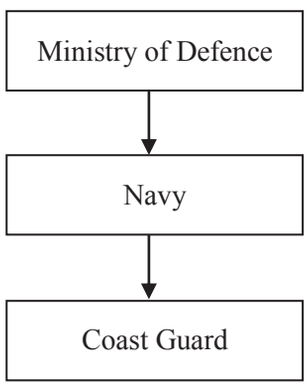




Another ministry with relatively broad functions related to the maritime administration is the Ministry of Environmental Protection and Regional Development. Among other things, this ministry is responsible for ensuring environmental protection of sea waters. It is also responsible for the maritime spatial planning and the development and implementation of marine strategy. Subordinated to the Ministry of Environmental Protection and Regional Development is the State Environmental Service, which, among other things, has the following functions:

- control of the environmental protection in Latvian waters;
- implementation of the National Contingency Plan for response to pollution incidents of oil and hazardous or noxious substances at sea;
- approving of oil spill contingency plans for ports, berths and terminals and controlling of the implementation thereof;
- investigation of environmental pollution incidents;
- control of the reception and management of ship generated waste in ports.

Control of the fisheries regime primarily is the responsibility of the Ministry of Agriculture. However, this control is performed in close co-operation with other institutions, particularly the State Environmental Service and the Coast Guard.



Coast Guard, the part of the navy, among other things, is responsible for:

- co-ordination and performance of maritime search and rescue;
- co-ordination and performance of response to the pollution at sea;
- control of the observance of navigation regime in Latvian waters;
- ensuring the operation of different vessel traffic monitoring and information data exchange systems (GMDSS, AIS, SafeSeaNet etc.).

The observance of navigational regime in some extent is controlled also by the State Border Guard; within internal waters also by the State Police. Rescue operations in internal waters are the responsibility of the State Fire and Rescue Service. All these three institutions – the State Border Guard, the State Police and the State Fire and Rescue Service – are subordinated to the Ministry of the Interior. Local municipalities, which, inter alia, may have their own police, are of help as well.

Specific functions related to the maritime domain have also the Consumer Rights Protection Center – the authority subordinated to the Ministry of Economics. Among other things, this center controls the observance of the rights of ship's passengers and monitors ship equipment market.

6. Legal framework

International maritime conventions

Latvia is a party to absolute majority of the international maritime conventions: UNCLOS; SOLAS; MARPOL; STCW; MLC etc.

International bilateral agreements

Latvia has signed several bilateral agreements covering maritime issues: maritime boundary delimitation agreement with Estonia; search and rescue co-operation agreements with Estonia, Lithuania and Sweden; agreement with Norway on social security of Latvian seafarers employed on Norwegian ships etc.

EU legal instruments

Latvia is an EU Member State. Consequently, also EU legal instruments are applicable in Latvia. Two main types of EU legal instruments are Regulations and Directives. Regulations are directly applicable. Directives become applicable only after their transposition into relevant national law. There are numerous EU Regulations and Directives covering different maritime subjects, as examples can be mentioned: Regulation 2015/757 on the monitoring, reporting and verification of carbon dioxide emissions from maritime transport; Regulation 725/2004 on enhancing ship and port facility security; Directive 2010/65/EU on reporting formalities for ships arriving in and/or departing from ports of the Member State; Directive 2009/16/EC on port State control.

Other regional legal instruments

Latvia is bound also by several legal instruments, which stem from the regional organisations other than EU: Convention on the Protection of the Marine Environment of the Baltic Sea Area (Helsinki Convention); The Paris Memorandum of Understanding on Port State Control (Paris MoU) etc.

National legal instruments

Two main types of national legal instruments are Laws and Cabinet Regulations. Laws are relatively general; they prescribe only basic rights and duties. Cabinet Regulations elaborate the respective rights and duties. Main laws regulating maritime affairs are: Maritime Code; Maritime Administration and Marine Safety Law; Law on Ports etc. Cabinet Regulations are numerous, as examples can be mentioned: Regulation No.1060 “Regulations Regarding the Handling and Control of Dangerous and Polluting Cargoes in Ports”; Regulation No.895 “Regulations Regarding Certification of Seafarers”; Regulation No.439 “Regulations Regarding the Implementation of Flag State Supervision of Ships”

7. Maritime transport

A. Shipping

There are many companies in Latvia, which offer shipping-related services, such as ship agency, terminal services, warehousing, freight forwarding etc. Ship management companies are few, and ship owning companies even less. The biggest player is Latvian Shipping Company. It holds high-rank position not only in Latvia, but, in its specific segment, also worldwide.

Latvian Shipping Company is a joint-stock company primarily engaged in the transportation of oil products, chemicals and crude oil utilizing its handy size and medium range tanker fleet. Currently the fleet of the Company consists of 16 ships. The Company has always stressed that it is proud of its professional and well-trained Latvian officers, crew and shore based staff in Riga.

LSC Shipmanagement is a fully owned subsidiary of Latvian Shipping Company. It carries out the duties of full technical management and ensures efficient and safe running of its vessels, offers consultations for the development of shipbuilding projects and assessment of the technical condition of vessels, as well as offers crew management services for oil and chemical tankers. LSC Shipmanagement currently fully manages 25 modern tanker vessels.

B. Shipping traffic at major ports

Major ports in Latvia are: Riga, Ventspils and Liepaja. Port of Riga and port of Ventspils have a status of Freeport. Port of Liepaja is a part of the Liepaja Special Economic Zone. Companies which work in either Freeport or Special Economic Zone receive considerable tax reliefs.

Riga

In 2016, the total cargo turnover at the port of Riga was 37 070 000 tons (22 393 000 tons – bulk cargo, 8 166 000 tons – liquid cargo, 6 511 000 tons – general cargo). Main types of cargo handled were: coal, oil products, containers, chemicals, timber and grain. Statistics of the first three quarters of year 2017 show that the traffic of containers is increasing significantly. Huge increase is evident in the traffic of metals. Another fast growing segment is passengers, including cruise passengers. In this regard it should be noted that ferries operate on the rout Riga - Stockholm and cruising to Riga is booming – in the first three quarters of year 2017 there have already been 87 visits of cruise ships.

Ventspils

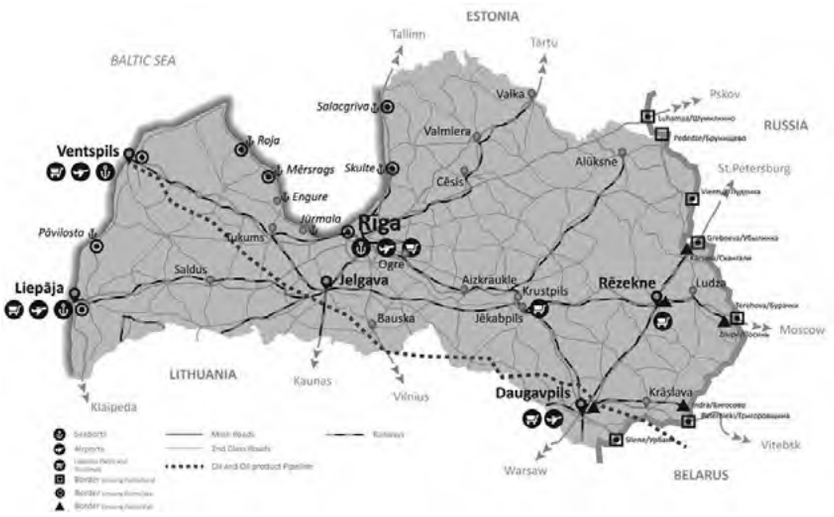
In 2016, the total cargo turnover at the port of Ventspils was 18 812 000 tons (10 927 000 tons – liquid cargo, 5 408 000 tons – bulk cargo, 2 477 000 – general cargo). Main types of cargo handled were: oil products, coal, roll on/roll off cargo, chemicals, timber and grain. Statistics of the first three quarters of year 2017 show that the traffic of coal is steadily increasing. Similarly increasing is the traffic of roll on/roll off cargo. The significant contributor to this increase is the regular ro-pax ferry line between Ventspils and Nynashamn in Sweden. Thanks to this ferry line also the passenger turnover in the port of Ventspils is significantly increasing.

Liepaja

In 2016, the total cargo turnover at the port of Liepaja was 5 680 000 tons (4 273 000 tons – bulk cargo, 1 026 000 tons – general cargo, 381 000 – liquid cargo). Main types of cargo handled were: grain and agricultural products, building materials, roll on/roll off cargo, coal, oil products and woodchips. Statistics of the first three quarters of year 2017 show that the traffic of many types of cargo, including building materials, roll on/roll off cargo, oil products, chemicals and timber, is increasing significantly. Huge increase is evident in the traffic of coal and containers. Thanks to the regular ro-pax ferry line between Liepaja and Travemunde in Germany also the passenger turnover is increasing. Thus, although the port of Liepaja is relatively small, it is fast developing.

C. Ports

Apart from Riga, Ventspils and Liepaja (big ports) there are 7 smaller ports: Skulte, Mersrags, Salacgriva, Pavilosta, Roja, Jurmala and Engure.



While big ports work mainly with transit cargos, small ports predominantly are engaged in the export of timber and reception of fishery products. During the summer they operate also as yacht harbors.

All ports in Latvia are governed following the landlord port authority scheme, i.e. terminal operations are awarded to private companies using relevant long-term agreements.

D. Dry dock and ship yards

In Latvia there are more than 10 ship yards. Predominantly they are specialised in ship repair. However, in some extent also ship building is carried out. The biggest player in the field is Riga Shipyard.

Joint-stock company *Riga Shipyard* is one of the largest ship yards in the Baltic region, repairing more than 100 seagoing vessels per year. The yard is capable to accommodate Panamax size vessels for dry-docking and Aframax size vessels for afloat repairs. In 1997 the yard recommenced also ship building. Since that time more than 150 hulls, some partially outfitted, have been built and delivered to European customers. Two ice-class tugboats for the port of Riga are also built at Riga Shipyard.





In addition, Riga Shipyard offers such services as conversion of vessels and production of metal constructions.

Joint-stock company *Tosmare Shipyard* in Liepaja, the affiliate of Riga Shipyard, is one of the oldest ship yards in the Baltic region, which has maintained its importance also nowadays. The yard has two dry docks and one floating dock capable to accommodate different types of vessels. Similar to Riga Shipyard, Tosmare Shipyard does everything: repair, building and conversion. In addition, Tosmare Shipyard is the EU approved ship recycling facility.

E. Safety and security

Latvia is on the Paris MoU White list, what indicates that its ships are safe and secure. Maritime Administration and shipowners are doing their best to maintain this position, among other things, regular meetings between administrators and shipowners take place. During these meetings latest regulatory requirements as well as identified practical problems and their possible solutions are discussed. Port State control inspectors of the Maritime Administration control foreign ships in Latvian ports.

Regarding safety of Latvian waters and ports: navigational aids are provided; navigational regime is controlled, with the help of both relevant systems and physical presence; in case of necessity, institutions are ready to involve in search and rescue operations; etc. Obviously, all positions still can and must be improved, but, in principle, already now Latvian waters are safe. In the last decades there has not been any accident of catastrophic scale. Serious accidents, in general, are very rare. The latest most serious accident was the death of a stevedoring company worker after falling from the height on a container ship during cargo loading operations in Riga port.

Regarding security of Latvian waters and ports: the Security Police asserts that the risk of security incidents in Latvian waters and ports is low. Small incidents, like theft or hooliganism, of course, might happen time to time, but major incident are, basically, not present. Requirements of ISPS Code are implemented in all ports and their continued observance is supervised by the Ship and Port Security Inspectorate of the Maritime Administration.

8. Marine environment protection and preservation

Latvia has always cared about protection and preservation of its environment, including marine environment. Many relevant laws and regulations have been adopted and many relevant practical activities have been carried out, for example, the Law on the Conservation of Species and Biotopes has been adopted and 7 marine protected areas have been established.

As a result, Environmental Performance Index of Latvia is among the highest in the world.

In 2008 EU adopted Marine Strategy Framework Directive. The respective Directive is transposed into the relevant Latvian law. Thus, the system how to develop marine strategy for achieving better environmental status of Latvian waters is established. Based on this system, the detailed initial assessment of the state of marine environment has been carried out and corresponding monitoring and action programmes have been developed. However, a number of practical activities are still pending, particularly because they require considerable financial resources, which the state at the moment is not capable to provide. Some activities are financed from outer sources, through different kind of projects.

9. Registration of ships

The Ship Register of the Maritime Administration of Latvia registers:

- cargo ships, passenger ships, pleasure ships (ships carrying less than 12 passengers), special purpose ships (tugs, icebreakers, pilot ships, rescue ships, training and research ships, cable-laying vessels, dredgers, barges, support vessels, floating cranes, etc.) and State service ships;
- ships under construction;
- recreational craft – sailing yachts with the maximum length over 2.5 metres, motoryachts with the maximum length 12 metres or more as well as motoryachts with the length less than 12 metres, if they are used for commercial activities (carrying of passengers, etc.);
- fishing vessels and fishing boats, which are used in industrial fishing in territorial waters and economic zone waters.

As of November 2017 in the Ship Register there were registered 357 ships with total gross tonnage (GT) 265 996:

- 28 cargo ships (24 of them with GT over 500);
- 22 passenger ships (2 of them with GT over 500);

- 49 tugs (1 of them with GT over 500);
- 1 icebreaker (with GT over 500);
- 175 auxiliary ships (21 of them with GT over 500);
- 7 State service ships;
- 75 fishing vessels (15 of them with GT over 500).

In addition, there were registered 638 yachts (112 motor and 526 sailing) and 610 fishing boats.

The Road Traffic Safety Directorate registers specific small craft (craft the maximum length of which is less than 12 metres), if this craft is not used for commercial activities. As of November 2017 in the Directorate there were registered: 10 090 rowing boats, 11 832 motor boats, 1 475 water motorcycles, 974 cutters and 9 units of other small craft.

10. Seafarers and maritime education and training

Latvia currently has almost 13 000 active seafarers. This figure constitutes approximately 1.3% of all economically active inhabitants. In this regard Latvia ranks 1st in Europe.

From these above-mentioned 13 000 seafarers around 12 000 work on merchant vessels – slightly less than 6000 as officers and slightly more than 6000 as ratings. Absolute majority (48%) works on oil and chemical tankers, followed by ro-ro cargo ships (12%) and gas tankers (10%).

There are following maritime education and training institutions in Latvia:

Latvian Maritime Academy – state-owned higher education institution, which provides professional bachelor's degree programmes, preparing for the labour market – navigators (A-II/1 + A-II/2), marine engineers (A-III/1 + A-III/2) and marine electrical engineers (A-III/6).

Liepaja Maritime College (state-owned) and Novikontas Maritime College (private) – higher education institutions, which provide first-level vocational education programmes, preparing for the labour market – navigators (A-II/1, reduced A-II/2 requirements) and marine engineers (A-III/1, reduced A-III/2 requirements).

Latvian Maritime Academy and Liepaja Maritime College have also their own marine schools – vocational secondary education institutions, preparing for the labour market – navigators on ships of less than 500 GT engaged on near-coastal voyages (A-II/3) and engineers on ships powered by main propulsion machinery of less than 750 kW propulsion power (reduced A-III/1 requirements).

All three – Latvian Maritime Academy, Liepaja Maritime College and Novikontas Maritime College – through their training centres offer to seafarers also variety of courses and vocational development programmes.

In addition, there are 9 training centres apart from those related to Latvian Maritime Academy, Liepaja Maritime College and Novikontas Maritime College. They offer wide range of courses as well.

Despite the fact that in Latvia the ratio of seafarers within the society traditionally has been very high and Latvian seafarers have always been respected within the labour market, thus showing the potential of this sector for bringing bigger wealth to the country, so far this potential has not been fully realised. Maritime education and training institutions do not get proper financial support from the state. Consequently, these institutions still lack qualified manpower and equipment, what, obviously, hampers development.

Yet, maritime society is doing its best to attract young people to the seafarer's profession. For example, a lot of Latvian maritime institutions from both public and private sector (Maritime Administration, Coast Guard, public and private educational institutions, crewing companies, ports and many others) jointly organise the competition "Enkurs" (Anchor) for secondary schools. Responsiveness from schools is big. Several of those pupils who have participated in the competition afterwards choose seafaring as their profession.





11. Non-seafarers maritime education and training

Latvian Maritime Academy provides professional bachelor's degree programme in Port and Ship Management and professional master's degree programme in Maritime Transport.

Ventspils University provides professional bachelor's degree in Ship Navigation Electronics. The primary aim of this programme is to prepare radio electronics engineers for companies which service ship navigation electronics systems.

Several educational institutions provide programmes in Trade and Logistics – subjects closely linked to the maritime sector.

12. Maritime organization and WMU graduates distribution

There are 3 WMU graduates from Latvia. The author of this report did not manage to find out where the 1993 graduate Mr. Māris Krevs currently works, but with the help of social media it can be traced that until recently he worked within the shipping agency sector. 1994 graduate Mr. Boriss Bannikovs currently works in Denmark, as a laytime specialist at Ultranav. 2009 graduate Ms. Anete Logina (Sasakawa Fellow) currently works as a legal adviser at the Maritime Administration of Latvia.

13. Relationship with Japan in the maritime field

Relationships between Latvia and Japan, in general, are very good. Among other things:

- Japan was one of the first countries in the world to recognize Latvia's independence;
- diplomatic relations between the countries are well developed;

- there is close co-operation in the fields of culture and education, among other things, the Nippon Foundation provides the Ryoichi Sasakawa Young Leaders Fellowship to students at the University of Latvia;
- Kobe and Riga are sister cities.

Economic relations are also present, although the interaction between the countries in this field is not very intense. By the total trade turnover Japan ranks 33rd among the foreign trade partners of Latvia. In 2016, export volume to Japan constituted around 47 million euro (19% increase compared to year 2015), import volume – around 19 million euro (7% decrease compared to year 2015). Main export product was timber, main import product – vehicles. By the direct investments in Latvian enterprises Japan ranks 62nd among all countries who have made respective investments.

According to available information, specifically in the maritime field there are no noteworthy relationships between Latvia and Japan.

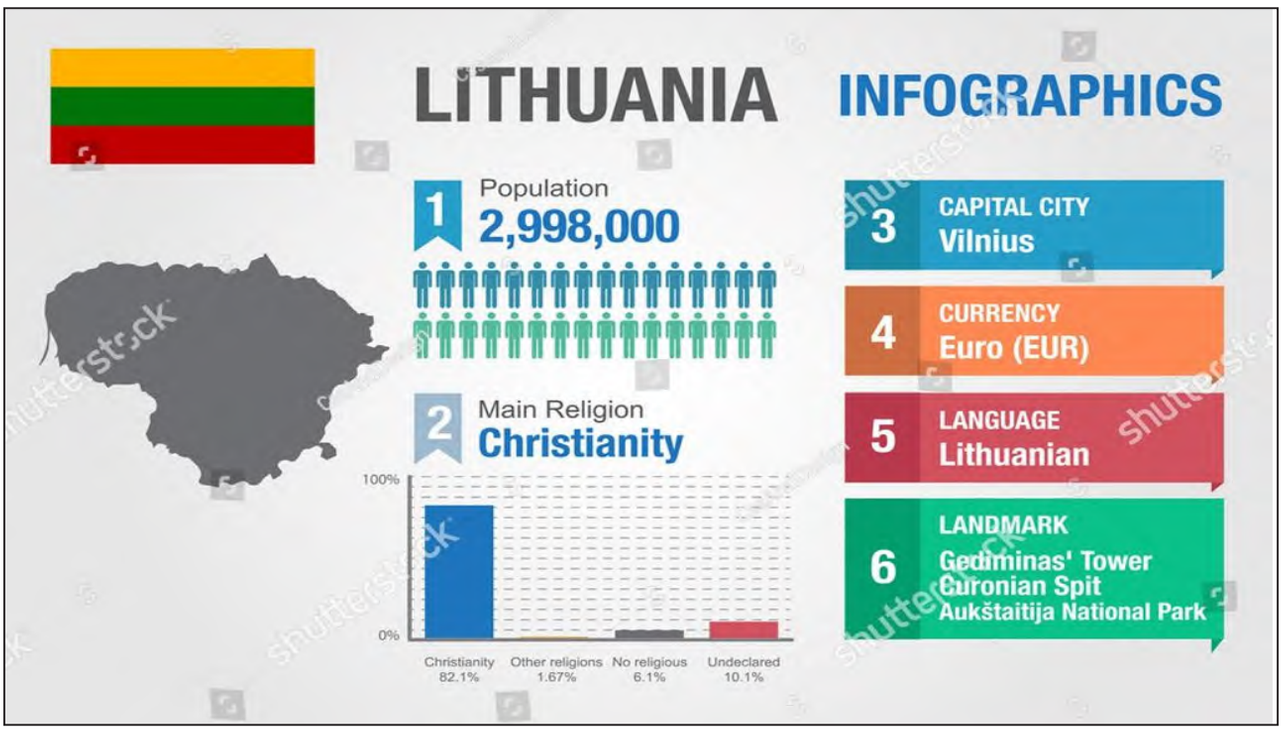
14. Comments

The report has been prepared based on the information from the following sources:

- Nations Online: http://www.nationsonline.org/oneworld/latvia.htm.
- Informative materials of the Latvian Institute: http://www.li.lv.
- Database of the Central Statistical Bureau of Latvia: http://www.csb.gov.lv.
- Ministry of Economics of the Republic of Latvia, Report on the Economic Development of Latvia, 2016.
- Informative materials of the Investment and Development Agency of Latvia: http://www.liaa.gov.lv.
- Central Intelligence Agency of the United States, the World Factbook, Latvia: https://www.cia.gov/library/publications/the-world-factbook/geos/lg.html.
- Latvia Travel: http://www.latvia.travel.
- Cabinet approved policy planning document "Spatial Development of Coastal Regions for 2011-2017".
- Ministry of Transport: http://www.sam.gov.lv.
- Maritime Administration of Latvia: https://www.lja.lv.
- Road Traffic Safety Directorate: https://www.csdd.lv.
- Traffic Accident and Incident Investigation Bureau: http://www.taiib.gov.lv.
- Ministry of Environmental Protection and Regional Development: http://www.varam.gov.lv.
- State Environmental Service: http://www.vvd.gov.lv.
- Coast Guard Service: http://www.mrcc.lv.
- Latvian Shipping Company: http://www.lk.lv.
- Freeport of Riga: http://rop.lv.
- Freeport of Ventspils: http://www.portofventspils.lv.
- Liepaja Special Economic Zone: http://www.liepaja-sez.lv.
- Riga Shipyard: http://www.riga-shipyard.com.
- Tosmare Shipyard: http://www.tosmare.lv.
- Environmental Performance Index: http://epi.yale.edu.
- Latvian Maritime Academy: http://www.latja.lv.
- Liepaja Maritime College: http://www.ljk.lv.
- Novikontas Maritime College: http://www.novikontas.lv.
- Ministry of Foreign Affairs: http://www.mfa.gov.lv.

COUNTRY REPORT

L I T H U A N I A



LITHUANIAN MARITIME CLUSTER

Shipping sector
- Annual incomes 200 mln. Euro, abt 1300 seafarers,
- Seafarers working on foreign flagged ships incomes 30 mln. Euro, seafarers number abt. 6 000

Governmental institutions
customs, immigration, phytosanitary, veterinary inspection, maritime safety administration.
Abt.1 100 job places

Ports infrastructure building sector
annual incomes abt 30,0 mln.euro,
Abt. 1 300 job places

Ships' repair and building sector
- Incomes 300 mln.euro
- abt 4 900 job places

Ships' agency sector
- Incomes abt. 12 mln. euro
- abt. 200 job places

Fishing sector
- Incomes abt. 100 mln. euro

Cargo handling, logistic sector
- Incomes abt. 170 mln.euro
- abt. 2 730 job places

Education institutions
- Klaipeda University – 504 students;
- Lithuanian Maritime academy – 1 436 students;
- Shipping school – 348 students;
- Klaipeda ship repairers and builders school – 454 students.

Šaltinis: Lietuvos Laisvosios Rinkos Institutas, LLSA.

LITHUANIAN SHIPPING SECTOR

The biggest shipping companies (01-05-2015)

Company	Number of ships	Total gross tonnage
DFDS Seaways	10	213 430
Lietuvos shipping Co.	7	71 418
Limarko shipping Co.	6	41 319
Baltlanta	4	27 438
Baltnautic	6	8 113
Sofia shipping	3	11 436

Merchant fleet (01-05-2015)

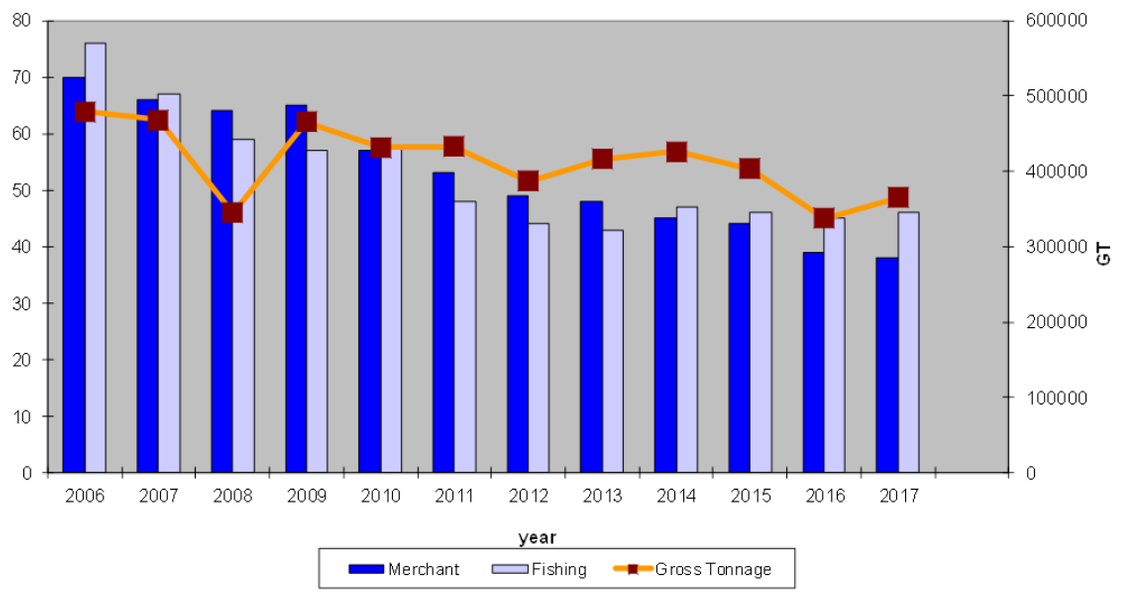
Type of ships	number	Gross tonnage
multipurpose bulkers	28	141 399
Refregerators	9	28 664
Ro-ro, ro-pax vessels	8	190 370
Auxiliaries ships	14	5 480
Total:	**59**	**361 151**

- Fishing vessels are excluded from data

- 1300 seafarers working on national fleet.
- Total turnover – 200 mln.euro.
- 6000 Lithuanian seafarers working on other flagged ships

5

STATISTICS OF LITHUANIAN FLAGGED SEAGOING FLEET



NEW ACQUISITIONS OF LITHUANIAN FLAGGED VESSELS (I)

On 20 of July the first of two ro-ro vessels to be registered under Lithuanian flag was entered into Lithuanian Register of Seagoing ships.

The new vessel named Gardenia Seaways is 210 metres long and has transport capacity with space for 262 trailers and a load space of 4,076 metres.

Gardenia Seaways meets all of the current environmental requirements including reduced fuel consumption and improved handling when loading and unloading in ports

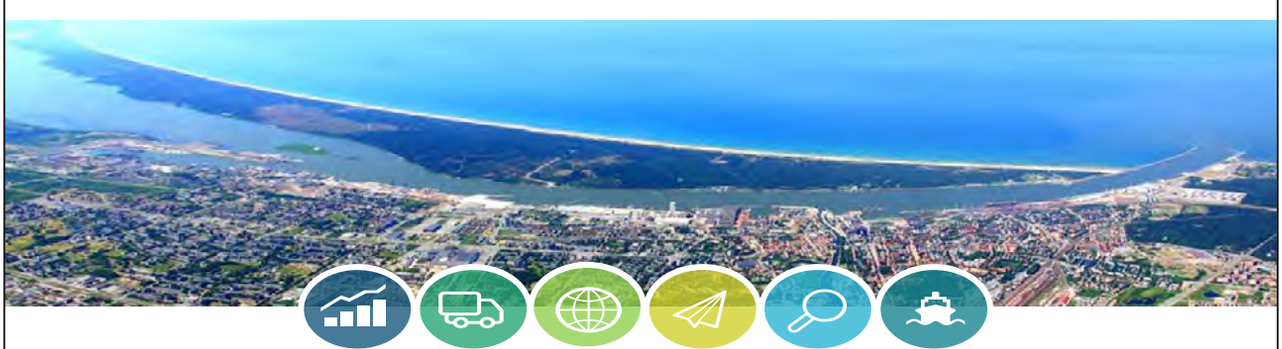
She will operate on the North Sea Immingham - Rotterdam route with Lithuanian crew.

NEW ACQUISITIONS OF LITHUANIAN FLAGGED VESSELS (II)

The second vessel, Tulipa Seaways will be registered in 2018.

BIGGEST DOCK IN THE BALTIC COUNTRIES

BLRT Group acquired a 235 meters long and 53 meters wide floating dock to be installed at the Western Shipyard in Klaipėda.
The dock will be the biggest dock in the Baltic countries and will open up new opportunities for ship owners and shipyard to carry out repair and modernization projects on Panamax-type ships



Port of Klaipėda

Klaipeda port
Cargo handling, logistic sector

Cargo group	Volumes		Yoy change in pct.
	01-12 of 2015	01-12 of 2016	
Totally:	38 507 121,9	40 138 593,5	+4,2
Liquid cargo	10 117 931,0	11 171 929,0	+10,4
General cargo	11 156 738,9	12 350 042,8	+10,7
Dry and bulk cargo	17 232 452,0	16 616 621,7	-3,6

12

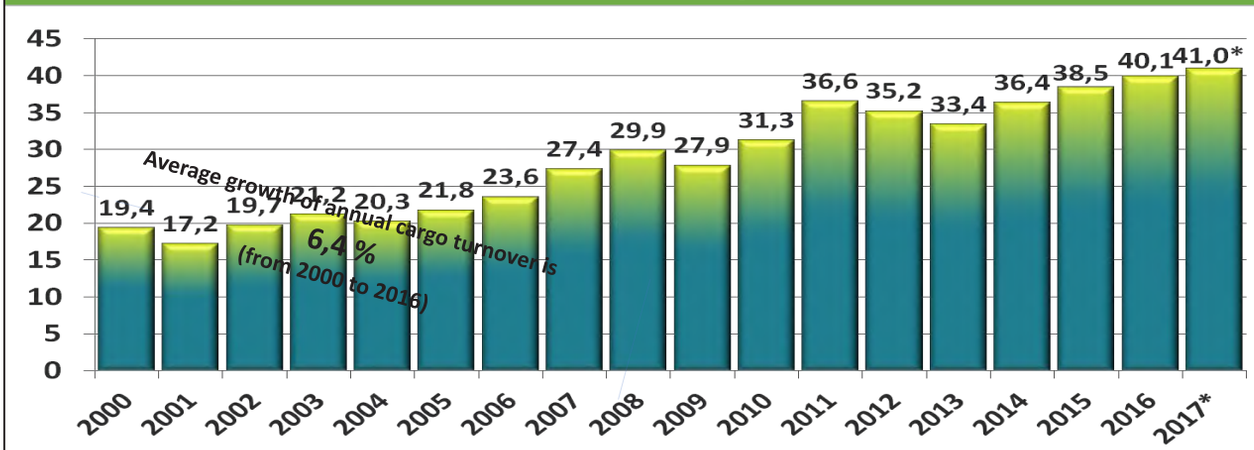
Container handling in the Eastern Baltic Seaports, in TEU

	01-12 of 2015	01-12 of 2016		
	2 945 215	3 052 417	3,6	107 202
	1 715 139	1 745 182	1,8	30 043
	392 674	443 312	12,9	50 638
	355 241	385 937	8,6	30 696
	208 784	202 327	-3,1	-6 457
	179 378	189 180	5,5	9 802
	89 820	83 934	-6,6	-5 886
	3 669	2 312	-37,0	-1 357
	510	233	-54,3	-277

Cargo handling in the Eastern Baltic Seaports, in thou. tn

	01-12 of 2015	01-12 of 2016		
	368 537,6	367 733,2	-0,2	-804,4
	87 868,4	93 362,5	6,3	5 494,1
	59 606,1	64 428,6	8,1	4 822,5
	51 513,5	48 624,3	-5,6	-2 889,2
	38 507,1	40 138,6	4,2	1 631,5
	8 678,7	9 315,6	7,3	637,0
	40 055,8	37 070,3	-7,5	-2 985,5
	22 431,3	20 118,3	-10,3	-2 313,0
	22 528,0	18 812,0	-16,5	-3 716,0
	17 483,6	17 101,5	-2,2	-382,1
	12 695,3	11 700,1	-7,8	-995,2
	5 611,4	5 679,7	1,2	68,3
	1 558,5	1 381,7	-11,3	-176,8

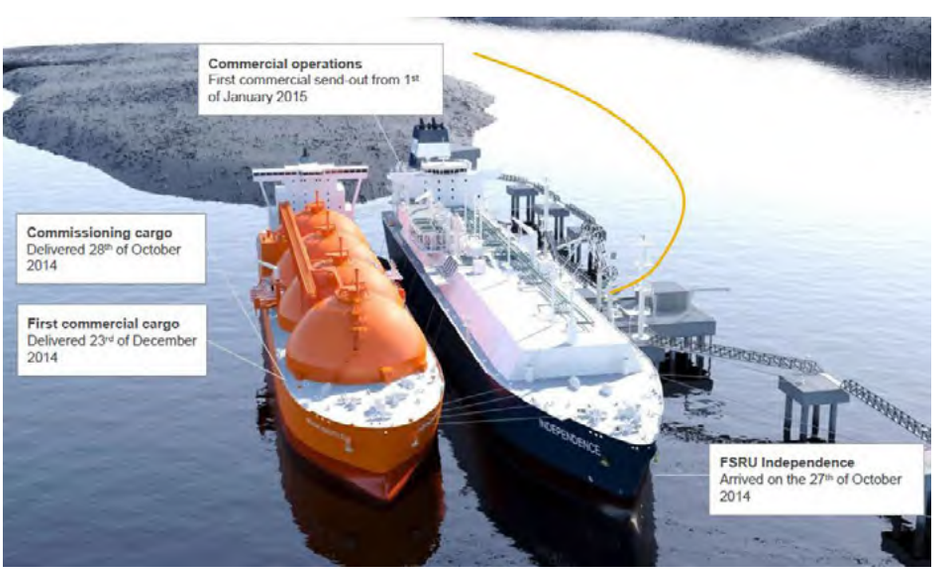
Annual cargo turnover in Port of Klaipėda



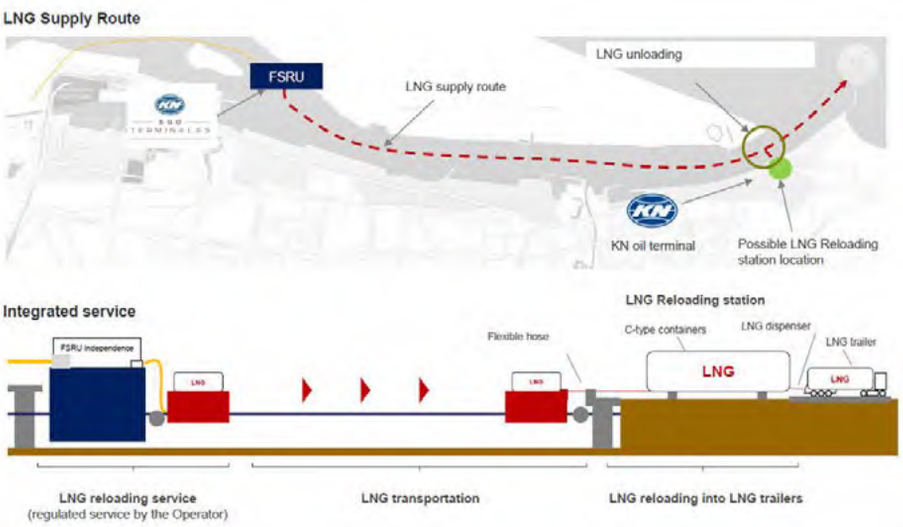
Results of Baltic ports (thou. t)

Port	Cargo volumes		Change in, %	Change, thou. t
	2015	2016		
Klaipėda	38 507,1	40 138,6	4,2 %	1 631,5
Riga	40 055,8	37 070,3	-7,5 %	-2 985,5
Tallinn	22 431,3	20 118,3	-10,3 %	-2 313,0
Ventspils	22 528,0	18 812,0	-16,5 %	-3 716,0

LNG – Independence and new industry for Lithuania



Small scale LNG



COUNTRY REPORT

M A L T A

1. Introduction - Country Overview

Civilization in Malta dates back to thousands of years, with pre-historic civilization identified through the oldest megalithic sites in the world. The Maltese islands have attracted and served as a strategic military location. Through the years, the islands were under the control of the Phoenicians, Carthaginians, Greeks, and Romans. The Maltese archipelago was home country for centuries of the Order of Knights of the Hospital of St John and then part of the British Empire. Malta became independent in 1964.

Located at the southern tip of Italy and just over 316km2 in area, the Maltese Islands lie in the heart of the Mediterranean midway between Europe and North Africa. The Maltese Archipelago consists of Malta, Gozo and Comino, with another small rock island known as Filfla. The terrain is low and rocky with coastal cliffs.

Malta experiences a typically Mediterranean climate. Average extreme temperatures are 12°C and 35°C.

Figure 1: Map of the Maltese Islands. Bottom left Malta's location in the Mediterranean is shown.

Capital: Valletta
Geographical size: 316 km^2.
Population: 416 338 (2017)
Population as % of total EU: 0.1 % (2015)
Gross domestic product (GDP): € 8.796 billion (2015)
Official EU language(s): Maltese, English
Political system: parliamentary republic
EU member country: 1 May 2004
Currency: Euro
Schengen area member: Yes.
(The world Factbook - Malta, 2017).

2. The Maltese Economy

Malta's economy relies heavily on trade in both goods and services, principally with Europe. Malta produces less than a quarter of its food needs, has limited freshwater supplies, and has few domestic energy sources. Malta's economy is dependent on foreign trade, manufacturing, and tourism.

Malta has weathered the eurozone crisis better than most EU member states due to a low debt-to-GDP ratio and financially sound banking sector. It maintains one of the lowest unemployment rates in Europe, and growth has fully recovered from the 2009 recession. In 2014 through 2016, Malta led the eurozone in growth, expanding more than 4.5% per year.

Malta's services sector continues to grow, with sustained growth in the financial services and online gaming sectors. Advantageous tax schemes remained attractive to foreign investors, though EU discussions of anti-tax avoidance measures have raised concerns among Malta's financial services and insurance providers, as the measures could have a significant impact on those sectors. The tourism sector also continued to grow, with 2016 showing record-breaking numbers of both air and cruise passenger arrivals.

Malta's GDP growth remains strong and is supported by a strong labour market. The government has implemented new programs, including free childcare, to encourage increased labour participation. The high costs of borrowing and small labour market remain potential constraints to future economic growth. Increasingly, other EU and European migrants are relocating to Malta for employment, though wages have remained low compared to other European countries. (Dimireva, 2017).

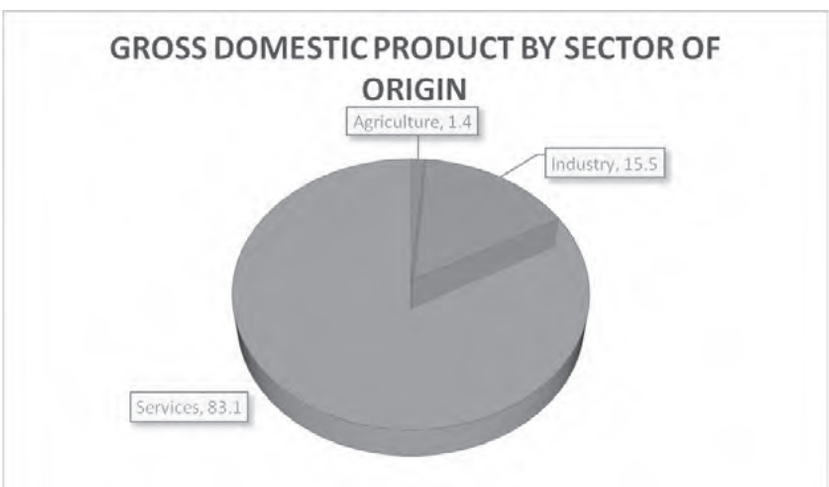


Figure 2: GDP by sector of origin as estimated during 2016.

3. Energy for Powering the Island

The annual consumption of electricity in Malta is less than 2,500 GWh. However, with the increase in the tourist and domestic base, the demand for electrical generation is going to continue to increase.

Malta has worked on diversifying and modernizing its electrical grid in recent years, transitioning from inefficient coal- and heavy oil-fuelled domestic production to a diversified approach utilizing natural gas, oil for backup, and an electricity interconnector with Sicily. In January 2017, Malta's newly installed floating storage and regasification unit at Delimara received the country's first cargo of LNG. A new gas-fired power station was switched on in April 2017.

The share of renewable in gross final consumption of energy is one of the significant targets set for each Member State within the Europe 2020 strategy; Malta's share target is set at ten percent. Renewable energy

consumption figures released by Eurostat in 2017 placed Malta next to last among EU countries. Energy from renewable sources amounted to only five percent of the energy consumed in Malta.

Malta has not yet adopted renewable energy solutions beyond solar power, although it has studied several possibilities. Increases in energy costs worldwide have given new impetus to this work since Malta imports all of its energy. The government of Malta is continuing to explore additional possibilities for solar power generation (Malta Country Commercial Guide, 2017).

4. Maritime Affairs in Malta

The Government of Malta (GoM) aims to create an environment conducive to strengthening Malta's maritime industry. The current government has committed itself to reinforcing marinas and berthing facilities and to encourage supporting industries to provide direct or indirect services such as marine supplies and even hospitality facilities. With the strategic location of the island between Europe, North Africa, and the Middle East, Malta has established itself as a leading maritime centre offering an array of services and facilities to the marine industry. In addition to taking advantage of Malta's natural facilities such as the numerous deep, protected harbours dotted around the island, over the years the country has updated the quality and level of supporting services to continue developing the maritime industry in Malta.

Malta has undertaken significant investment to upgrade and develop marine facilities and infrastructure. These include the construction of the Malta Freeport, Malta Oil Tanking, Malta Super Yacht Services facilities, various yacht marinas, the upgrading of the Malta Dry Docks, and the development of a luxury cruise liner terminal, together with the overall regeneration of the port areas. This investment has also been in line with the growth in tonnage and reputation of the Maltese flag. Detailed information will be provided throughout the following sections (Malta - Maritime, 2017).

5. Maritime Legal Framework

Passed by Parliament in 1973, the Merchant Shipping Act today contains nearly 400 sections, and is divided into 10 parts. Numerous legal notices have been promulgated under the Act containing subsidiary legislation that deals with the various merchant shipping-related subjects. The Act and legal notices form together a comprehensive body of legislation that is at times both technical and also complex.

Foremost amongst the legal themes concerning the Maltese merchant fleet that is dealt with in the Act is the 'registration of ships in Malta'. Maltese ships registered in terms of the Merchant Shipping Act are entitled to fly the Maltese Flag and entitled to enjoy the advantages presented under the Act, including international recognition and protection. The 'Malta Flag' formally came into existence in 1973, upon the promulgation of the Act – this has been, for Malta, a success story. The Act, in fact, was the first legislative step taken towards placing the Malta Flag on the world map. The Maltese merchant fleet is today the largest in Europe.

5.1 Established on Legal Tradition

Within the Mediterranean, maritime navigation, trade and commerce have flourished under the influence of widely accepted and respected rules of maritime law, at times codified as the Consolato del Mare. Malta's maritime role has ensured that the study and practice of maritime law have flourished amongst the island's legal profession.

Indeed, it is this legal tradition which contributed to the formulation of the Maltese initiative at the 1967 United Nations General Assembly that culminated in the adoption of the 1982 United Nations Convention on the Law of the Sea.

Vessel registration under the Malta flag and the operation of the Maltese ships is regulated by the Merchant Shipping Act, a law based in the main on United Kingdom legislation, subsequently revised and amended in 1986, 1988, 1990 and 2000. These amendments introduced important measures for control, added safeguards for the financiers, thus making financing more attractive, and a bareboat charter registration.

Malta is a party to most of the major IMO and ILO International Maritime Conventions and Malta flagships are obliged to strictly adhere to the provisions of these international conventions (Transport Malta, 2017).

6. IMO & ILO Conventions

Throughout the years, Malta has ratified the following conventions, with its legal framework being based on these conventions and ships under the Maltese jurisdiction have to abide by.

- International Convention on Civil Liability for Oil Pollution Damage, 1969 and 1992 Protocol
- International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage, 1971 and 1992 Protocol
- International Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972
- International Convention for the Prevention of Pollution from Ships, 1973 and 1978 Protocol and amendments, Annexes I, II, III, IV, V and VI
- International Convention for the Safety of Life at Sea 1974, 1978 Protocol, 1988 Protocol
- International Convention on Load Lines, 66 and 1988 Protocol
- International Convention on Maritime Search and Rescue, 1979
- International Convention on Oil Pollution Preparedness, Response and Co-operation, 1990
- Protocol on Preparedness, Response and Co-operation to Pollution Incidents by Hazardous and Noxious Substances, 2000
- International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978, as amended
- International Convention for the Suppression of Unlawful Acts against the Safety of Maritime Navigation, 1988
- Protocol for the Suppression of Unlawful Acts against the Safety of Fixed Platforms located on the Continental Shelf, 1988
- International Convention on Tonnage Measurement of Ships, 1969
- Convention on Facilitation of International Maritime Traffic, 1965, as amended
- Convention on the International Regulations for Preventing Collisions at Sea 1972, as amended
- Convention on the International Mobile Satellite Organisation
- Protocol of 1996 to amend the Convention on Limitation of Liability for Maritime Claims, 1976
- Operating Agreement on the International Mobile Satellite Organisation, as amended, amendments 1998
- International Convention on Civil Liability for Bunker Oil Pollution Damage, 2001
- International Convention on the Control of Harmful Anti-Fouling Systems on Ships, 2001
- Protocol of 2002 of the Athens Convention relating to the carriage of passengers and their luggage by sea, 1974
- International Convention for the Control and Management of Ships' Ballast Water and Sediments, 2004
- Nairobi International Convention on the Removal of Wrecks, 2007
- Freedom of Association and Protection of the Right to Organise, 1948 (No 87)
- Right to Organise and Collective Bargaining, 1949 (No 98)

- Seafarers' Identity Documents Convention, 1958 (No 108)
- Minimum Age, 1973 (No 138)
- Maritime Labour Convention, 2006.

7. Vessel Registration

The Malta register continues to be a great success. Since its launch in the early 1970s, the register has grown to be the largest shipping register in Europe and is in the top ten worldwide. This growth fuelled the excellent infrastructure and facilities available and the number of shipping agents and professionals operating within a versatile and well-regulated maritime legal framework. In addition to being party to numerous international conventions and regulations regarding use of the Sea and continental shelf, Malta is on the White List of the Paris Memorandum of Understanding on Port State Control. This means that detention in ports for breach of international conventions is less likely for ships flying the Maltese flag.

The Malta flag administration's policy is clear: guarantee "quality shipping and ensure that ships with a poor detention or safety and marine pollution record do not operate under the Malta flag." The Malta registry continues to grow, and the average age of its vessels continually decreases. The incentives offered to use younger vessels and the seriousness with which the flag administration is carrying out Flag State Inspections has contributed greatly to Malta's continuing presence on the Paris MOU White List, which subsequently attracts blue chip shipping companies to the island (Malta - Maritime, 2017).

The priority of the Malta register is not tonnage but rather hosting reliable and safe vessels which do not pollute the sea or harm marine life. A robust legal framework and firm registration criteria in line with EU Directives and IMO conventions have fuelled the growth in reputation and integrity of the Malta register.

The advantages of having a Maltese flag include:

- Exemption from Maltese income tax on the income that is derived from shipping activities of Maltese vessels of 1,000 net tons and over;
- Exemption from duty on documents on the sale or transfer of a Maltese vessel of 1,000 tons and over;
- Exemption from duty on documents on the allotment or transfer of shares in Maltese companies;
- Exemption from income tax, donation, and succession duty, in respect to Maltese vessels under 1,000 net tons subject to certain conditions;
- Reasonable incorporation and registration costs;
- No trading restrictions imposed on Maltese registered vessels; and
- No restrictions on the nationality of the master, officers, and crew serving on Maltese vessels.

7.1 Ship Registration

Transport Malta regulates the registration of a ship under the Maltese flag and is open to vessels owned by Maltese and non-Maltese nationals. Vessels under construction may also be registered. Initially, Malta registers vessels on a provisional basis valid for six months pending the completion of the necessary formalities to attain permanent registration. The authority releases a permanent registration certificate following the submission of documents that include a builder's certificate, international tonnage certificate (where applicable), proof of title, and a survey report. All registered vessels are required to obtain a Radio Ship Station license.

It is also possible to register vessels in Malta under bareboat charter subject to certain documentary evidence. This includes a declaration of bareboat charter supported by the charter agreement, an extract of the underlying registration, and a copy of the ship's certificate of international tonnage.

Fiscal tax advantages are available to qualifying shipping activities, including the ownership, operation, administration, and management of ships.

7.2 Yacht registration

Yacht registration under the Maltese flag is available to Maltese and EU nationals, companies incorporated in Malta or in the EU, and non-EU bodies of persons. A Maltese registered company is an ideal structure for yacht registration in Malta. When the yacht owner is not a resident of Malta, it is necessary to appoint a resident agent. There are no restrictions on the nationality of the master, crew, and officers.

The Maltese VAT legislation contains rules which provide an opportunity for a reduction in the VAT impact when vessels are under finance lease arrangements. These opportunities are only available when the yacht is: owned by a Maltese-registered company; and the lease agreement is for a period not exceeding three years. The benefit arises from a reduced rate of VAT payable in Malta on the acquisition of the yacht by the Maltese company and depends on the type of vessel and its deemed use in the EU. The effective rate of Maltese VAT varies from 5.4 percent to 16.2 percent, resulting in VAT savings from 1.8 percent to 12.6 percent. The lease agreement must provide a purchase option at the end of the lease, and the agreement requires the approval of the VAT office in Malta.

7.3 Commercial Yacht registration

The registration of a commercial yacht in Malta produces a number of benefits, including tax benefits and VAT exemptions. Registration requires the submission of a number of documents, including a more detailed survey (specific to this kind of registration). In this instance, the authority issues a provisional license which then becomes formalized upon the presentation of the required documents.

The exemptions offered under Maltese fiscal law include an exemption from the VAT on the importation or supply of vessels used for navigation on the high seas, the transport of passengers under commercial activities, and the supply of services consisting of the hiring, leasing, chartering, modification, or maintenance of vessels. The Maltese tax refund system is of particular relevance to Maltese-registered companies established by non-residents for the operation of commercial yachts (Transport Malta, 2017).

8. Maritime Safety and Investigation

The Marine Safety Investigation Unit (MSIU) is an independent Government investigation Unit. The MSIU, which is managed by the Head of Marine Safety Investigation, is independent in its organisation and decision-making process from the policymaker, regulator, and any other party whose interests could conflict with the tasks entrusted to the MSIU.

The MSIU is tasked to contribute to maritime safety by carrying out safety investigations into accidents and incidents, and participate in safety studies and academic research.

The MSIU is established by the Merchant Shipping (Accident and Incident Safety Investigation) Regulations 2011. Its safety investigations are conducted in accordance with the provisions prescribed in these regulations. The MSIU does not investigate to apportion blame and/or determine civil/criminal liabilities. The Unit has significant authority to investigate marine accidents and incidents and no entity other than the MSIU may commence a safety investigation into a marine accident and incident.

Malta is a major stakeholder in the maritime industry, whilst its geographical position in the Mediterranean Sea makes its waters amongst the busiest in Europe. The MSIU has the legal mandate to investigate accidents and incidents involving Maltese registered ships anywhere in the world, and foreign-flagged ships navigating and trading within Maltese waters. Masters, ship operators, ships managers and Transport Malta are required to report accidents and incidents as soon as practicable to the MSIU.

A typical safety investigation normally takes about 12 months to complete, depending on the accident dynamics and its complexity. The safety investigation reports compiled by the MSIU are published after the

safety investigation process is completed. However, these reports and most of the collected evidence are inadmissible in a court of law and cannot be used in criminal and civil proceedings. Their only scope is the dissemination of safety lessons and the prevention of similar future accidents and incidents.

Malta is an active member of the International Maritime Organization (IMO), the United Nations' specialised agency with responsibility for the safety and security of shipping and the prevention of marine pollution by ships. The MSIU has an active role and is a member of the Maltese delegation at the IMO's Sub-Committee on Implementation of IMO Instruments (III). The MSIU is also a member of the European Commission's Permanent Co-operation Framework, the Marine Accident Investigators International Forum, and the European Maritime Investigators Forum (Transport Malta, 2017).

9. Marine Environment Protection and Pollution Prevention

9.1 Emergency Response to Maritime Related Incidents

As part of the Pollution and Incidence Response Unit (PIRU) duties, Officers are required as requested or following feedback by Inspectors (P&YD Inspectorate Unit) to go on-site in case of smaller-scale maritime-related incidents. The actions associated with the latter include initial assessment of the incident, ascertaining correct response take place by the appropriate individuals or entities and overseeing or coordinating all necessary action, liaising with third parties such as Terminal and Facility Operators, Civil Protection and Malta Environment and Planning Authority as necessary, determining that sufficient action has been taken to declare the incident closed and compiling a report or recording the incident.

The PIRU is also involved in the Clean Sea Net initiative and the Clean Sea Net user group set up by the European Maritime Safety Agency where satellite technology is utilized to localize oil pollution at sea. Presently Transport Malta is the National Competent Authority for this measure.

9.2 Malta's preparedness to respond to a maritime incident

With respect to preparedness and response to large-scale incident, that is, an incident that a single terminal or entity may not be able to handle, the PIRU is responsible for the implementation and maintenance of the National Marine Pollution Contingency Plan (NMPCP)and the maintenance and operation of offshore Oil Response Equipment newly acquired through the EEA Financial Mechanism. An annual full-scale oil pollution response exercise in collaboration with the European Maritime Safety Agency is carried out as part of the ongoing oil and HNS spill response training.

9.3 Provision of Port Reception Facilities

MARPOL Annex I: Waste oil disposal services are available through authorized road tankers, barges and direct pumping from the facilities' berths in the Port of Valletta. Road tanker and barge services are available in the Port of Marsaxlokk.

MARPOL Annex IV: Sewage disposal services are available by authorized waste carriers (road tankers) in both Ports.

MARPOL Annex V: Garbage disposal services are available in both our Ports by authorized waste carriers (trucks). Waste Disposal in Malta is generally organized by the vessel's agent with respect to the Terminal's Waste Management Plan. These service providers usually charge per m3 collected. For more information regarding the charges, you can contact our local ship agents.

10. Shipyards

10.1 Palumbo S.P.A

Palumbo Shipyards has been operating in Naples Italy since 1967. Palumbo is a family company which has been the Italian leader in the ship repair, conversion and new building field through three generations. Palumbo operates with 7 Shipyards.

The Shipyards are located in Naples (Italy), Messina (Italy), two in Malta (Malta), Marseille (France), Tenerife (Spain), Ancona (Italy) and commercial office in Montecarlo (Monaco). Palumbo Shipyards is the owner of 14 dry docks, 1 slipway, berths, warehouses and areas used to prefabricate steel structures, piping, for mechanics and for the storage of materials.

Palumbo Shipyards is certified ISO 9001:2008, ISO 14001:2004 and ISO 30000:2009. The Company quality system has been in place since 1993. The adoption of this quality system offers our customers an additional guarantee with respect to reliability, competency and the professionalism of the Palumbo Yard. The continuous effect to improve our performance, the quality of our products and of the services offered, is aimed at achieving excellence in the Quality System in order to reflect and meet the expectations of our customers.

	DOCK DIMENSIONS			WARFSIDE CRANES									
	LENGTH (M)	BREADTH (M)	DRAFT (M)	5T	7T	10T	12T	20T	30T	40T	50T	120T	150T
MSY - Graving Dock n°2	164,13	25	8.83	3									
MSY - Graving Covered Dock n°3	143,77	18	8.83	2									
MALTA - Graving Dock n°4	262	40(44)	8.53	2		1					1		
MALTA - Graving Dock n°5	216	27.40	8.53	2		1					1		
MALTA - Graving Dock n°6	362	62	9.30						1	2			1
MALTA - Graving Dock n°7	98	35	3.03								1		
MALTA - Floating Dock n°8	40.24	12.50	2.77					1					

BERTH	BERTH LENGTH (M)	WARFSIDE CRANES							MOBILE CRANES							
		5T	7T	12T	20T	30T	50T	150T	20T	35T	50T	80T	100T	300T	450T	700T
MALTA	(499+85+101+95+124)=904	3			1	1	1	1	1	1	1	1				
MSY	(122+118+137)=377	1		1												

Figure 3: Palumbo S.P.A. facilities in Malta (Source: Palumbo S.P.A.).

10.2 Cassar Ship Repair

Cassar Ship Repair is a leading ship repair yard in Malta. The privately owned company has been established since 1967 offering clients the full range of services a vessel owner requires whether it is docking for scheduled maintenance, damage repair, or conversion work. The company offers afloat and emergency repair on vessels both inside and outside harbour as well as assistance and riding squad. Specialised work is included in activities from engineering and fabrication work, steelwork and pipe work to electrical works, blasting and painting. Operations are available on 24 hours, 7 days a week basis all year round.

Figure 4: Arial view of Cassar Ship Repair facilities. (Source: Malta shipphotos.com).

10.3 Mediterranean Maritime Hub

In 2013, the GoM issued a call for an international expression of interest to convert a redundant shipbuilding facility into an international maritime hub. The GoM announced the preferred bidder in January 2015. The government chose the oil and gas industry category as the one with the biggest potential for effective use of the site. This category would see the setting up of a rig-servicing centre and an academic institution for teaching and training.

The government's vision is that the servicing of oilrigs would attract not only rigs operating in the Mediterranean but also those in the Atlantic Ocean and West Africa. There is the potential for an oil pollution response centre, a first of its sort in the Mediterranean – to be set up as well, catering for the whole region. Opportunities exist for U.S. suppliers of products/services operating in these sectors. The Mediterranean Maritime Hub is at the centre of Malta's growing status as the regional centre of service support for the marine, oil and gas industry in the Mediterranean. Strategically-located at Valetta Port in Malta, the Hub is developing holistic services offering that will enable companies to access the complete range of high-quality supply chain support that they require, in a single location.

The hub is a premier operations support facility strategically placed to deliver:

- Pre-Stacking & Reactivation
- SPSs' & Certification
- Upgrades and Modifications
- Overhaul & Maintenance

The hub is purpose-built to provide subsea, drilling, production and marine sectors with operational predictability, reliability and repeatability, achieved through consistently safe, efficient & cost effective delivery.

Figure 5: The facilities of the Mediterranean Maritime Hub as they are being redeveloped. (Source: MMH).

10.4 Bezzina Ship Repair

Bezzina ship repair is a small shipyard with two small floating docks, hardstand and workshop facility. Their main focus is in the yachting industry, working vessels, and small ship maintenance.

The company is in possession of flat top barges, hopper barges and small crane barges. They also manage construction equipment for maritime construction.

Figure 6: Shipyard facilities for Bezzina ship Repair. (Source: Bezzina Ship Repair).

10.5 Melita Marine Group

The Melita Marine Group was founded in 1989 offering basic yachting services. Following initial success, an expansion plan was drawn with the goal of offering a comprehensive range of yachting services in Malta. These services included refit management, agency, yacht brokerage, yacht charter, customs clearance, duty-free supplies and bunkering. After gaining invaluable experience and a vast understanding of the Maltese yachting market, we soon recognised the huge potential of Malta to become a major player in the Mediterranean Yachting Industry.

This lead to Melita Power Diesel being set up in 1998, which was the result of the buyout of Marine Industrial Repairs, offering the services of engine repair, overhauling and reconditioning. Following the success of Melita Power Diesel Ltd, Melita Yacht Painters Ltd, representing AWLGRIP, was set up in 1999 with a professional team of 8 painters.

The Group's strategy then focused on expansion, both in the services offered collectively as well as expanding the Group's international reach.

Figure 7: The floating dock property of Melita Marine shipyard. (Source: Melita Marine Group).

10.6 Manoel Island Yacht Yard

With over 35 years of experience in marine maintenance, Manoel Island Yacht Yard is superbly located in the heart of the Mediterranean Sea on the delightful Maltese Islands. The Yard, located close to the bustling heart of Sliema, with its chandlers, shops, bars and restaurants, can accommodate craft up to 50 metres and 500 tons displacement.

Manoel Island Yacht Yard offers a range of skills to tackle everything – from a minor emergency to a full refit using the latest in modern technology: backed by a highly skilled workforce.

The Islands worldwide communications are excellent. From Luqa, Malta's international airport, flights connect globally, whilst ferries link the Islands to the European mainland. Private helicopter and jet hire are available.

Figure 8: Manoel Island Yacht Yard facilities.

11. Marinas and Berthing

Manoel Island Marina: This is the best one and the most reasonable we found. It is part of Manoel Island Yard. The marina is located on the south coast of Manoel Island in Marsamxett Harbour. We paid €450.00 excluding Vat of 18% for one month, and you should be able to get a slip here during the summer months for a short period, showers and toilets as you enter through the gates. Utilities are extra; security 24/7. It is conveniently located near most of the service centres and chandleries all are within a short walk, as are many restaurants and groceries. Public transportation is available close by to most parts of the island.

Grand Harbour Marina: (Camper and Nicolson operation). This is a high-end Marina with all the facilities offered to yachts berthed in this facility. There is a couple of chandleries with limited supplies but they can get you items from their other location the same day. There are very nice restaurants along the way out of the marina and 24/7 security, utilities are extra. This marina is located in a historical area of Grand Harbour and has spectacular surroundings of fortresses that date back to the 15th century. Provisioning is available close to within walking distance. Public transportation is not as frequent from here but there are water taxies that will take you to Valletta the Capital across the harbour.

Kalkara Boat Yard and Marina: This marina is located in the second creek to your port side as you enter the Grand Harbour. They have a couple of pontoons and charge €30.00/day for 12 meters, no discounts for long-term stays, showers are included. It is a small village but not much else, some restaurants around the creek and non-frequent public transportation.

Msida Creek Marina: In 2012 it was being renovated i.e. pontoons being replaced and the marina was closed for visiting boats. The marina was paying their contract clients to go stay at other marinas around the island. From the progress I have seen, it is not likely that it will be ready to accept visitors for the summer of 2013.

Sandy Yacht Marina: Situated at Ta' Xbiex waterfront, this is an organized mooring field with fore and

aft moorings. The company has applied for a proper marina with Mediterranean moor pontoons, but as of this writing, nothing has happened. They have free pickup and delivery back to your boat so you do not have to keep your dinghy in the water.

Portomaso Marina: This is a small marina located in an upscale area of Malta surrounded by high-end condominiums and restaurants. There is a small chandlery with limited stock catering for the small marina and the fishing fleet nearby in Spinola Bay. This is near the heart of the entertainment district and easy public transportation to the rest of the island. This is the most expensive marina in Malta simply because of its location.

Mgarr Harbour Marina: This is the only marina located on the island of Gozo, it has very nice surroundings and if you like a more relaxed atmosphere this is the place to be. Gozo is a fantastic island with very nice scenery and you will find anything you want here. Ferry service every 30 minutes to Malta right from the harbour. This is an all year marina with the most reasonable rates and the one you are most likely to get a spot at for the summer.

12. Yacht and Boats Maintenance

Manoel Island Yacht Yard: This is the largest boatyard in Malta with slipways and travel lift, a large area of hard standing with 24/7 security.

Kalkara Boat Yard: This is the same yard mentioned above. All I can tell you is that it has become the most expensive yard on the island since we wintered our boat there for the winter of 2000/2001. There are very clean showers. This is a totally enclosed yard with 24/7 security.

Marsaxlokk Harbour Yard: This yard is located in the very south of the island close to the picturesque fishing village of Marsaxlokk. It has a 300-ton travel-lift and many services we couldn't acquire. This is where the large tour boats, gullets and large fishing boats hauled out for repairs. If you are interested to haul out here anchor in the bay of Marsaxlokk and dinghy over to get more info. This is a very good place to anchor with good holding and almost all-around protection.

A&J Baldacchino Boatyard Ltd: This is just for hard standing, but you are not allowed to DIY and they do not like very long-term storage.

13. Provision and bunkering

The geographical position of Malta offers 5 areas around the island with seabed depths of around 70m, known as Hurds Bank. These locations are ideal for ship anchoring. Bunkering and provision services are available for these areas. Any fuel oil and provision, including food, machinery spares, can be requested through the respective suppliers. Sometimes crew changes also take place offshore.

Due to its geographical position, Malta benefits from a strong shipping trade pattern that passes through the Mediterranean and is estimated to form around 19% of the global seaborne trade. Almost 12,000 ships called in Maltese ports in 2015, and of these, 2695 bunker operations for fuel oil were requested. A total of 60,440,192 GRT of fuel oil was bunkered. This volume reflects operations both in port and at Hurds Bank.

(Source: "Annual report 2015", 2015; Buonfanti, 2013).

14. Crewing

Due to its geographical position and the relation with shipping, Malta is the base country for crewing companies. Maltese crewing agents have a good reputation with various nationalities and are able to process the necessary documentation in effective time to carry out crew exchange while ships are on a short port visit in

Malta and worldwide.

15. Classification Societies

With the Limited amount of ports available in Malta and few shipyards, classification societies are needed in Malta. Major classification societies have their offices and employ surveyors which are based in Malta. Other Classification Societies have their representative surveyors, to be able to serve their few clients while in Maltese ports.

16. Freeport Trade

Since its establishment in 1988, Malta Freeport has registered remarkable growth and is now a major transhipment port in the Mediterranean region enjoying positive international recognition with global carriers as a reliable and credible port. Malta Freeport Terminals amalgamates the activities of container handling and industrial storage.

Malta Freeport focuses on the ‘hub' concept, whereby cargo is discharged from large mother vessels and relayed to a network of regional ports by regular and frequent feeder vessels. Around 96 percent of Malta Freeport's container traffic is transhipment business. The logistics concept offers various benefits for Malta Freeport's clients, including fewer mainline port calls, reduced voyage times through minimal diversions and shorter transit times thus enabling them to concentrate on profitable voyage legs. In 2016, Malta Freeport Terminals handled 3.08 million TEUs. As one of the Mediterranean’s key transhipment ports Malta Freeport represents a strategic platform for the shipping lines that have chosen it as their Mediterranean hub port being located at the crossroads of some of the world’s greatest shipping routes and in the heart of the Europe/Maghreb/ Middle East triangle.

Figure 9: Malta Freeport container terminal, Birzebbuga, Malta.

Malta Freeport Terminals offers clients state-of-the-art transhipment facilities developed in line with their increasing requirements including a total operational deepwater quay of 2,463 metres, a total area of 771,000 square metres, 15,290 container ground slots and a total number of 1,077 reefer points. All the mainline berths have a water depth of 17 metres, namely Terminal Two North Quay and South Quay and Terminal One North

Quay. Malta Freeport Terminals is currently equipped with twenty-one super post-Panamax Quayside Cranes. The Yard Cranes serving both Terminals include 50 Rubber-Tyred Gantry Cranes (RTGs). Forty of these RTGs have twin-lift spreader capability.

The various developments undertaken at the Port has placed Malta Freeport Terminals in an unmatched position and the Container Terminals are now fully equipped to handle 18,000 TEU containerships and larger on both Terminals. Malta Freeport is taking other investment initiatives to further increase its current capacity to 4.5 million TEUs in the coming years.

17. Oil Tanking

Between the world's oil fields and the users of derivative products, independent terminal networks like Oil Tanking perform vital connecting services. Independent storage terminals are not owned by the clients they serve and do not own any of the products they handle. We employ a decentralised management structure in which each facility functions as an autonomous Profit Centre.

During the last four decades, Oil Tanking has become the world's second-largest company in this competitive field. Its clients include private and state oil companies, refiners, petrochemical companies, and traders in petroleum products and chemicals. By nature, we have a strong orientation towards customer satisfaction. Often we develop and operate our business with reputable local, private and state-owned companies, whereby Oil Tanking acts as an operating partner in the joint venture.

To customers, Oil Tanking serves as a trustworthy custodian of valuable products. To business partners, the company offers the proven ability to manage terminals profitably. In developing capital-intensive terminal facilities alone—or with substantial local business partners—the financial strength of parent company Marquard & Bahls AG is a valuable resource.

To further improve our shareholder's value we continue to employ a strategy of controlled growth of our tank terminal-based service network through acquisitions, new buildings and upgrading of existing facilities.

18. LNG Study

From 2017, Malta has a constant supply of LNG from the FSU dedicated as a fuel to the electrical power generation plant in Delimara. In 2018, Malta is planning to start the implementation phase of the gas pipeline which connects the island to the European grid. This project is expected to take 7 years, expected to be ready by 2024 ("SNAM RETE GAS", 2017).

As Malta is into the study phase of the provision of LNG for ship fuel, assumptions according to a study carried out in 2015 for the demand there will be after the regulations come into force in 2020 (CT3017/2017, 2017).

19. Seafarers and Maritime Education and Training

19.1 STCW related training and qualifications

The Malta College of Arts Science and Technology has been offering the essential seafaring training in Malta for years. The navigational courses have always been doing strong, however, the engineering courses had experienced a 10 year of no available candidates. In 2013 the OIC Engineering course was reinitiated. Only a few Maltese youths are willing to embark on the maritime seafaring trade. Malta is open to foreign candidates to study maritime related courses in Malta, where a lot have already done so.

19.2 Higher Level Professional qualification

The University of Malta has a well-established engineering department. The undergraduate mechanical engineering course has been incorporated a module of maritime studies, providing the basic concepts of maritime engineering and naval architecture.

MCAST, today offering its university degree courses, has been providing Marine Engineering on a National Diploma, Higher National Diploma and a BSc degree level.

19.3 International Maritime Law Institute – IMLI

The IMO International Maritime Law Institute was established under the auspices of the International Maritime Organization, a specialised agency of the United Nations. It was established in 1988 through an international agreement between IMO and the Government of Malta.

The Institute is an international centre for the training of specialists in maritime law. It also contributes to the development and dissemination of knowledge and expertise in international maritime law, with special reference to the international regulations and procedures for safety and efficiency of shipping and the prevention of marine pollution.

19.4 Other accredited Maritime Institutions and courses

Apart from the MCAST, UoM and IMLI, other private entities have established accredited and specialised courses in specific fields of the Maritime Industry. Of these well-established institutions are:

- MMRTC - Mediterranean Maritime Research and Training Centre
- MSA – Malta Sailing Academy
- MMH – Mediterranean Maritime Hub Academy
- ISTC – International Safety Training College

Through these institutions, one can achieve an accredited qualification in the following:

- STCW related courses;
- Medical & First Aid;
- Fire Fighting;
- Oil and gas related courses;
- Basic offshore safety induction and emergency training;
- Oil pollution prevention;
- Commercial yachting navigational and engineering courses;
- Nautical and sailing licenses.

20. Future Perspective of the Maritime Industry in Malta

One of the maritime areas which Malta looks into improving in the future is maritime transportation. As a small island, the government is looking into a possible solution for increasing the public transport by sea. Small ferries would be ideal to link public coastal areas and ports.

Malta has to abide by new emission regulations for the shipping industry and the provision of alternative fuels according to EU directives. In meeting these requirements, Port infrastructure needs to be improved to provide effective means of energy source while ships are in port. Different fuel transportation means are required to provide different kinds of fuels for ships in port while offshore bunkering areas around the island.

21. Maritime Organization and WMU Graduates Distribution

From its small population, throughout the years few Maltese have made it to WMU. Today, Maltese WMU alumni represent both the public and the private sector. Some occupy a high position within the Maritime administration, while others are occupying a position within EMSA and the IMO.

Mr Charles Carmelo ABELA - PSA-1993
Senior Project Officer
European Maritime Safety Agency
E-Mail: abelacl@yahoo.com

Mr John ALDEN - MSA(E)-1998

Mr Mark Philip CASSAR - MEM-2017
Flag & Port State Control Inspector
Technical Department
Merchant Shipping Directorate
- Transport Malta
E-Mail: mark-philip.cassar@transport.gov.mt

Mr Jean-Pie GAUCI-MAISTRE - SM-2009
Lawyer
Legal Department
GM International Services Limited
E-Mail: jplegal@gmint.com

Mr Kevin Thomas GHIRXI - MSEP-2003
Head of Marine Safety Investigation
Marine Safety Investigation Unit
E-Mail: msiu.tm@transport.gov.mt

Mr Mario GRECH - MSA(N)-1989
Fleet Management Executive
Gozo Channel Co Ltd
E-Mail: bud@vol.net.mt

Mr David KERR - MSEP-2002
Maritime Security Officer
Unit C - Safety Assessments and Inspections
European Maritime Safety Agency (EMSA)
E-Mail: david.kerr@gov.mt

Mr Mario MIFSUD - PM-1997
Head of Unit
European Maritime Safety Agency
E-Mail: Mario.mifsud@emsa.europa.eu

Mr Jonathan PACE - GMA-1990
Maritime Policy Development Officer
Technical Cooperation Division
International Maritime Organization (IMO)
E-Mail: jpace@imo.org

(Source: WMU Directory of Graduates 1983-2017).

22. Relationship with Japan in the Maritime Field

Japan and Malta have established a diplomatic relationship back in 1965. Malta is represented through a consulate in Tokyo, Japan. Japan has a consulate in Floriana, Malta.

Sourcing information from the local newspaper, Times of Malta, A visit from Miki Yamada, senior Foreign Affairs Ministry official in Tokyo, in Malta said that Japan is willing to learn from Malta in the tourism industry.

Other relationships include the visiting of Japanese destroyers and training ship back in August 2016 and previously in 2005. This visit was planned during the training of Japanese Maritime self-defence Force cadets.

In the past years, Malta also hosted two Japanese students at the IMLI institute.

In the shipping repair industry and the boat building sector, provide entities have called on Japanese brand for importing their products and also being representatives of their brands within the Mediterranean region.

23. Conclusion

Initiated by its maritime history and exposure under other administrations, Malta's maritime affairs have always evolved with the shipping needs and today we have a well-established maritime industry. Today, the maritime fields in Malta offer any needed service within the industry, allowing ships to be served with all their needs while trading or navigating through the Maltese territorial waters.

Looking into the future, Malta aims to improve its energy and transportation networks by making better use of the fact that we are surrounded by the sea. Offshore energy farms and coastal navigation can improve the mentioned networks for Malta.

Dealing with international regulations and EU directives, Malta aims to provide the essential services for improved maritime industry, becoming cleaner, while keeping the highest standards of safety.

References

(2017). Retrieved from Transport Malta: www.transport.gov.mt

(2017). Retrieved from Malta Ship & Action Photos: http://www.maltashipphotos.com/

About Us. (2017). Retrieved from Cassar Ship Repair Ltd: http://www.cassarshiprepair.com/

CT3017/2017. (2017). *Provision of services for a technical study and cost-benefit analysis for the development of LNG as a marine fuel in Malta.*

Demand assessment report for incremental capacity between ITALY and MALTA . (2017, July 27). SNAM RETE GAS.

Dimireva, I. (2017, January 26). *Malta - Country Overview.* Retrieved from EU Business: http://www.eubusiness.com/europe/malta

Malta - Maritime. (2017, April 8). Retrieved from Export.gov: https://www.export.gov/article?id=Malta-Maritime-Industry

Malta Country Commercial Guide. (2017, April 8). Retrieved from Export.gov: https://www.export.gov/article?id=Malta-energy

Malta Shipyards. (2017). Retrieved from Palumbo S.P.A.: http://www.palumbo.it/palumbo_eng/malta_eng.html

The world Factbook - Malta. (2017, July). Retrieved October 2017, from Central Intelligence Agency: https://www.cia.gov/library/publications/the-world-factbook/geos/mt.html

List of Abbreviations

EEA	European Economic Area
EMSA	European Maritime Safety Agency
HNS	Hazardous Noxious Substances
ILO	International Labour Convention
IMO	International Maritime Organisation
GoM	Government of Malta
MCAST	Malta College of Arts, Science and Technology
MLC	Maritime Labour Convention
MSIU	Maritime Safety and Investigation Unit
OIC	Officer in Charge
PIRU	Pollution and Incidence Response Unit

P&YD	Ports and Yachting Directorate
STCW	Seafarers Training Certification and Watch-Keeping
UoM	University of Malta
WMU	World Maritime University

(Disclaimer: Information established in this document is sourced from reliable sources and respective companies' websites. Any other opinions are the personal view of the author.)

COUNTRY REPORT

M O R O C C O

1- Country Overview :

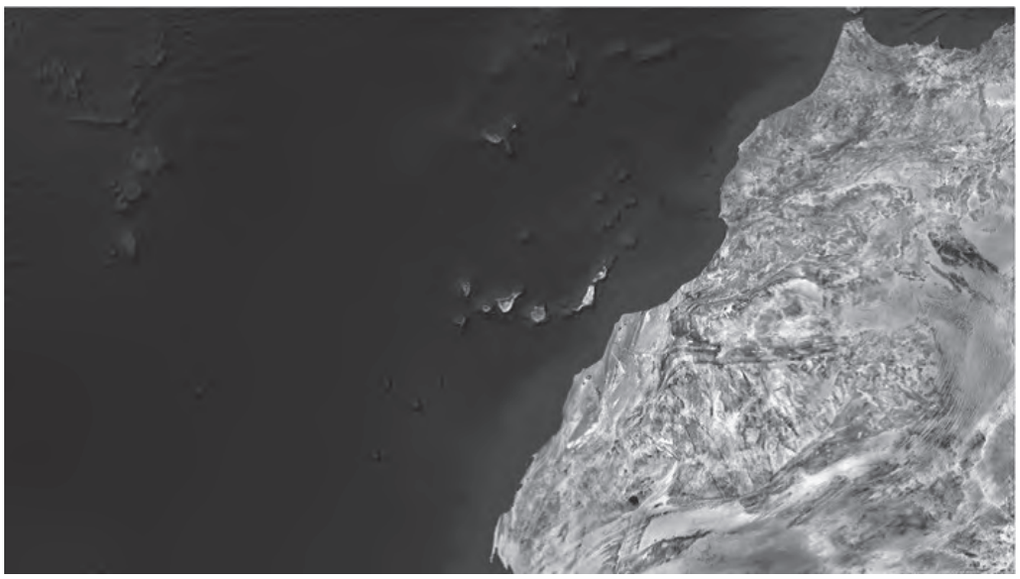
The Kingdom of Morocco is located in Northwest Africa, right on the edge of the African continent, bordering Algeria to the east, Mauritania to the south, the Atlantic Ocean to the west and the Mediterranean Sea to the north. The Moroccan coast extends over 3500 km length, with an exclusive economic zone of 1.2 million km^2, which makes of the Kingdom of Morocco a maritime country by excellence.

The country is endowed with a strategic geographical position, as it links Europe to Africa and ensures transition between the Mediterranean Sea and the Atlantic Ocean. Currently being at the center of an international dynamic evolution, the maritime spaces rich in natural resources in terms of landscapes, habitats and biodiversity are of global importance for the national economy.

According to the survey carried out by the High Commission for Planning in 2014 [1], the population of Morocco is around 34 million people with 62.4% in the age interval 15-59 and a population growth rate of 2.0% per annum. In terms of national value added, the GDP of the country is in 2016 to ***103.6 billion $.***

2- Moroccan map :

1 http://rgphentableaux.hcp.ma/



3- The economic pillars of the Kingdom :

During the recent years, the Moroccan economy has witnessed substantial reforms with the aim to set a national development scheme, able to ensure an inclusive growth, create jobs and reduce social and spatial disparities [2]. This shift, though in a context marked by a notable international financial and economic crisis, has contributed to consolidate the gains without compromising the stability of the fundamental balances and to strengthen the resilience of the national economy. In terms of achievements, suffice it to mention that the different sectoral strategies mainly on agriculture, industry and services launched have gradually induced considerable changes in the economic structure and a modernization of the national productive fabric.

The ***Agriculture sector*** which includes mainly outputs from farming, fishing and forestry represents **13%** of the national GDP. With regard the ***farming activity*** is becoming less dependent on weather conditions, in particular due to the efforts deployed within the framework of the ***Green Moroccan Plan***, launched in 2008. In terms of farming activities, It is to be noted that this field has gone through a profound change with the implementation of the structuring actions that have immensely boosted considerable investments, enabling the domestic agriculture to reduce its dependence and its vulnerability to climate hazards and drought, particularly through an increase in plantations with high value, at the expense of cereals. Also, it is instrumental to highlight that the integrated projects carried out within ***the Halieutis Strategy***, which constitute the fisheries roadmap of the country have been valuable in terms of the management of the marketed species (80%) and the enhancement of the valorization of sea products.

Regarding ***the industrial sector,*** which represents around **29%** of the national GDP, the development of **2.6%** per year was mainly driven by the processing industries which constitute **17.2%** on average of the total value added. In this respect, the sector of phosphate and derivatives, considered as one of the fields that use to revitalize the national economy has achieved a remarkable growth with regard export and Investments. This positive trend has confirmed the leadership in the international market, with a market share of **47%** for phosphoric acid, **33%** for fertilizers and **19%** for the raw material.

Also, the country has strived to consolidate the competitive position of the national industry in the global value chain via the emergence of new sophisticated high value industries, as reflected by the considerable growth of the automotive and aeronautics.

There has been a notable increase in the exports of the national automotive sector, which ranks first in

2 Summary of the Economic and Financial Report2016 at https://www.finances.gov.ma/Docs/depf/2016/ref_synthese2015eng.pdf

terms of export activities in 2014. Morocco has thus become the second largest vehicle producer in Africa after South Africa with a market share of 35% in 2014 against only 5% in 2003 with automobile production exceeding 227,579 vehicles in 2014 against only 18,546 vehicles in 2003

What need to be mentioned especially is the setting of a Moroccan energy model with the implementation of structural projects of clean energy sources (solar and wind), particularly the Noor Ourzazate project, combined with a better energy efficiency and exploration of the potential for creating new sources of green growth.

As for the ***service sector,*** which represents **58%** of the national GDP, it has achieved an increase of **4%** on average per year during the period between 2008 and 2014, due to the major reforms, initiated within the sectors of information technology, communication, banking and services rendered to enterprises. Tourism which is considered another significant driving sector for the national economy has shown an average annual growth of over 5%, stimulated by a variety of new projects established under the framework of the "Vision 2020".

Due to the structural reforms carried out within the different components of the national economy, it has been expected to notice considerable improvements in terms of human development indicators. In fact, the unemployment rate has gradually reduced from 10.8% in 2004 to 9.9% in 2014, despite some abnormalities that still persist in this field, particularly among graduates and young people. In this regard, it needs to be noted that the National Initiative for Human Development launched by the King Mohammed VI in 2005 has contributed to a large extent to the reduction of poverty, vulnerability and social exclusion. Hence, a significant increase was recorded in the level of gross national income per capita which has improved by about 4.8% on average per year over the period 2000-2014, rising from 15,141 MAD (Moroccan Dirham) in 2000 to 29.146 MAD in 2014. With respect literacy, although it has risen by 11points between 2004 and 2014, going up from 57% to 68%, significant efforts are to be undertaking, particularly in rural areas and among women.

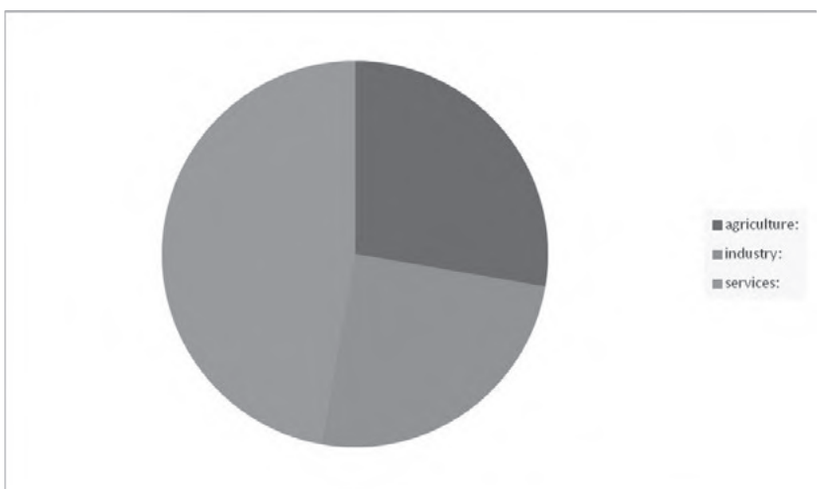


Chart 1: Contributions by sector to national GDP

4- Main trade features and commercial partners :

According to the latest figures, the country's exports have reached in 2016 ***18.88 Billion $.*** The main commodities subject to export are clothing and textiles, cars, electric components, inorganic chemicals, transistors, crude minerals, fertilizers (including phosphates), petroleum products, citrus fruits, vegetables and fish. The main export partners are mainly Spain (23.4%), France(21.1%) and Italy (4.6%).

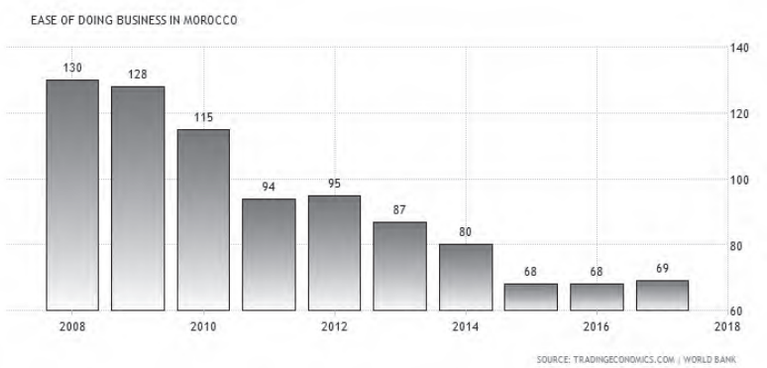
Regarding the imports, they have reached in 2016 ***36.59 billion $,*** with main commodities including crude petroleum, textile fabric, telecommunications equipment, wheat, gas and electricity, transistors and plastics. The main import partners are Spain 15.7%, France 13.2%, China 9.1%, US 6.4%, Germany 5.9%, Italy 5.4% and

Turkey 4.4%.

The recent figures as for July 2017 [3] shows that the Moroccan economy has been marked by a continued increase on exports of phosphate products of (+8%), agri-food products (+8%), aeronautics (+14%) and electronics (+6%).

However, the balance of trade estimated at ***4.9 billion dirhams*** has continued its negative trend between august 2016 and august 2017, due mainly to the increase of the energy bill of 10.4 billion DH.

When it comes to **ease of Doing Business,** Morocco is ranked 69 [4] among 190 economies, according to the latest World Bank annual ratings. The rank of Morocco deteriorated to 69 in 2017 from 68 in 2016. Ease of Doing Business in Morocco averaged 93.40 from 2008 until 2017, reaching an all time high of 130 in 2008 and a record low of 68 in 2015.



5- Coastal Management :

The willingness of Morocco to strengthen its legal and regulatory body in terms of coastal management in order to ensure a sustainable coastline development was an impetus to the promulgation of the national act 81-12. This instrument sets out the fundamental principles and rules of an integrated and sustainable management of the coastline, for protection, protection and conservation.

It stipulates that the competent authority develop a national plan of integrated coastal management called « **Coastal National Plan** » (LNP), based on the available scientific, socio-economic and environmental data and through an approach of an integrated coastal management, taking into account climate change.

In terms of competency, it should be pointed out that under article 20 of the implementing decree No. 2-15-769, the governmental authority responsible for the environment is responsible for the elaboration of the plan in question, within a period of two years, from the date of official publication of the decree. The Coastal National Plan missions are as follows :

- Determine the general orientations and the main objectives to be attained in terms of the protection, valorization and conservation of the coast, taking into account the national policy for the development of the territory, the objectives of economic and social development and the provisions of the coast law;
- Include the dimension of littoral protection within sectoral policies particularly in the fields of industry, tourism, housing and infrastructure ;
- Establish the appropriate indicators to ensure coherence between investment programs and define the means for the harmonization between the development projects to be carried out on the coast;
- Establish measures to be taken in order to prevent, combat and reduce littoral pollution ;
- Ensure coherence between regional coastal schemes.

3 Conjoctural note number n° 247 of september 2017 at https://www.finances.gov.ma/Docs/depf/.../NC%20247%20Septembre%202017.pdf

4 https://tradingeconomics.com/morocco/ease-of-doing-business

6- Maritime Administration :

It's to note that the management of fishing vessels is under the responsibility of the Department of Fisheries, whereas the merchant fleet is steered by the Directorate of Merchant Marine, which is part of the Ministry of Equipment, Transport and Logistics [5]. Pursuant to the Decree No. 2-06-472 of 2 of August 04, 2008, related to the organization of the Ministry in question, the mandate of the Directorate of Merchant Marine include, inter alia:

- The elaboration of the shipping policy;
- The registration of the merchant fleet;
- To take part in the conception of the directives and in the execution of the programs aiming to ensure the safety of shipping and the prevention of marine pollution;
- Follow up of the various economic and technical studies concerning the maritime transport and leisure segment and the related activities;
- To take part in the National Plan of Search and Rescue, in coordination with the concerned administrations;
- To take part in the various established national plans for the prevention and the combating of marine pollution and to ensure the implementation of the set of regulations and laws pertaining to the conservation of the marine environment;
- The Education and Training of seafarers;
- Monitor and manage maritime traffic in the strait of Gibraltar.

7- The involvement of the country in the implementation of IMO mandates:

The Kingdom of Morocco is a member of the International Maritime Organization since 1962. The country has been always elected as a member of IMO's council since 1992. Convinced of the important role and objectives of IMO, the Kingdom of Morocco has ratified a considerable number of conventions. **(33)** related to safety of life at sea, prevention of pollution and preservation of the marine environment, training and certification of seafarers and security of ships and ports.

Whilst fully subscribing to the IMO's efforts, particularly with regard to the capacity-building of maritime administrations in developing countries, Morocco has been reiterating its determination to collaborate and work consistently with other Member States in the development of technical assistance programs for the region by also providing maritime administration officials as consultants and experts.

Morocco, as a flag State, ensures compliance of Moroccan vessels with international and national standards, and as a port State contributes actively to the activities of the Mediterranean Memorandum of Understanding on Port State control (MedMoU). In its effort to support this Mou, the country has been hosting and administering since 1997 the Information Center of this regional agreement.

With regard to port and maritime security, the country ensures that its ships, ports and port facilities comply with the provisions of the ISPS Code. Thus, all Moroccan ports and port facilities are certified in accordance with this Code. Also and bearing in mind the crucial necessity to reinforce the domestic legal framework on the subject matter, the Kingdom has continued its endeavor to give effect to the existing international regulations in force by the IMO mandatory instruments into the national regulatory body.

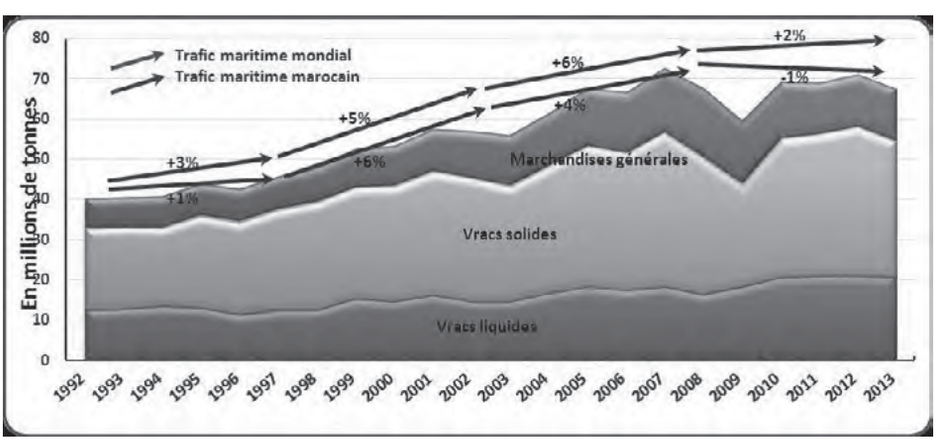
5 You may find the structure of these organizations in the Annex.

It's significant to highlight the valuable contribution of the country to the work carried out by IMO in terms of setting a cleaner shipping, since Morocco is one of 10 pilot countries participating in the project "Transforming the International Maritime Transport Sector to Reduce Carbon Emissions through Energy Efficiency Improvement <<GLoMEEP>>, aimed at increasing knowledge and understanding technical and operational measures related to the energy efficiency of ships and to develop national, regional and global capacity-building partnerships to improve the energy efficiency of shipping.

8- Maritime Transport

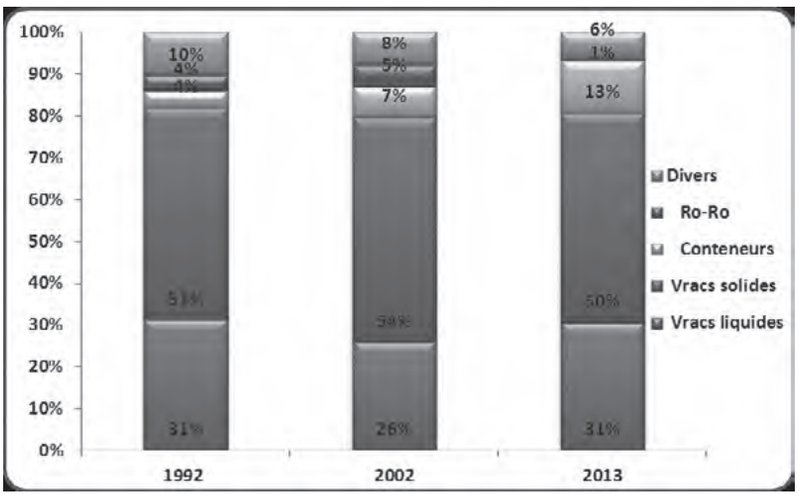
8/1- Shipping

The national [6] maritime traffic, which was following a positive trend during many years by a positive and steady growth of the exchanges on the various types of goods, has accused since 2007 strong fluctuations. Thus, after an annual growth of 9% in 2007, the maritime traffic fell by 7% in 2008 then by 12% in 2009, further to the world economic crisis, before an important resumption becomes apparent in 2010 by +16%. The traffic stagnated in 2011 (-0, 2 %) before getting its upward trend back in 2012 (3%) and in 2013 (+9%). This evolution, which is due, essentially, to that of the solid bulks goods which represent more than 50 % of the maritime traffic and other goods (in particular the containerized goods the part of which increased by 12 % in 2013 against 4 % in 1992), was compatible with the movements of the world maritime traffic. Indeed, the world and Moroccan maritime traffics globally followed the same trend of growth over the period between 1992 and 2012.



6 Hors transbordement du port Tanger Med qui a représenté 25,2 millions de tonnes en 2013, soit 25% du trafic maritime global au Maroc. Dorénavant, toute l'analyse du trafic maritime correspondra au trafic national hors transbordement, pour faire le lien avec l'activité économique et commerciale du Maroc, transitant dans les ports gérés par l'ANP (90% du trafic national), dont l'information est la plus explicite

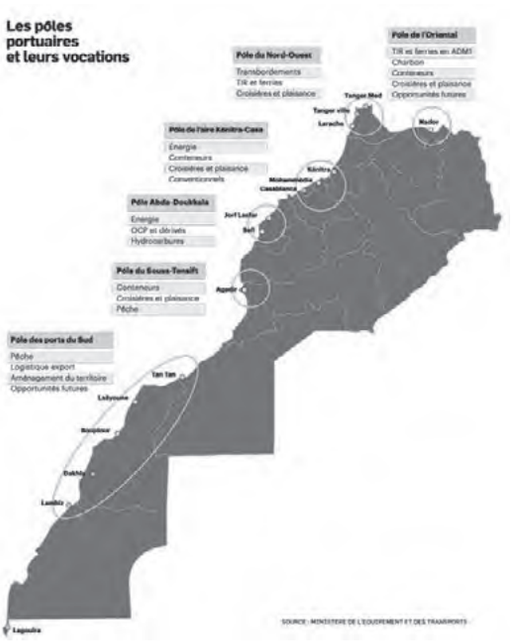
Specifically, an insight into the structure of marine traffic [7] from 1992 to 2013 shows that there has been approximately a steady evolution of solid and liquid bulk, which has turned respectively around 50 and 30% of the total traffic, whereas the container segment has recorded a continuous evolution from 4 to 13%.



Source: Elaboration DEPF, data ANP et CNUCED

8/2- Ports

Morocco's ports which are the key assets for linking the logistics chain to international trade are contributing to a large extent to the economic and social development of the country. Conscious of this crucial importance for economic growth, the Kingdom has established an ambitious strategy to ensure a harmonious development of ports, in coordination with sectoral strategies and spatial and environmental planning policies .The strategy adopted in 2012 by the Ministry of Equipment, Transport and Logistics in the horizon of 2030 focus on six central regional ports hubs specialized in specified activities such as the one of Abda-Doukkala dedicated to heavy industries and aims to support regionalization, take advantage of the major structuring projects and promote the comparative advantage of each regional hub.



7 Charts depicting the distribution of maritime traffic at major ports are presented in the Annex.

Explicitly, The kingdom has 40 ports including :

- 13 commercial ports open to foreign trade:

Nador, Al Hoceima, Tangier-Med. Tangier city, Kenitra, Mohammedia, Casablanca, JorfLasfar, Safi, Agadir, Tan Tan, Laayoune and Dakhla.

- 21 fishing ports: RasKebdana, Jebha, M'diq, Larache, Mehdia, El Jadida, Essaouira, Sidi Ifni, Tarfaya, Boujdour, SidiHssaine, Cala Iris, Chmaala, F'nideq, KsarSghir, Assilah, Salty, Souiria Kadima, Imessouane, Inouaren and Dalia;
- 6 ports dedicated to yachting: Saidia, Casablanca, Kabila, Marina Smir, Bouregreg, Marina of Agadir.

The port traffic occupies a prominent place in the economy of the country, accounting for more than 90% of Morocco's external trade. At the end of 2016, the activity of Moroccan ports recorded the transit of 121.1 million Mt, compared with 111.5 million Mt realized a year earlier, which constitutes an increase of 8.6%.

Taking advantage of the dynamics of the country's maritime trade, imports increased by 12.6%, with a volume of 56.4 million tons. Exports have been also up 3.5% and a volume of 29.3 Million tons. In value terms, exports of goods amounted to 222.6 billions of Dirhams at the end of 2016, recording a increase of (+ 2.1%). The value of imports has grown at a faster rate (+ 9.3%), amounting to 407 billion dirhams at the end of 2016.

According to the statistics of the National Ports Agency for 2016, the maritime commercial traffic by product, which transfers through ports managed by Agency, is as the following:

- Phosphate and related products : 25.5 Million MT
- Hydrocarbonproducts : 15.7 Million MT
- Containers : 1 145 957 TEU
- TIR : 9622 units
- Cereals : 8.8 Million MT
- Passengers : 2.25 Millions

The structural strategy of the port sector by 2030 is gradually being implemented in the light of the development of the port landscape, which is reflected in the implementation of structuring projects, mobilizing an investment envelope of more than 60 billion dirhams, particularly for the construction of new port complexes. Several projects are planned within the framework of this strategy, such as the mineral port of Safi on the Atlantic, Port Nador WEST MED on the Mediterranean. Other large-scale projects are being planned or studied, namely the deep-water port of Dakhla, the Port of Kenitra Atlantic and the Jorf Lasfar Port.Today, Tangier-Med port is a great source of pride and achievement that puts Morocco among the pioneering countries with regard the field of world maritime transport..

As a result of the expansion of port infrastructures, the Kingdom has the strongest maritime connectivity in Africa, as it improved its performance scoring 67 points out of 100, ahead of Egypt (54.6) and South Africa (37.4), as reported by the 2017 Maritime Connectivity Index conducted by the United Nation Conference on Trade and Development (UNCTAD)..

It’s to mention that the connectivity index (Liner Shipping Connectivity Index) measures the liner shipping network of a country and its integration into world trade. It is regularly taken in assessing the competitiveness of a country. Indeed, due to its core business of transshipment. Tangier Med Port which welcomes ships of large capacity is now connected to 161 ports and 63 countries on five continents.

8/3- Dry dock and Ship Yards

In Parallel to the endeavor carried out concerning ports, the Ministry of Equipment, Transport and Logistics has developed a study for a strategy for the development of ports infrastructures dedicated to the construction and ship repair and which has been culminated with the elaboration of a master plan of infrastructures dealing with the shipbuilding industry and whose main objectives include, inter alia:

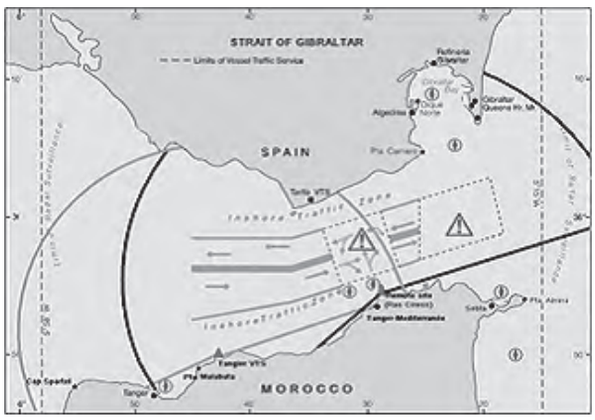
- Identify and assess the different market segments of shipbuilding and ship repair activities;
- Define the proper benchmarking of Morocco for each segment;
- Define a master plan for the development of infrastructures to support the strategy;

8/4- Maritime safety and security

In accordance with its obligations as a coastal State, Morocco has established a coastal VTS operational in the Strait of Gibraltar since 1 December 2010 and which ensures the surveillance and safety of navigation in accordance with the adopted organizations guidelines in this regard.

Morocco has also installed along its coasts a network of AIS coastal stations and operates a database for tracking ships carrying hazardous materials. A VMS is also operated for the location and monitoring of fishing vessels in Moroccan waters.

Furthermore, at the regional cooperation level, Morocco shares its data with both the SafeSeaNet database and the regional MAREΣ server, with the aim of exchanging information of maritime interest covering the western region of the Mediterranean and of its Atlantic approaches.



Maritime signaling is a major element of the overall concept of maritime safety, enabling all navigators to position themselves and avoid dangers. To this end, Morocco as a coastal State ensures the safety of navigation by the development, management, maintenance of maritime beacons, lighthouses and aids to navigation along the Moroccan coasts, as well as those marking routes in accordance with the rules of the IMO and the International Association of Maritime Signaling (IALA).

Also and pursuant to the provisions of Chapter V of the SOLAS Convention, Morocco also ensures the provision of nautical information by collecting, analyzing and distributing notices to mariners and sailing instructions. For this purpose, a national mobile application integrated into a Geographic Information System (GIS) for the publication and automatic updating of information on the availability of aids to navigation, nautical notices and incidents at sea has been set up to provide real-time alert information.

In terms of port and maritime security, Morocco as a port state approves security assessments and plans. To this end, it shall issue certificates of conformity to the ISPS Code for ships, ports and port facilities. Thus, all Moroccan ports and port facilities are certified. Morocco is aiming in the future to consolidate its national legal and regulatory background to make it in line with the existing mandatory international regulations prescribed by IMO.

As a flag state, Morocco has recognized by decree a number of classification societies (BV, LR, ABS, DNV, NKK…) to issue certificates on behalf of the Administration, in accordance with the rules of the international conventions, such as the load lines convention. These societies are allowed to carry out the necessary regulatory verifications (Initial, intermediate.), and issue the relevant certificates for the ships flying the Moroccan flag. The domestic legislation complies in this respect with the Directives concerning the authorization of organizations acting on behalf of the Administration, in virtue of resolution A.739 (18), adopted by the International Maritime Organization.

Through the creation of its own national hydrographic service, Morocco aims to ensure its autonomy in the production and edition of nautical charts and works and securing of navigation and access routes to the Kingdom's ports.

9- Marine environment protection and preservation

Bearing in mind the crucial importance of the conservation and the protection of its marine environment, Morocco has ratified the majority of IMO conventions related to the prevention of marine pollution from ships including Annex VI of Marpol and the Ballast Water Management Convention (BWM 2004).

In order to enhance the competencies of the human element with regard response and control against accidental marine pollution, Morocco organizes every two years a Simulation exercise. The last exercise has been organized in April 2006 off Nador, North of the country.

It is to be noted that Morocco has established a National contingency plan for fighting against accidental marine pollution (PUN) , in order to cope with massive accidental pollution or serious threats of pollution which may affect marine waters under the sovereignty or national jurisdiction and the Moroccan coast (and its related interests).

The National Contingency Plan for the Prevention of Marine Pollution which consists on a set of necessary information, directives and instructions enabling the public authorities to prevent or combat in best conditions any marine pollution by oil and other harmful substances, threatening the marine environment and the national coastline, aims inter alia:

- The establishment of an appropriate detection and warning system in the event of massive marine pollution ;
- The rapid, effective and coordinated organization of preventive and control actions and the definition of the main elements, in particular through the rational management of the means of fighting, the distribution of responsibilities and tasks, the identification of the most sensitive areas to be protected as a priority and storage sites for the recovered products ;
- International cooperation and facilitation of mutual assistance if such assistance is requested or if Morocco is engaged in agreements to which it is a party in international co-operation ;
- The accounting management of operations for possible future compensation ;
- the management of the stock of anti-pollution products and equipment and the updating of the inventory of available personnel and equipment ;
- Training of qualified personnel in the prevention and control of massive marine pollution by hydrocarbons and other harmful products.

Also and in terms of protection of underwater cultural heritage, Morocco has deployed a considerable effort to build an inclusive strategy, coherent and voluntary in this respect with a pool of officials and experts duly recognized on the international scene. Recently and as recognition for his outstanding performance by the international community, Morocco has been elected President of the Scientific and Technical Advisory Council of the UNESCO Convention on the Protection of the Underwater Cultural Heritage of 2001.

It should be stressed either that the organization of the 22th Conference on climate change **COP 22** in Morocco in 2016 is considered a recognition by the international community of the achievements carried out by the country all over these years towards the creation of a safer and cleaner environment, pursuant to the principles of sustainable development laid down by the United Nations SDG 2030.

It's to underline that the organization of the action of the state at sea and which is ensured by the Royal Navy, devotes an appreciated part to some other public activities, in particular:

- Maritime and Port Security ;
- Protection of the marine environment ;
- Combating illicit trafficking at sea ;
- Fisheries surveillance and control.

To carry out these missions, important types of naval means are deployed throughout the Moroccan maritime zones as well as some radar stations located all over the national coast.

10- Search and Rescue

As a party to the 1979 convention on rescue at sea (SAR), the Kingdom of Morocco has embarked on the path of developing its structures of search and rescue at sea, covering a strategic maritime area of over 1 million km2 within which operates a significant number of merchant ships, fishing and leisure vessels.

Hence, the country has established a national scheme of search and rescue, provided with a set of means including equipment and skilled human resources, organized within a process of planning and coordination of interventions at sea. The SAR process, mainly initiated by the National Maritime Rescue Coordination (MRCC) located in Bouznika (Rabat) is based upon :

- 21 rescue boats and 21 semi-rigid lifeboats distributed along the coast of the Kingdom ;
- A number of air and sea units belonging to other national bodies that can be deployed when needed in accordance with the National Sar Plan (PNS)
- At the national level, programs have been launched in terms of capacity reinforcement, training of SAR personnel and acquisition of units dedicated to SAR missions ;
- At the regional level, it is essential to underline that Morocco has launched a cooperation in this respect under the framework of the initiative <<5+5>> and he hosts the Regional Maritime Rescue Coordination Center of the West African region, which cover respectively the maritime zones of Morocco, Mauritania, Senegal, Gambia, Cap Verde and Guinea Bissau.

MRCC of Bouznika, Rabat/Morocco

11- Registration of ships

The national registry of the merchant vessels flying the flag of the Kingdom of Morocco is maintained by the Directorate of Merchant Marine, which is managed under the auspices of the Ministry of Equipment, transport and Logistics. It's to mention that t the registration of fishing vessels is carried out within the Department of Fisheries.

The **26** registred merchant moroccan fleet is composed of 01 cargo ship, 03 chemical tankers, 06 ship-containers, 14 passenger/cargo ships and 02 roll on/roll off ships. Also, we may note the activity of 14 foreign-owned vessels (France 3, Germany 1, Italy 1, Spain 9) and 04 vessels registered in Gibraltar.

12- Seafarers and Maritime Education and Training

Through its schools and training institutes, Morocco is highly involved in the maritime training of the human element. A part from the specialized institutes in training merchant navy officers, mainly the Higher Institute for Maritime Studies, those dedicated to fisheries training (Institutes of Maritime Fisheries) and the Royal Naval School, the country has an extensive network of vocational training centers.

In this respect, it's to underline that the Higher Institute for Maritime Studies has launched during the recent years a process of reforms of the educational programs and infrastructures in place. In fact, a notable endeavor has been carried out in terms of providing the Institute of a number of simulators, for bridge and machine respectively and proceeding to the renovation of its practical training laboratories. However, more efforts are to be done in upgrading the various laboratories, particularly those of electronics and electrical engineering, with a view to improving the research potential of the university, which may be crucial to attract donors likely to finance research works in issues with high added value.

To achieve its main objectives, the Institute has strived to set a modern system of governance, based on a quality approach covering the entire system (training, administration, support ...), so that all stakeholders are fully involved within the process. Already certified ISO 9001 version in 2008, the Institute is targeting for the next four years to extend its perimeter of quality to the environment and the management.

In this respect, new technologies have been introduced in all maritime training establishments through the use of different types of simulators, linking the acquisition of knowledge with the demonstration of skills, pursuant to a competency-based approach.

The GMDSS and basic training on maritime safety has also been prioritized and integrated into training programs in accordance with the provisions of the STCW and STCW-F Conventions ratified by Morocco.

Within the framework of South-South cooperation, Morocco welcomes annually candidates from countries of the African continent who follow their training in the various maritime and port institutes. These candidates

constitute 30% of trainees' intake. Among the countries covered by this cooperation, Senegal, Togo, Mauritania, Congo, Democratic Republic of Congo, Benin and Djibouti.

Number of graduates of the Higher Institute for Maritime Studies since 2012

AcademicYear	Number of graduats				Total
	Deck officer First Class	Marine engineer First Class	Lieutenant Long Course	Lieutenant (Engineering) First Class	
2011-2012	13	20	21	23	77
2012-2013	23	26	22	25	96
2013-2014	18	14	22	18	72
2014-2015	9	13	13	10	45
2015-2016	10	15	24	17	66

13- Non – Seafarers Maritime Education and Training

As for port sector, Morocco has a specialized port training institute (IFP) for continuous training aimed at improving the competence of human resources for national and international needs. Several international partnerships and cooperation actions have been undertaken or are underway, including the training of Aids to Navigation managers in partnership with IALA and IMO.

Effectively and in order to reinforce the technical capacity of the personnel charged with navigational safety, Morocco has set up a partnership framework with the International Association of Maritime Signaling (IALA), for the first time Africa, through a training Session for Level 1 Aids to Navigation Managers at the Port Training Institute (IFP), in July 2017.The organization of this internationally renowned training, has required at the first place an accreditation of the IFP by the national competent, authority as a training organization that is recognized worldwide for the organization of such kind of trainings. The session was attended by 15 participants from various Moroccan public and private firms, operating in the field of maritime signaling. Among the participants, there have been three African nationals coming respectively from Coast Ivory, Benin and COMORES Islands and which have been sponsored by IMO.

In the same perspective of consolidating a strong and laborious relationship with IALA, Morocco intends to host in February 2018 the third pre-conference of this organization with the aim of accompanying

it in its structural project, towards a change of status and a new positioning within the maritime world as an intergovernmental organization.

14- The Contribution of WMU graduates within the maritime sector

Since many years, the maritime training programs have been tailored to the specific technical needs of the various entities operating within the maritime sector. Also, the Moroccan Government used to encourage French-background programs, since most training candidates find it easier to enroll in universities and institutes with a French-speaking context.

However, a number of initiatives have been initiated to apply for scholarships in some Anglophone programs, in particular those of the world Maritime University. This renowned Institute has begun to stimulate more attention by Moroccan authorities, due to the quality of its programs.

The main education has been endeavor deployed has been projects in this respect have been entities and carried out by the Moroccan Government and remaining decades, the training programs addresses of managers within the maritime sector have been carried out within a French background.

As of 2017, the number of WMU graduates accounts to 15 [8] , coming from various administrations, in particular the Department of Fisheries and the Directorate of Merchant Marine.

15- Relationship with Japan in the Maritime Field

The thirty-first annual session was held between the delegations of both countries on the 24th -26th April, 2017, in Rabat, morocco in accordance with article 7 of the Agreement on Marine Fisheries signed in Rabat on September 11, 1985.

Both sides expressed their willingness for further cooperative relations in the field of fisheries.

This cooperation has focused at the outset on tuna fishing activities operated by the Japanese fishing vessels within the Moroccan waters, before a review has been carried out to include other areas.

SPECIES COMPOSITION OF THE CATCH OF JAPANESE TUNA
LONGLINE VESSELS OPERATED WITHIN THE MOROCCAN WATERS

UNIT: MT
( ) %

YEAR	TOTAL	BLUEFIN (BFT)	BIGEYE (BET)	YELLOWFIN (YET)	ALBACORE (ALB)	SKIPJACK (SKJ)	SWORDFISH (SWD)	BILLFISHES (BIL)	OTHERS (OTH)	Remark
2007	319,0 (100%)	193,8 (60,8%)	31,8 (10,0%)	1,9 (0,6%)	0,9 (0,3%)	0,0 (0,0%)	9,5 (3,0%)	0,2 (0,1%)	80,9 (25,4%)	
2008	522,4 (100%)	372,0 (71,2%)	3,7 (0,7%)	39,0 (7,5%)	7,3 (1,4%)	0,0 (0,0%)	9,6 (1,8%)	0,0 (0,0%)	90,8 (17,4%)	...
2009	74,7 (100%)	28,6 (38,3%)	22,9 (30,8%)	2,1 (2,8%)	0,3 (0,4%)	0,0 (0,0%)	6,4 (8,6%)	0,5 (0,7%)	13,9 (18,6%)	...
2010	171,6 (100%)	12,8 (7,5%)	107,0 (62,4%)	5,4 (3,1%)	8,0 (4,7%)	0,0 (0,0%)	13,0 (7,6%)	2,1 (1,2%)	23,3 (13,6%)	...
2011	243,8 (100%)	0,0 (0,0%)	74,4 (30,5%)	51,9 (21,3%)	25,2 (10,3%)	0,0 (0,0%)	31,2 (12,8%)	4,2 (1,7%)	56,9 (23,3%)	...
2012	20,1 (100%)	0,0 (0,0%)	11,1 (55,2%)	0,4 (2,0%)	2,7 (13,4%)	0,0 (0,0%)	2,5 (12,0%)	0,2 (1,0%)	3,2 (15,9%)	...
2013	96,9 (100%)	0,0 (0,0%)	70,8 (73,1%)	10,5 (10,8%)	9,4 (9,7%)	0,0 (0,0%)	6,2 (6,4%)	0,0 (0,0%)	0,0 (0,0%)	...
2014	645,2 (100%)	0,0 (0,0%)	357,8 (55,5%)	69,4 (10,8%)	65,2 (10,1%)	0,0 (0,0%)	71,1 (11,0%)	2,4 (0,4%)	79,3 (12,3%)	...
2015	571,7 (100%)	0,0 (0,0%)	349,4 (61,1%)	13,2 (2,3%)	43,9 (7,7%)	0,0 (0,0%)	108,7 (19,0%)	3,2 (0,6%)	53,3 (9,3%)	...
2016	434,2 (100%)	0,0 (0,0%)	286,5 (66,0%)	22,0 (5,1%)	23,6 (5,4%)	0,0 (0,0%)	61,0 (14,0%)	2,7 (0,6%)	38,5 (8,9%)	...
AVERAGE	310,0 (100%)	60,7 (19,6%)	131,5 (42,4%)	21,6 (7,0%)	18,7 (6,0%)	0,0 (0,0%)	31,9 (10,3%)	1,6 (0,5%)	44,0 (14,2%)	

Remark ... Gross weight

The figures related to tuna -fishing activity are shown above..

8 The distribution by administration is presented in the Annex.

This cooperation is also aiming to develop research projects such as the one related to the construction of Shellfish Aquaculture Technology Research Center in the North of Morocco and also the Fishery Research Vessel Construction Project, convened between, the Japanese International Cooperation Agency (JICA) with the Institute of Halieutic Reasearch (INRH), for a total cost of 467 million Moroccan Dirhams.

Also, The Kingdom of Morocco has requested to extend the cooperation scheme to other fields, including aquaculture, the promotion of artisanal fishery, and the establishment of fishing villages and landing points. AS a focal point in the region, the tripartite cooperation among Japan, Morocco other African countries for the management of fishery landing points.

16- The Moroccan Fisheries and Aquaculture Sector:

- **Fisheries :**

With a total coastline of more 3500 km on the Mediterranean Sea and the Atlantic Ocean, Morocco has an exclusive economic zone of more than one million km², The high biodiversity of the Moroccan coats is characterized by the presence of around 600 species, among them 60 species are commonly exploited. In terms of volume, 85% of small pelagic species are concentrated in central and southern Atlantic. As for the distribution of the catches, 7% of the total harvest come from the Mediterranean, 9% in the North Atlantic, 30% in the Central Atlantic and 55% from the South Atlantic. This potential puts Morocco among the world leaders in the international market for fishery products, in particular for certain products such as canned fish, fish meal and Agar-Agar.

Aware of the crucial economic and social importance of the fisheries sector in the Moroccan economy, a national strategy under the name of « **Halieutis** » has been launched since 2009, setting a number of objectives to be achieved by 2020. This ambitious and comprehensive rod map aims the upgrading and modernization of the different segments of the fisheries sector as well as improving its competitiveness and performance, within the international market for fish and fishery products.

From a practical perspective and in order to ensure a sustainable exploitation of fisheries resources, a set of management plans based on biological, environmental, technical and socio-economic consideration have been put in place with regard a number of endangered such octopus, small pelagic, swordfish and crustaceans. In this respect, The Halieutis strategy has set various management measures, to mention inter alia, introduction of quotas, spatio-temporal closure, and regulation of bycatch and the use of the vessel monitoring system. It is significant to underline the great endeavor carried out in terms of deterring and combating the Illegal, Unreported and Unregulated fishing, mainly through the enactment of a specific law in this regard.

Key FisheriesData for 2015 [9]

Number of vessels	18406
Percentage of artisanal vessels	85%
Percentage of ofcoastalvessels	13%
Percentage of of high seavessels	2%
Production of small scale vessels	894 186 mt
Production of high sea vessels (KMT)	454 231 mt
Total Production (KMT)	1 348 399 mt
Total Value (KDH)	10 586 331 DH

9 Mer en Chiffres 2015. Publication of the Moroccan Department of Fisheries.

Also and due to the different hindrances faced by the artisanal fisheries, in particular with regard the conservation and the commercialization of the catches, the Department of Fisheries has initiated in coordination with its partners a national program for the construction of fishing villages (VDP) and equipped landing points (PDA), along the Moroccan coasts. Hence, there are 40 units already established, 05 in progress and 15 units programmed.

In recent years, the valorization of fishery products has been given a particular attention by the majority countries, as the downstream activities related to fisheries, namely processing, marketing, distribution, logistics and research. The products of the sea are made of different types of fish and other products (cephalopods, crustaceans, mollusks, seaweeds, seaweed aquaculture). In sum, 80% of the landings of inshore and craft are intended to supply the industry with processing of seafood products at 409 units on land, and 20% supply the local market for consumption.

Performance of the fishing processing units during 2015 [10]

Activity	Number of units	Total Production (T)	Turnover (MDH)
Freezing	186	278 500	8070
Fresh conservation	49	25600	2110
Canning	48	187 000	6170
Semi-Canning	37	19100	1420
Fish meal and Fish oil	22	205 00	3070

The canning industry has experienced a great development over the years, due to the continual the improvement of manufacturing technologies, the abundance of the resource the diversification of products. This trend has permitted the Kingdom to acquire a renowned position in international markets in this specific segment.

In terms of assessment, the strategy has contributed to more growth both at the production and the investment levels, with an emphasis on the modernization of the infrastructures and facilities. The country has managed to diversify its products in the international market, apart from its pioneering position as the largest exporter of sardines (sardine pilchardus) in Africa. In terms of outcomes, national fisheries production has increased from 950 thousand metric tons in 2011 to 1.46 million metric tons in 2016, which exceed the target set by the Halieutis strategy for 2020.Regarding the income generated, it reached 11.5 billion dirhams in 2016, registering an annual increase of 10% during the period 2010-2016.

Concerning Moroccan seafood exports, it is to note that the total volume registered in 2015 is around 642 thousand metric tons in 2015, showing a 10% increase compared to 2014 and an annual increase of 5% during the period 2010-2015.These exports generated 19.4 billion dirhams in 2015, representing 48% of the revenues generated by agri-food exports and 65% of the target set by the Halieutis strategy by 2020.Also, it is essential to note that among the notable achievements was the increase of investments destined to the units of value of the products of the sea which reached 389 million dirhams in 2015, with an annual increase of 9% during the period 2010-2015. In the social area, this activity had allowed the creation of 129 thousand jobs at sea (2015) and 89 thousand jobs at land (2016).

10 Mer en Chiffres 2015. Publication of the Moroccan Department of Fisheries.

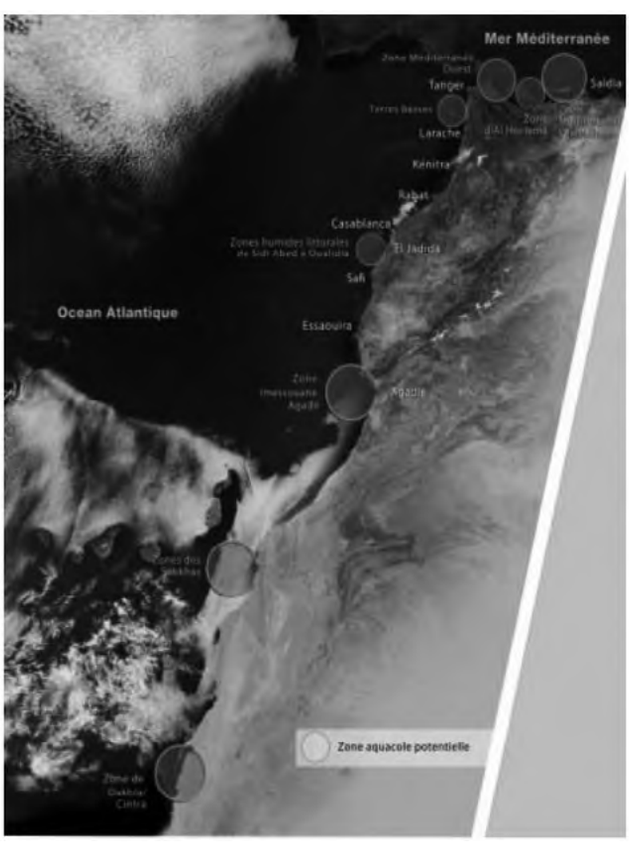
Aquaculture:

The Evolution of aquaculture in Morocco

Morocco knows what is called the administrative separation between the marine and continental aquaculture. This part will focus on the development of the marine aquaculture rather the continental one. The marine aquaculture is not that ancient as sector in the Moroccan Economy. The first starting was in the middle of the 50s of the last century with the establishment of the first aqua farming in the Oualidia and Moulay Boussalhem Lagoons and in the Sidi Moussa. Three kind of oyster had been introduced: the 'Ostrea edulis', the 'Crassostrea Angulata', and the 'Crassostrea Gigas' known by the Japanese Oyster which is the most cultivated and suitable in the region.

By the 1985, started the diversification of many species of seafood used for aqua-farming. In 2009, the national plan "Halieutis" has been adopted to further promote the sector. The target of this plan is to enhance the production to attend 200 000 tons and create approximately 400 000 possibility of employment. This plan created the National Agency for the Development of Aquaculture which belongs to the Ministry of fisheries to implement the policy for development and promotion of the aquaculture at the national level. With 3500 km of coastline, this Agency is developing environmental and sustainable based regional plans for the aqua farming activity on both the Mediterranean and Atlantic sides, taking into accounts the cumulative effects. Until now, many plans have been achieved especially in the region of Tan-Tan to Boujdour in the south on the Atlantic side, and in the North on the Mediterranean side between Cap Targha and Saîdia, and also between the south of Cintra Bay and Imessouane and Sidi Ifni. Those spatial plans are important for the development of the activity by granting the authorizations of aqua farming on the areas which are suitable for the activity and for enhancing the environmental, health and safety control of the products.

This Map shows the actual achieved regional plans for the development of aquaculture.



Those figures show the level of the actual seafood production from aquaculture in Morocco in tons.

Zones Aquacoles	Conchyliculture	Pisciculture	Algoculture	TOTAL
Aqua M'diq		300		**300**
Lagune d'Oualidia	150			**150**
Baie de Dakhla	100			**100**
Total				**450**

The aim of the new proposal for marine aquaculture legal framework

Morocco has a significant potential for the development of marine aquaculture activities through specialized and complementary sectors, or even to contribute to the creation of attractive and competitive regional development poles. This sector, through the diversification of its sectors by contributing to the objectives of food security, energy security, protection of the environment and fishery resources, can also create jobs, and have an added value that allows it to serve the public and the Moroccan economy in an effective, innovative and efficient way.

On the basis of these objectives, marine aquaculture can ensure the sustainable development of the fisheries sector and contribute to boosting and competitiveness of the Moroccan offer in foreign trade exchanges. Indeed, it is an intrinsic lever for the development of the blue economy and the green economy at the national level.

Potentially strategic, the aquaculture sector in Morocco can develop several production sectors and cross-cutting areas where marine aquaculture will be considered of public utility notably through: The chain of food and feed production; The cosmetics, pharmaceutical, chemical and ornamental production sector; The agricultural inputs sector of fertilizers and bio-pesticides; The production line of ecological component of building materials; The third-generation biofuels production chain from algae sources; The aquarium industry. The same is true of cross-cutting areas relating to: restocking and rebuilding biodiversity; environmental protection for the mitigation of carbon emissions, the protection and reconstruction of the coastline and the fight against marine pollution; and finally the transversal field of training, research and development and technological progress.

The aquaculture sector, with the development of its various sectors, is fully in line with Morocco's commitments to its partners and national and international environmental policy guidelines, particularly the respect of the FAO guidelines and approaches and the United Nations Sustainable Development Goals Agenda, such as contributing to the preservation of water quality, participating in the protection of the environment, and providing mitigation and adaptation impact of climate change on the environment in all its dimensions.

However, the aquaculture sector in Morocco, which aspires to achieve ambitious objectives, within the range of the potential of its coasts, needs to be the subject of a legal framework specific to the sector at the normative, organizational, technical, health and environmental levels.

In fact, at present, the activity of aquaculture is governed by the provisions of the Dahir bearing the act n ° 1-73-255 of 27 Choual 1393 23 November 1973 forming regulation on marine fishing as modified and completed and the regulations taken for its application.

In addition, the current regulatory framework no longer meets the specificities mentioned above. In addition, as part of the commitment made by the Moroccan state, through the Halieutis plan, adopted in 2009, the political choices, to "make marine aquaculture a major growth engine" and highlight the marine aquaculture activity as a vital relay of fisheries growth and an essential element for the preservation of these resources and the marine ecosystem, plan to provide it with a modern and specific legislative framework to boost the activity of this sector on new legal bases.

Thus, the provisions of the said draft text include new principles and approaches and concern inter alia:

- The definition of aquaculture in the national legal arsenal, and the determination of its scope;
- The principle of granting prior authorization, which allows the competent authority to assess the viability of the aquaculture project and set the conditions for the aquaculture farm. And on the other hand for the operator, the stability and legal security of the authorization;
- The adoption of the sectoral and spatial planning approach to marine aquaculture and the Regulation of Environmental Impact Assessment: This represents a major instrument of the policy followed for marine aquaculture planning respecting the participatory approach of public authorities and stakeholders in the aquaculture sector and coordinating their actions. This principle is adopted in order to ensure a sustainable, environmentally friendly aquaculture in compliance with the multi-trophic approach integrated on a large scale in the maritime areas, while subjecting aquaculture management plans to an evaluation of aquaculture. Impact on the environment, taking into account cumulative impacts, guaranteed by the environmental and protective risk approach to its marine ecosystem
- Access to space and activity in compliance with the rules of competition and transparency through the establishment of provisions relating to the conditions, forms and methods of exercise of these activities. Therefore, a law organizing this sector and policies that support its development, the control of its environmental effect and the quality of its production, can only ensure the economic sustainability of Moroccan marine aquaculture.

This new proposal is actually under adoption process.

17- The role of women in the fishing sector

Moroccan women have been always present within the fishery sector in performing man a set of different downstream activities beginning from landing to processing fishery products. However and due to their limited implication on the sector, the Department of Fisheries has paid more attention to the empowerment of women in fisheries, which has been reflected in the creation in July 1999 of ‘’The unit of the promotion of woman’’, which became later ‘’ Gender and Development Unit’’ and whose missions are mainly :

- Ensure the integration of the gender and development "in the strategies and action plans of the Department of Fisheries ;
- Undertake socio-economic studies on the role of women indirect or indirect activities in fishing
- Develop programs and action plans aiming the integration and promotion women in the sector ;

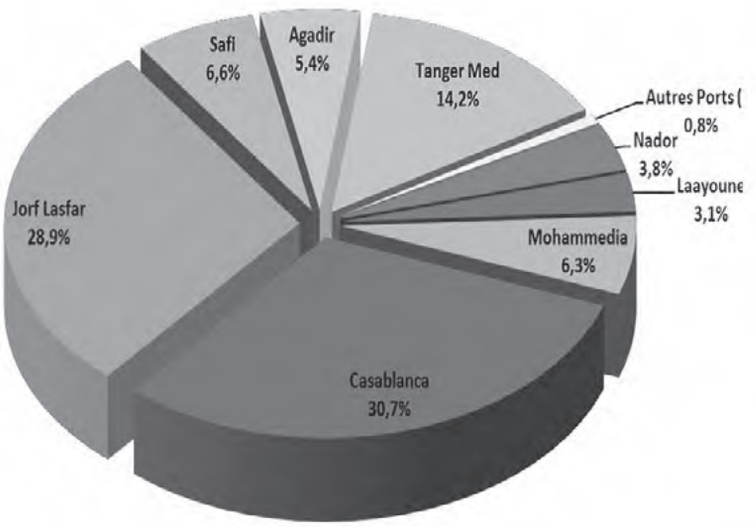
As a result of this policy approach, women are actively participating in the development of the Moroccan Fisheries and are found mainly in the activities related, particularly to the collection of algae and other fishery products, gathered within cooperatives, operating within the processing units (67%) or occupying posts of command on board fishing vessels, after getting a higher education on training institutions.

It is too apparent that some women’s cooperatives operating within the fisheries sector have achieved a great maturity in terms of management and performance, which reflects the success of the different actions aiming the empowerment of woman in the fishing industry.

Women'scooperativesexposing a variety of fishproducts, including, inter alia, oysters at the Halieutis Expoorganized in Agadir between 15 and 19 February 2017.

At the international level, Morocco has launched a cooperation policy towards the promotion of the implication of women in the fishing industry, in particular within the African region, as witnessed by the creation of the African Network of Women in Fisheries (RAFEP) in December 2010. This international body has considerably contributed to the strengthening of the organizational, professional and entrepreneurial capacities of women in fisheries in the member countries of COMHAFAT, with a view to improving their political and economic powers and to the promotion of the commercialization of fishery products at national, sub-regional, regional and international levels.

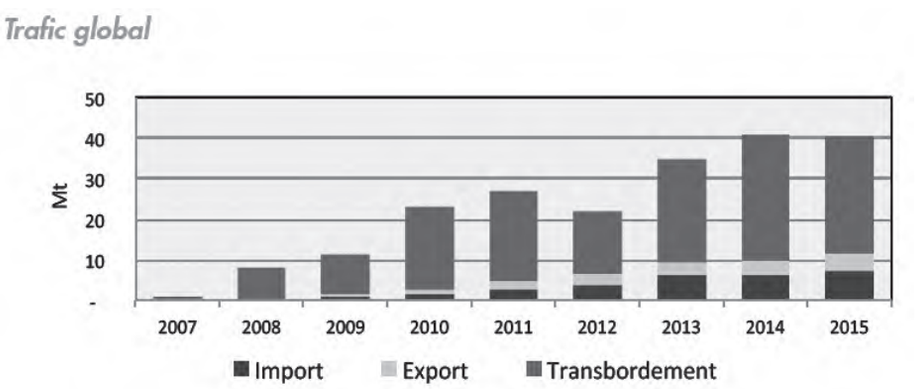
Annex no. 1



Maritime Traffic by port

Source : National Port Agency

Annex no. 2



Evolution of the maritime traffic during the period 2007-2015

(Source : Ports en Chiffres, Décembre 2016)

Annex no. 3

The Kingdom of Morocco
World Maritime University Graduats

S/N	Name	Major and Year of graduation	Administration	Remarks
1	Mr. AKKOUH Abdelwahab	PSA 1993	Retired (Department of Fisheries)	Non SasakawaFellow
2	Mr. ANWARI, Nabil	MA 2005	Department of Fisheries (Directorate of Strategy and cooperation)	SasakawaFellow
3	Mr Mohamed Samir BENHADDOU	PM 1997	Department of Fisheries (Regional fisheries department of El Jadida)	Non SasakawaFellow
4	Mr. BENNIS Abderrafia	MET(E)-1985IN	Directorate of Merchant Marine)	Non SasakawaFellow
5	Ms. BENNOUNA de ESPINOSALamia	SM-1999	Singapore Port Authority (information to be checked)	Non SasakawaFellow
6	Mr BERRADA Karim	GMEP-1996	COMHAFAT(ATLAFCO)	Non SasakawaFellow
7	Mr. BICHOU Khalid	PM-1999	Centre for Transport Studies Imperial College London	Non SasakawaFellow
8	Mr. BOURHIMAomar	MSEPA-1999	Department of Fisheries(Head of Bilateral Service)	Non SasakawaFellow
9	Dr BRIOUIG Mohamed	PM-1997	Has just left Qatar Ports Management Company	Non SasakawaFellow
10	Mr. CHEIKH Mohammed Salim	PM 2001	Directorate of Merchant Marine (Cooperation Division)	Non SasakawaFellow
11	Mrs. EL MARZOUKI Fatima Zahra	MLP 2016	National Agency for the Development of the Aquaculture (Department of Engineering of the Aquaculture Projects)	SasakawaFellow
12	Mr. EL-AMINE Abdelghni	GMA 1993	Department of Fisheries (General Secretariat)	Non SasakawaFellow
13	Mr. JOUIDI Mohamed	MSA(N)-1991	Casablanca Harbour (to be confirmed)	Non Sasakawafellow
14	Mr. LAAMRICH Abdennaji	GMA-1990	COMHAFAT(ATLAFCO)	Non SasakawaFellow
15	Mr. MARZAGUI Mohamed	PSA-1990	Retired (Directorate of Merchant Marine)	Non SasakawaFellow

Annex no. 4

"THE TANGIER DECLARATION"

"EFFECTIVE IMPLEMENTATION OF THE CONVENTIONS OF THE INTERNATIONAL MARITIME ORGANIZATION (LMO) : FOUNDATION OF SUSTAINABLE DEVELOPMENT IN THE MARITIME SECTOR"

The participants in the World Maritime Day Parallel event which took place in Tangier from 27 to 28 October 2014, at
the kind invitation of the Government of the Kingdom of Morocco.to celebrate this event which was decided in 2005 by
the International Maritime Organization (IMO) and whose theme this year is "IMO Conventions : Effective Implementation":

- Taking account of the solemn call to all States of the international community by the IMO Secretary-General on the occasion of World Maritime Day 2014 to ratify. accede to and effectively implement the IMO conventions, some of which have already entered into force and others that require further ratifications and accessions to enter into force:
- Referring in particular to the need to accelerate the entry into force and effective implementation of certain key IMO conventions, including :
- the International Convention for the Control and Management of Ships' Ballast Water and Sediments, 2004, known as the "BWM Convention":
- the Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships, 2009:
- the Protocol of 2010 to the International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea, 1996, known as the "HNS Convention";
- the Cape Town Agreement of 2012 on the Implementation of the Provisions of the Torremolinos Protocol of 1993 relating to the Torremolinos International Convention for the Safety of Fishing Vessels, 1977:
- Conscious of the fundamental role in terms of sustainable and equitable development in the maritime sector that can be played by effective implementation of IMO conventions and other relevant international conventions in guaranteeing the sakty and security of navigation and protection of the marine environment and its resources against the risks of pollution, and in determining, where necessary. liabilities and compensation for damage caused to the marine and coastal environment and its resources;
- Noting the fact that the standards decreed by the international maritime conventions apply uniformly to States of varying stages of economic and technological development, and, therefore, some developing countries may encounter difficulties in effectively implementing those standards and fulfilling the obligations assumed under those conventions;
- Appreciating the efforts of NO and other international institutions, as part of their technical cooperation programs, to assist developing countries to strengthen their capacities in order to fulfill their obligations under international maritime conventions:
- Taking the view that the obligations to guarantee the safety and security of maritime navigation at the worldwide level and protection of the marine environment and its resources must be fulfilled by all States in a spirit of equitable partnership and effective solidarity between countries of varying economic and technological levels;

Declare that, in order to ensure effective implementation of the MO conventions and other international instruments aimed at the sustainable development of the maritime sector and its contribution to the wellbeing and prosperity of all countries in an equitable manner, the following actions, among others, should be promoted and developed :

- Intensify IMO technical and legislative cooperation for developing countries with a view to strengthening their capacities to effectively and efficiently implement the IMO conventions ;
- Promote and strengthen the necessarycooperation for solidarity between developed and developing Member States to contribute to better implementation of the IMO conventions ;

- Assist developing countries in strengthening their port services that contribute to the effective implementation of the provisions and standards of the IMO conventions to which they are party ;
- Encourage the development of maritime transport fleets flying the national flags of developing countries, while ensuring that the vessels in those fleets meet the standards for safety. crew training and marine environment protection established by the IMO conventions ;
- Organize regional seminars to raise awareness about ratification and effective implementation of the IMO conventions. particularly in developing or emerging geographical regions :
- Further develop cooperation mechanisms between IMO and the various regional programs for marine environment protection that impact on maritime transport ;
- Support the adoption of appropriate measures within the "Particularly Sensitive Sea Areas" (PSSAs), such as those established by IMO. by providing technical assistance to coastal developing countries for the establishment and preservation of such areas;
- Support bilateral, regional and multilateral cooperation, including IMO recommendations, with a view to making navigation safer in the face of the increase in maritime piracy in several regions of the world
- Facilitate cooperation between flag State, port State and Coastal State with a view to making navigation safer and strengthening marine environment protection ;
- Support the development of "Clean port" and "Safe and healthy port" certifications, continuing initiatives that have already been launched, and providing technical assistance for ports in developing countries that aspire to achieve them, particularly with regard to the design, construction and management of their port complexes, commercial ports. fishing ports and marinas;
- Establish greater cooperation between IMO and the Food and Agriculture Organization of the United Nations (FAO) towards modernization of fishing vessels in developing countries. particularly with regard to their safety in accordance with IMO Conventions standards ;
- Assist developing countries to make their maritime sectors a real lever for economic and social development, in particular by increasing employment ;
- Promote interregional maritime cooperation. particularly in Africa, facilitating sustainable development of the maritime sector of the African continent ;
- Strengthen North-South and South-South cooperation, in relation to maritime search and rescue and prevention and control of pollution of the marine environment and its resources :
- Establish the necessary mechanisms and procedures to make maritime areas beyond national jurisdiction, areas of mutually beneficial cooperation and solidarity

The participants in the meeting in Tangier in the Kingdom of Morocco to mark World Maritime Day 2(114 Parallel event, adopt the present Declaration, and kindly request the IMO Secretary-General to bring its spirit and content to the attention of all IIVIO Member States,

Tangier, Kingdom of Morocco, 28" October 2014

COUNTRY REPORT

T U N I S I A

1. COUNTRY OVERVIEW

Home of the ancient city of Carthage, present-day Tunisia has a long and distinguished history. Its location at the centre of North Africa, close to vital shipping routes in the Mediterranean, ensured it became a hub for control over the region for successive ruling elites, including the Berbers, Phoenicians, Romans, and Arab and Ottoman dynasties. In the late 19th century Tunisia became a French protectorate, a status it maintained until colonial rule ended in 1956, and the country achieved full independence. The start of Tunisia's Jasmine Revolution had a widespread impact, igniting the region-wide movement now known as the Arab Spring. Though at times rocky, Tunisia's road to democracy has been generally deemed a success, and the country is often hailed as a beacon of hope in a turbulent region.

Located in the continent of Africa, Tunisia covers 155,360 square kilometers of land and 8,250 square kilometers of water, making it the 93rd largest nation in the world with a total area of 163,610 square kilometers. According to International monetary Fund IMF the country population is 11.338 million.

Source:http://www.bbc.com/news/world-africa-14107241

2. SCOPE OF ECONOMIC ACTIVITIES

Tunisia's diverse, market-oriented economy has long been cited as a success story in Africa and the Middle East, but it faces an array of challenges following the 2011 Arab Spring revolution. Following an ill-fated experiment with socialist economic policies in the 1960s, Tunisia embarked on a successful strategy focused on bolstering exports, foreign investment, and tourism, all of which have become central to the country's economy. Key exports now include textiles and apparel, food products, petroleum products, chemicals, and phosphates, with about 80% of exports bound for Tunisia's main economic partner, the EU.

Agriculture is a key sector of the Tunisian economy. An improvement in its production in the past years has allowed for the development of the sector (cultivation of olive trees, fruit trees and palm trees), while enabling the country to reach a level of food sufficiency. Organic farming is also booming, Tunisia being the second most productive country in this respect. Agriculture accounts for over 10% of the GDP and employs

nearly 15% of the workforce. This performance is the consequence of the large-scale support and modernisation efforts made within the framework of the country's development policy, as well as the regulation of agricultural and rural activities.

Industry represents 30% of the GDP and employs one-third of the workforce. The textile industry has been relatively hit by Asian competition. The country's industrial sectors are predominantly export-oriented.

The local economy is largely orientated towards services, which account for over 60% of the GDP, including the booming sectors of ICT (Information and communication technologies) and tourism. The service sector employs nearly one-half of the country's workforce. Nevertheless, the tourism industry suffers from the deteriorating security situation.

After a half century of rapid growth, the structure of the Tunisian economy has changed. While industry and services shares in output have increased, that of agriculture has gradually decreased.

Tunisia’s economy grew at an estimated annual rate of 1.0 percent in 2016 (2.0 per-cent excluding agriculture and fisheries) compared to 1.1 percent in 2015 (0.1 per-cent excluding agriculture).

3. TRANSPORT SECTOR

The transport sector has long played a key role in Tunisia’s development given the country’s focus on exports and tourism. A combination of low logistical costs and proximity to European markets helped it attract visitors and export everything from olive oil to airplane components. As part of the Tunisia 2020 strategy, the government has been looking to regain logistical competitiveness and appears to be on track to do so, with private investors pledging approximately $15bn in infrastructure investments during the November 2016 Tunisia 2020 Conference. However, following through with the development strategy will depend on the government’s ability to attract further foreign investment, improve the business climate and channel the social aims of trade unions. The transport sector is crucial for Tunisia to restore confidence, recover its role as an industrial workshop for Europe, and convert itself into a key logistics hub between Europe and Africa.

3.1 Maritime sector

The maritime sector plays an important role in the development and promotion of Tunisia's foreign trade. Indeed, 98% of our foreign trade is carried out by sea through the 7 maritime ports of commerce as shown in the figure.1. These ports provided transit in 2015 of 28 million tons, 729 thousand passengers and 297 thousand cars.

The maritime sector contains about 560 companies operating in the maritime professions, freight forwarders and port professions, and offering close to 6,000 direct jobs.

Fig.1: Tunisian ports

Tunisia has 7 ports located mainly along the east coast: Bizerte- Menzelbourguiba, Rades-La Goulette, Sousse, Sfax-sidiyoussef, La Skhira, Gabes, Zarzis.

3.2 Ports chain characteristics

Ports	Principal Traffic	Nbr of Quays	quays Length(m)	draught(m)
La Goulette	Passengers and cruises	10	1870	9
Rades	Containers andRo-Ro cargos Dry and liquid bulk	11	1930	9,75
Bizerte-Manzel Bourguiba	Hydrocarbons,Cements and Steels	12	1586	10,67
Sousse	General cargos	7	795	8,5
Sfax-Sidi Youssef	Containers, General cargos And chemica fertilizers	15	2550	10,5
La Skhira	Hydrocarbons and chimical products	3	450	15
Gabes	Chemical products and dry bulk	8	1725	11,88
Zarzis	Hydrocarbon and Salt	5	875	8

3.3 ports statistics: Year: 2017,Period: 3 month

Marchandises	Import	Export	Total
Trafic M ses	5 224 681	2 588 742	7 813 423
Hydrocarbons	1 583 015	1 120 926	2 703 941
Liquid bulk	173 298	79 353	252 651
Cereals	1 298 661	20 846	1 319 507
Solid bulk	626 963	713 573	1 340 536
General M ses	1 542 744	654 044	2 196 788
Containers Number TEU	60 154	56 179	116 333
Containers Tonnage	829 164	351 871	1 181 035
RO-RO UnitsNumber	17 061	17 587	34 648
RO-RO Units Tonnage	232 227	257 144	489 371
Passengers Trafic	42 644	51 300	93 944
Cars	20 326	24 920	45 246
Cruises Trafic	3 533	3 533	7 066
Vessels Trafic	1 298	1 295	2 593

3.4 MARITIME PROFESSIONS

1. PROFESSIONS SUBJECT TO REGISTRATION

PROFESSION	NUMBER
SHIPOWNER	07
CARRIER	05
STEVDORING COMPANY	06
CLASSICIFATION SOCIETY	01
TOTAL	**19**

2. OCCUPATIONS SUBJECT TO SCHEDULES OF SPECIFICATIONS

PROFESSION	NUMBER
FORWARDING AGENT	86
SHIPS' CONSIGNEE	267
CARGO CONSIGNEE	7
CHARTER BROKER	27
SHIP HANDLER	59
MARITIME EXPERT	3
SHIP MANAGEMENT COMPANY	7
REPRESENTATIVE OFFICE OF FOREIGN SHIPS CLASSIFICATION SOCIETY	1
ASSISTANCE, RESCUE AND TOWING COMPANY	-
PILOT	-
TOTAL	**457**

3. PORT PROFESSIONS

PROFESSION	NUMBER
MOORING	19
WATCHMEN	26
GARBAGE REMOVAL	30
WASTE OIL REMOVAL	07
TOTAL	**82**

3.5 ship repair

Tunisia has a unique ship repair installation called CMR TUNISIA SHIP REPAIRS. Built at the beginning of the 20th century under French protectorate as a naval repair base and arsenal, it became a state-run Tunisian company in 1963, operating under the name of SOCOMENA until 2004, when the shipyard was privatized.CMR Tunisia Ship Repairs is situated in Menzel Bourguiba on the north-eastern coast of Tunisia and is the largest shipyard in the south Mediterranean area. It is equipped with 4 graving docks.

4. MARITIME ACTIVITIES AND THE PROTECTION OF MARINE AREAS

The main maritime activities taking place in the waters surrounding Tunisia are the extraction of hydrocarbons, maritime transport and fishing.

Offshore hydrocarbon activities take place in the Pelagian Province, a marine area surrounding Tunisia, Libya, Malta and Italy. These activities encompass both territorial and cross-border petroleum systems. In this respect, Tunisia is involved in national as well as cross-border exploitations: − Oil exploitation, e.g. the Pantelleria Permit (Italian waters): Sambuca prospect, extends into the Kerkouane permit across the Italian-Tunisian maritime border; − Gas exploitation, e.g. the Kerkouane Permit (Tunisian waters) - Dougga gas/condensate field; − Oil wells at the Libyan-Tunisian border are exploited by a Libyan-Tunisian joint venture called the Joint Oil Company.

Fishing is an important economic activity in Tunisia. According to FAO, the total fish production was approximately 100 000 tonnes in 2008 and about 3 300 tonnes were produced by aquaculture facilities4. Mariculture has experienced growth and is expected to increase further since plans are being made to increase the production capacity. However, on the other hand worries exist about the environmental impact of mariculture. The most productive fishing areas are located in the Gulf of Gabes; more than 70% of fish is caught in the Gulf.

Coastal tourism along the coastline of Tunisia is significant. Many resorts are located along the coast, in places such as Sousse and Monastir,

In Tunisia 25 sensitive areas have been identified. For each of these areas a management plan has been set up. Six of these areas are MPAs: La Galite Archipelago, Cap Negro – Cap Serrat, Zembra and Zembretta Archipelago, Kuriat islands, Kerkenah islands and Kneis6. The Network of Managers of Marine Protected Areas in the Mediterranean (MedPAN) identified two SPAMIs along Tunisia's seashore. Figure 1 shows their location and some general information.

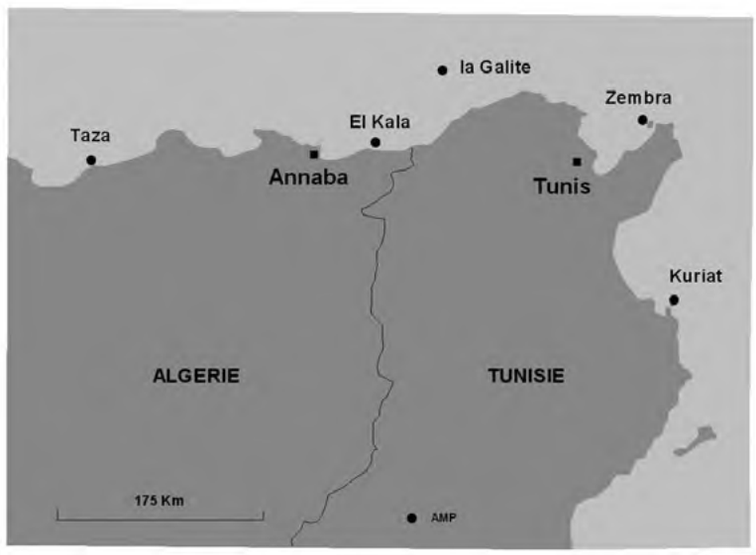


Figure 1 :MarineProtected Areas – Tunisia

Archipel de la Galite:	**Zembra and Zembretta:**
SPAMI (2001)	SPAMI (2001)
Important Bird Area	Important Bird Area
Surface: 19 km^2	Surface: 47 km^2
	(4 km^2no-take zone)

Source: Policy Research Corporation based on the Network of Managers of Marine Protected Areas in the Mediterranean, www.medpan.org

5. Legal framework

Tunisian commercial ports are managed by the Office of Merchant Marine and Ports (O.M.M.P)which is a public institution of the State, endowed with financial autonomy and civil personality.OMMP exercises the attributions confided to the maritime authority and administration as well as the tasks of port authority in accordance with the laws in force.

The activity fields of the OMMP port chain are characterized by the diversity of maritime traffic, whether line or tramping traffic, handling containers, RO/RO, passengers, cruise passengers. Thus, OMMP manages and runs its rich and varied installations in compliance with the norms of productivity and safety: oil ports, container terminals, a passenger terminal, ore terminals, specialized installations … twenty-four hours a day and 7days/7.

As a port authority, the main mission of the organization is the treatment in the best conditions of time, cost and security, of all ships and goods transiting through Tunisian ports.

As a maritime authority, the organization provides merchant navy services including ship administration, seafarers and maritime safety.

6. International cooperation

The ministry of transport cooperates with many entities in order to develop maritime transport sector. Many cooperation projects have been set.

Major cooperation projects with the European Union:

As partner with the European Union institutions,Tunisia participates in programs and initiatives related to maritime transport in the framework of IPEV, EUROMED, REMPEC, IMO, and EMSA.

The twinning project:

Launch of the twinning project in the field of maritime transport and ports between the Tunisian maritime authorities and the European Union (the Franco-German Consortium, with participation of STC-GROUP (Rotterdam, NL)) in August 2015 for a period of two years and focusing on four main areas:

1. The reorganization of the maritime administration and authority, strengthening of their institutional capacities and harmonization of their relations with the port authority.
2. The update of the Tunisian maritime regulatory framework, through the transposition of international conventions and its approximation to European standards.
3. The development of a national maritime and port sectorial strategy (including a maritime safety strategy code III).
4. The development and implementation of a maritime and port training action plan and transfer of skills.

SafeMedIII project:

Tunisia participates in the SAFEMED program in its third phase in the field of maritime safety, the fight against pollution and protection of the marine environment.

Integrated Maritime Policy Project for the Mediterranean (IMP-MED):

This project aims to establish an integrated Mediterranean policy covering all activities related to the sea (shipping, ports, fishing, recreational boating, fishing, energy from the sea and heritage to the sea, submerged scientific research, ..).

MEDA-MoS Project - Motorways of the Sea in the Mediterranean:

Motorways of the Sea provide high quality intermodal door-to-door transport by sea; through the improvement of existing maritime links or through the creation of new viable, regular and frequent connections.

The MEDA-MoS projects are funded by the European Commission under the 2007-2012 Regional Transport Action Plan (RTAP) established by the European Neighborhood Policy (ENP) for the Mediterranean region.

The preparation and implementation of a maritime strategy for the countries located on the Euro-Mediterranean west coast:

The coordination between the countries of the 5 + 5 dialogue, especially in the field of motorways of the sea, the maritime traffic control, the protection of the marine environment and the fight against illegal immigration.

U.F.M. (Union for the Mediterranean):

UFM is an intergovernmental organization with a regional vocation, designed to refresh the Barcelona Process. It is a partnership linking Europe to the countries bordering the Mediterranean. The main facts of the organization concern the fields of energy and environment: water, energy, and more particularly the depollution of the Mediterranean, and motorways of the sea.

Nippon cooperation

Through the National Agency for International Cooperation JICA, Tunisia is elected as a model for the creation and monitoring in the area of administrative developing and organizational strategies development.

The cooperation is based on the examination of organizational and administrative problems and the modes

of financing of the projects in Rades port and Sousse port and the development strategies of these two sites, gave rise to the choice of Tunisia as a model of study and follow-up among 14 countries.

7. Important future project

Port in deep waters and areas of economic and logistic activities Enfidha

Project presentation :

The realization of the Deep Water Port in Enfidha is part of the port strategy initiated by Tunisia to meet the requirements of its national economy and the development of transhipment traffic of containers in the region, thus anchoring Tunisia in trade international and services.

This mega project will be realized in Full BOT. Covering an area of 1000 hectares, it will include 3600m of container quay, 1400m for bulk, dredged at less than 17m, with a total capacity of 5 million TEU and 4 million tons of bulk cargo.

The economic and logistic area of Enfidha:

The first module of the Economic and Logistics Area adjacent to the port covers an area of 500 hectares. It will generate significant additional traffic and will enable:

- Provide transport operators, producers, traders, industrialists, importers and exporters with spaces dedicated to the transport and management of goods and load units.
- These services are provided in a space that provides the infrastructure, superstructures, equipment, organization and skills needed to handle large quantities of goods and benefit from economies of scale.
- Allow the creation of non-pollutant, commercial and value-added manufacturing industrial projects for merchandise, working in synergy with ports, airports and border areas, both for the needs of the national and international markets.
- Control freight flows and consolidate them in order to optimize transport operations by improving the filling of load units by coordinating shipments and consolidating goods with the same destination.
- Ensure interconnection and interoperability between different modes of transport (maritime, road, rail, air) and develop multimodal transport to optimize the end-to-end transport chain by controlling costs, reducing transit, the improvement of the efficiency of environmental conservation operations and the rationalization of energy consumption and also to strengthen the competitiveness of Tunisian foreign trade.
- Providing the necessary services and new services for computer processing and telematic transmission of administrative, customs and commercial data in order to reduce delays, simplify procedures and control the flow of information.

Project objectives:

1. Make Tunisia a regional and international center of commerce and services.
2. Meet the ever-increasing needs of national maritime traffic.
3. Modernize port infrastructure through the creation of a new port generation.
4. Take advantage of economies of scale by operating ships of 80,000 deadweight tons instead of 25,000 tons presently.
5. Drain part of the transhipment traffic of containers and bulk goods in the Mediterranean.
6. Create a synergy between the port and the economic and logistic areas of the region and ensure the integration of different modes for the development of multimodal transport.

Project realization:

This project will be realized in three phases:

Phase I:

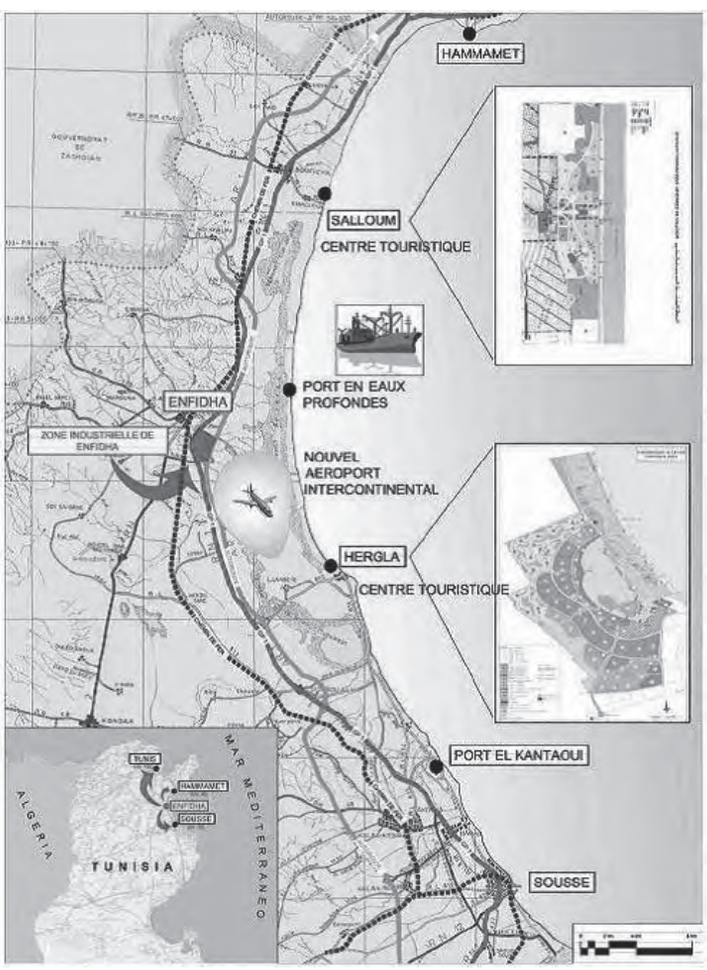
A space for the 82 ha container terminal with a 1500 m wharf and a 28 ha multipurpose terminal with a 1120 m wharf;

Phase II:

Expansion of the space area for the 35 Ha container terminals and the 700m long wharf extension.

Phase III:

- Extension of the space area for the 80 ha container terminal and 1400 m long wharf extension.
- Expansion of the surface area of the multipurpose terminal at 35ha and extension of the 280m platform.



Source: www.transport.tn

COUNTRY REPORT

T U R K E Y

1. Country Overview

The Eurasian country of the Republic of Turkey, located in the South Eastern part of Europe and the South Western part of Asia, has the geographic coordinates of 39°00'N latitude and 35°00'E longitude. Turkey covers 769,632 square kilometers of land and 13,930 square kilometers of water, making it the 37th largest nation in the world with a total area of 783,562 square kilometers. The Republic of Turkey is located at the crossroads of Asia and Europe and encircled by the Black Sea, the Marmara Sea, the Aegean Sea and the Mediterranean Sea. It has borders with Georgia, Armenia, Azerbaijan (Nakhichvan) and Iran to the East, Bulgaria and Greece to the West, Syria and Iraq to the South and Russia, Ukraine and Romania to the North.

The population of Turkey is 79,51 million people with the distribution of 50.9 and 49.1 female and male respectively and the population growth rate is 1.6% per annum (2016).

2. Economic activities categorization:

Main economic activities include Agriculture, Industry, and Services which contribute to total GDP. In 2016 the following distribution was in estimate:-

i) Agriculture contributed to 6.9% which including tobacco, cotton, grain, olives, sugar beets, hazelnuts, pulses, citrus, livestock.
ii) Industry was 32.3% which including:- textiles, food processing, automobiles, electronics, mining (coal, chromate, copper, boron), steel, petroleum, construction, lumber, paper.
iii) Services were 60.8% that cover: - Government activities, communications, transportation, finance and all other private economic activities that do not produce material goods.

3. Main trading & trading partners

According to year 2016 world-Factbook's estimation the nation's export reached USD 150,2 Billion whereby exported commodities were apparel, foodstuffs, textiles, metal manufactures, transport equipment.

The main export partners and their percentage share in export trade for the same period were Germany 9.8 %, UK 8.2 %, Iraq 5.4 %, Italy 5.3 %, USA 4.7 % and France 4.2 % (2016).

On the other hand imports for the same period were USD 191 Billion and the main imported commodities included machinery, chemicals, semi-finished goods, fuels, transport equipment.

From the same statistics main import partners and their percentage share to imports were China 12.8%, Germany 10.8%, Russia 7.6%, US 5.5%, Italy 5.2% (2016).

4. Coastal line

Fig. 1 Turkey Coastline

Source: http://www.turkiyeharitasi.gen.tr/

With a coastline of 8.483 km, it does not come as a surprise that the maritime sector of Turkey is of outmost importance and that shipping is the most used mode of transport in Turkey (export 46 %, import 59.1 %). It is bordered by four seas: the Mediterranean Sea, the Black Sea, the Aegean Sea, and the Marmara Sea, which is connected to the Black Sea by Istanbul Strait and to the Aegean Sea by Çanakkale Strait.

Turkish ports is as shown in fig. 2.

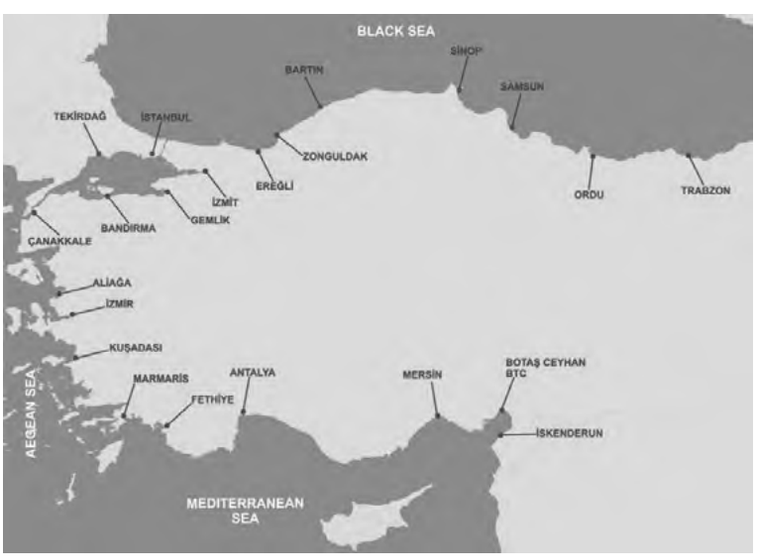


Fig. 2 Turkey Sea and Inland Water Ports

5. Maritime Administration

Turkey has no single institution that comprehensively address matters related to the maritime industry. Maritime transport issues, maritime logistics, ship registration, maritime safety, maritime security, seafarers education, emergency response to marine pollution prevention, maritime compensation and search and rescue are addressed by the Ministry of Transport, Maritime Affairs and Communications (MoTMAC).

On the other hand, issues pertaining to fishing are addressed under the Ministry of Food, Agriculture

and Livestock. Environmental issues are addressed by the Ministry of Environment and Urbanization. Other Ministries responsible for some issues related to maritime industry such as Ministry of Culture and Tourism is in charge of maritime tourism, Coast Guard and Navy are responsible for conducting maritime security issues.

MoTMAC is the regulatory body for maritime industry. There are 5 General Directorates which are assigned with marine and maritime issues in the Ministry. Those are; Directorate General for Regulation of Maritime and Inland Waters, Directorate General of Maritime Commerce, Directorate General for Coastal Structures and Shipyards, Directorate General for Dangerous Goods and Combined Transport and Directorate General for Coastal Safety.

6. Legal framework

National legislations play an important part in the supervision of maritime industry in Turkey like in any other State. As of January 2017, Turkey is a party to a total of thirty three (33) IMO Conventions. The ratified Conventions are transformed into national legislations to be effectively applicable in the country.

7. Maritime Transport

A. Shipping

In recent years, Turkish maritime fleet has improved and diversified in terms of ship-type, tonnage and size. It has turned into a highly-competitive fleet operating in nearly all waters of the world. To improve Turkish maritime sector and increase the number of vessels registered in Turkish flag, we introduced fuel exempt of SCT (Special Consumption Tax) to Turkish maritime sector in 2004.

Private Sector plays a big role in Turkish shipping as there are about 567 ships flying Turkish flag (1563 in total) over 1.000 GT with 9,3 m. dwt Turkish merchant fleet ranks the 15th in 2016 in tonnage based. [1]

Distribution of 567 ships by their types ; 33,66 % dry cargo ships, 14.29 % bulk carriers, 10,05 % chemical tankers, 8,99 % containers and 6,53 % service ships, 26,48 % other types of ships.

Distribution of the fleet by DWT (8,1 Million) ; 48.52 % bulk carriers, 12,78 % dry cargo ships, 14,07 % oil tankers, 12,11 % containers, 5,76 % chemical tankers and 6.76 % other types of ships.

Turkish flagged ships have been on the White List since 2008. Turkish Maritime Administration is making every effort to preserve Turkish fleet's high quality and aims to upgrade its place on the white list. The Port State Control (PSC) is still being used in eight different geographical areas of the world, as well as for Turkish ships. These controls are used in the country, too, and the studies in this matter continues meticulously.

Within this context, Turkey has become a founder member of the Mediterranean and Black Sea Memorandums (MoU) and is taking any measures to prevent unfair competition and increase quality in shipping. Therefore, Turkey continues to control entries of non-standard vessels to our territorial waters and apply necessary controls. For this reason, the requirements of the international legislations such as SOLAS, MARPOL, SCTW, ISPS and ISM are being applied effectively.

Port State Controls are conducted by 130 Port State Control Officers who are all professionals and naval architects. Their responsibility, duties and assignments are regulated by legislation.

B. Shipping Traffic at Major Ports

The increasing waterborne traffic flows of Turkey offer great challenges for safe and efficient waterborne transport, and create new opportunities for the maritime sector.

Turkey's geographical location enables the ports to handle significant amounts of cargo between the West

1 Number and tonnage evaluations have been shown totally as of 31 December 2016.

and the East. Cargo coming from Europe and Americas are handled in transit to CIS Republics, Iran, Iraq, and the Balkans and vice versa. Maritime transport plays a major role at the lengthy Turkish coast, for national as well as international transportation.

Turkey also has great potential in terms of intermodal transportation, owing to its privileged geographical position amid European, Central Asia and Middle Eastern countries. The country's land bridge position in North–South and East–West transportation ensures that ports play a vital role in logistics and shipping operations.

88,06 % of the Turkey's foreign trade is being realised by maritime transportation. 61 % of the volume of Turkey's foreign trade transportation has been carried by sea. This figure shows the importance of seaports in Turkey. In addition to this land bridge and transit position, this also creates considerable opportunities for Turkey for the port industry.

Turkey has four major container ports, Haydarpasa, Ambarlı, İzmir and Mersin. Although the Mediterranean trade is one of the fastest growing container sectors, Turkish ports have not seen any spillover effects from this. There are some positive trends in the market as well. Turkey's volatile economy appears to be increasing. The low ocean freight rates are helping the carriers compete more effectively against the road haulage alternative, i.e., Turkey to northern Europe. Carriers are also launching new services and upgrading the existing ones.

Shipping movements constitute a major component of Turkish economy approximately 90% of the nation's foreign trade being transported by sea. About 40% of the total cargo handled ports in Turkey is handled at Turkish major ports. There are 172 ports throughout Turkish coastline of which 65 port facilities with ISPS requirements.

The MoTMAC coordinates and regulates all the development and operation of ports.

C. Ship Yards

The Turkish shipbuilding industry has a history of over 600 years. In 1390, the first shipbuilding activity commenced, and in the 16th century the largest shipyards in the world were Turkish. In the Ottoman Empire, large naval vessels were produced. The development of industrial shipbuilding however, took place relatively recently.

Until the 1970's the Turkish shipyards were relatively small compared to the industry in Europe and Asia. The shipyards were mainly located at the Golden Horn and the Bosporus in European Istanbul. In 1969 the Turkish government took a decision that would change the industry dramatically. Politics decided to scale up the industry, and move the shipyards to the other side of the Bosporus. The place for the relocation and expansion plan was the bay of Tuzla.

In Turkey 79 commercial shipyards appear in the national statistics. The industry is spread along the North- and West coasts of Turkey. All large new building and ship repair yards of Turkey are however clustered in the wider Istanbul area at the Marmara Sea. In the Aegean Sea part, a ship recycling centre is located. Across the Black Sea coast several smaller shipyard clusters are located, for example in Trabzon/Surmene, Samsun, Ordu and Zonguldak. In the extreme South the Akdeniz Shipyard is located (Adana).

The super yacht builders are concentrated in Istanbul and in the Southern Mediterranean coast near Marmaris and Antalya. The shipyards and yacht builders are supported by an equipment industry and research facilities, that are centered around the shipyard locations, mainly in Istanbul.

The three major shipbuilding centres are to be found in the Anatolian (Asian) Marmara coast near Istanbul. They are: Tuzla Bay, Izmit, Yalova.

Together these three regions represent 76% of Turkish commercial shipbuilding capacity. Tuzla is located 50 kilometres east from Istanbul, at the Asian part of the Marmara Sea. In fact, every inch of unlocked land is used for activities in shipbuilding, ship repair and related activities.

Where Tuzla could no longer accommodate the ambitious activities of the shipbuilding industries, new locations in Yalova and İzmit were developed. The start of the Yalova shipbuilding region in 2004-2007 took place in the absolute peak of worldwide shipbuilding. 26 shipyards have been operated here.

As a result, in a period of ten years the number of Turkish shipyards almost doubled: from 37 in 2002 to 79 in 2017. Turkish Shipyard Project capacity is around 4,5 million dwt per year.

The total repair and maintenance capacity in Turkey is around 19 M dwt. The number of floating docks expanded from eleven in 2003 to twenty nine in 2017. Whereas, the number of dry docks expanded from four in 2002 to ten in 2017.

D. Ship Recycling

Ship recycling is a specialised process that is totally different from shipbuilding. It can be a dangerous, polluting industry if the scrapping activities are not conducted in a professional way.

Aliağa is Turkish main ship-recycling region, with 23 scrapping companies located here. It is in the town and a district of Izmir Province in the Aegean Region of West-Asian Turkey. The town is situated at about 50 km North of Izmir and the economic activity is centered around an oil refinery, ship breaking yards, as well as tourism. The shipbreaking activities in this area are licensed by the Ministry of Environment and Urbanization (MoEU). It has the Authority Document from the Directorate General of Shipyards and Coastal Structures, a body of the MoTMAC.

From 2008 onwards, the Turkish ship recycling has become a rising industry. International meetings and platforms were supported by the Turkish government. Turkey contributed to the preparation of the draft contract of the International ship recycling regulations. The MoTMAC attended a diplomatic conference held in Hong Kong, China from 11 to 15 May 2009. Here, the Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships was adopted.

E. Maritime Safety

Enhancing safety of navigation, life, goods and marine environment at our seas is the most important priority of MoTMAC. Therefore, the Vessel Traffic Services (VTS) on Straits in 2003 was established so as to regulate maritime traffic effectively by benefiting from the advancing technological opportunities. By the same token, establishment procedures of Regional VTS Systems covering the bays of Izmit, Izmir, North Aegean, Mersin and Iskenderun as well as realization of national single window in the context of the Vessel Traffic Management Centre is still in progress. Automatic Identification System (AIS) and Long-Range Identification and Tracking (LRIT) system has been used in order to ensure safety and security of navigation in our seas. Moreover, the establishment procedure of “Local Traffic Control Centre” in Istanbul is still in progress.

Main Search and Rescue Coordination Centre which is affiliated to Directorate-General for Regulation of Maritime and Inland Waters has been working 24 hours efficiently with appropriate staff and equipment in accordance with the international standards. Turkey is a member of Cospas-Sarsat system being a search and rescue system provides information regarding location and risk warning to the users at sea, air and land. Turkey renders services to Iran, Iraq, Afghanistan, Georgia and Ukraine in addition to its service area.

8. Marine environment protection and preservation

So as to be ready against environmental disasters caused by maritime accidents, environmental sensitivity mapping in our seas and coasts, risk management system, Geographical Information System and oil spill model has been created and the establishment of Emergency Response Centers has been started. National Maritime Safety and Emergency Response Centre which is still under construction and planned to come into service at the

end of 2018, will serve as the coordinating body of the response against maritime accidents. Turkish seas and coats will be highly protected with 16 stations which will be established near its maritime zones.

Despite its rich biodiversity and cultural importance, the Mediterranean Sea is subject to intense human pressure, driven by urbanization and tourism development and resulting in habitat loss and degradation, overfishing and pollution. Therefore, all Mediterranean countries are committed to contribute to the implementation of the Convention on Biological Diversity, through the Barcelona Convention and its Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean.

Further, in 2013, Turkey hosted the Barcelona Convention COP 18 meeting in Istanbul. The key two outcomes of the COP 18 were: the "Istanbul Declaration", through which Parties adopted decisions to protect and conserve marine species (including monk seals and marine turtles). The Parties also agreed to develop a representative network of coastal and marine protected areas, to protect the Mediterranean Sea coral habitat and to increase the number and visibility of the Specially Protected Areas of Mediterranean Importance (SPAMI).

The project on “Strengthening the System of Marine and Coastal Protected Areas of Turkey", implemented by the General Directorate for Protection of Natural Assets of the Ministry of Environment and Urbanization in partnership with the United Nations Development Program (UNDP) aimed to strengthen Turkey’s national marine and coastal protection system and to ensure its effective management.

The natural ecological situation of the Black Sea deteriorated rapidly in the last 30 years. Over-fishing added to the environmental factors that lead to the breaking of the food chain in the Black Sea.

The transboundary nature of the environmental problems of the Black Sea has deemed international cooperation in the field absolutely necessary.

In this context, the Convention on the Protection of the Black Sea Against Pollution (Bucharest Convention), which was signed by Turkey, Romania, Ukraine, Bulgaria, Georgia and the Russian Federation in Bucharest on 21 April 1992, entered into force on 15 January 1994.

Article XVII of the Convention envisages the establishment of the Commission on the Protection of the Black Sea Against Pollution (Black Sea Commission) and a Permanent Secretariat. Since December 2000, Turkey has been hosting the Secretariat of the Black Sea Commission in Istanbul.

The Protocols of the Bucharest Convention to which Turkey is Party, are: Protocol on Protection of the Black Sea Marine Environment Against Pollution from Land Based Sources, Protocol on Cooperation in Combating Pollution of the Black Sea Marine Environment by Oil and Other Harmful Substances, Protocol on the Protection of the Black Sea Marine Environment Against Pollution by Dumping, The Black Sea Biodiversity and Landscape Conservation Protocol.

The United Nations Environment Programme (UNEP) decision to place the protection of the Mediterranean Sea among its priority actions resulted in the establishment of the Mediterranean Action Plan (MAP) in 1975 which is an action-orientated effort involving the countries bordering the Mediterranean Sea as well as the European Union. In order to give the actions carried out under the MAP a legal foundation, the Convention on the Protection of the Mediterranean Sea against Pollution (Barcelona Convention) was opened for signature on 16 February 1976 in Barcelona.

In conformity with the decisions of the United Nations Conference on Environment and Development, held in Rio de Janeiro in 1992, the Barcelona Convention was revised in 1995 to include coastal areas as well as the marine environment. The aim of sustainable development, increased public participation and environmental impact assessment were integrated into the Convention and its Protocols. In this context, the revised Convention was renamed as “The Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean” which entered into force in 9 June 2004. Turkey has become a Party to the Convention in 2002.

The Protocols of the Convention to which Turkey is Party, are: Protocol for the Prevention and Elimination of Pollution in the Mediterranean Sea by Dumping from Ships and Aircraft or Incineration at Sea,

Protocol for the Protection of the Mediterranean Sea Against Pollution from Land-Based Sources and Activities, Protocol Concerning Specially Protected Areas and Biological Diversity in the Mediterranean, Protocol Concerning Cooperation in Preventing Pollution from Ships and, in Cases of Emergency, Combating Pollution of the Mediterranean Sea, Protocol on the Prevention of Pollution of the Mediterranean Sea by Transboundary Movements of Hazardous Wastes and Their Disposal (a declaration was made on Turkey's position regarding the United Nations Law of the Sea).

The "Land-based Pollution National Action Plan" was prepared in 2005 in accordance with the Strategic Action Plan that was adopted in the framework of the Barcelona Convention and the Protocol for the Protection of the Mediterranean Sea Against Pollution from Land-Based Sources and Activities.

So as to implement the rules regarding the prevention of air pollution from ships, Turkey concluded an EU Twinning Project with Spain successfully on "Control of Ship-Sourced Emissions in Turkey" in 2014.

Turkey joined the European Maritime Safety Agency's Clean Sea Net System in May 2011. By this way, vessels become aware of being monitored thus a concrete step has been taken towards prevention of marine pollution.

In order to fulfill the requirements of both national and international conventions, following activities have been conducted:

- ✓ Risk Assessment of Turkey's seas and coasts have been performed.
- ✓ Geographical Information System has been established which includes maritime and environmental data of Turkish coasts
- ✓ Emergency Response Plans against marine pollution have been prepared for coastal facilities.

Another Project regarding the "Control and Management of Ships Ballast Water and Sediments" has been implemented from 2006 to 2008. Turkey became a party to the Ballast Water Convention in 2014.

9. Registration of ships

Turkey offers two modes of registration: a national and an international ship register. The total deadweight of the Turkish registered fleet (measured over 1,000 dwt) is 10.0 M dwt. This roughly is one third of the total fleet owned by Turkish ship owners. The remaining two thirds are either smaller than 1.000 dwt or registered abroad.

The Turkish national registry mainly contains relatively small ships, with an average capacity of 8.500 dwt. The ships in the Turkish international register measure on average 15.400 dwt. The Turkish registered fleet is dominated by bulk carriers and to a lesser extent of dry cargo, oil tankers, chemical tankers and containerships. Almost half the Turkish international registry consists of bulk carriers (47%).

10. Seafarers and Maritime Education and Training

Turkey attaches utmost importance to training and certification of seafarers playing an essential role as the human factor in improving maritime safety. As a responsible authority, the MoTMAC, in terms of implementing International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW 78/95), tightly inspects maritime training institutions so as to improve their training qualities. Furthermore, Turkish Maritime Administraion and maritime training institutions have been inspected by European Maritime Safety Agency (EMSA) and attested their conformity with European standards. Turkey is in the "STCW White List" of IMO which distinguishes nations that have displayed and established a plan of full compliance with the STCW Convention and Code. Thus, mutual recognition agreements have been made with 15 countries aimed for

recognition of Turkish seafarer's training and certification.

The number of educational institutions providing manpower to the maritime industry in Turkey has rapidly increased over the last decade. Moreover, there have been sizable investments in laboratories, classrooms and simulators in order to enable sufficient training. As of 2017, the number of universities offering maritime education and training at the bachelor degree (4 years) is sixteen out of 68 training facilities (22 technical high schools, 30 private courses).

11. Ship Inspection

Another important target is to ensure the Turkish Flag to comply with international standards, thus improving its performance during port state controls in foreign ports and preventing detentions. Therefore, oceangoing Turkish flagged vessels has been conducted through pre-surveys and non-scheduled surveys in addition to mandatory inspections. Flag and Port State implementations have been carried out by around 170 inspectors who are working under the MoTMAC.

As a result of the efforts made, Turkish flag has been moved to and still keeping its place in the "White List" of the Paris Memorandum of Understanding. Apart from that, substandard foreign flagged ships calling at Turkish ports have been inspected effectively within the framework of port state controls pursuant to Mediterranean and Black Sea Memorandum of Understandings that Turkey is a founder member.

12. International Maritime Organization (IMO) and WMU Graduates distribution

Turkey appoints an alternate representative to IMO in every 4 years who coordinates and represents the country in all maritime issues.

Being as an active member of the IMO Council since 1999 and committing to the realization of the objectives of the Organization, Turkey has become party to most of the major IMO Conventions and Protocols.

Turkey also constantly improves national legal framework to further align its legislation with the recent developments in the maritime field both commercially and technically from safety point of view and makes effort to harmonize Turkish maritime legislation with the EU acquis.

The maritime administrative framework of Turkey was audited by IMO in accordance with the Voluntary IMO Member State Audit Scheme (VIMSAS) in 2013.

The initial audit report showed that Turkey substantially meets its obligations in respect of the mandatory IMO instruments to which it is a Party.

The audit also identified a number of areas of good practice, which were found to be innovative and beneficial to the maritime community.

There are over 31 Turkish nationals who have graduated from WMU.

13. Relationship with Japan in the Maritime Field

Japan is the **oldest friend** of Turkey in East Asia. Sinking of an **Ottoman naval vessel «Ertugrul»** 127 years ago off the coast of the Kii Peninsula (after paying a goodwill visit to Emperor of Japan) became a solemn symbol of friendship between two nations.

Japan International Cooperation Agency (**JICA**) was one of the principal supporters in providing technical and maritime education to Turkish participants.

COUNTRY REPORT

U K R A I N E

1. Country Overview

With a surface area of 603,550km^2, Ukraine is the second largest country in Europe. It borders the Black Sea, and shares around 4,570km of land boundary with Russia, Moldova, Romania, Hungary, Slovakia, Poland, and Belarus. Ukraine consists almost entirely of plains, with mountainous areas such as the Ukrainian Carpathians and Crimean Mountains at the country's borders and accounting for barely 5% of its area.

Almost all the major rivers flow northwest to southeast through the plains, to empty into the Black Sea and the Sea of Azov.

The country is home to 42.5 million people. 73% of the population is Ukrainian, 22% Russian, 1% Jewish, and 4% of other nationality.

2. Economic activities categorization:

Europe's second largest country, Ukraine is a land of wide, fertile agricultural plains, with large pockets of heavy industry in the east.

Ukrainian economy concentrates on processing raw materials. Ukraine is divided between rich agricultural plains to the west and a strong industrial base to the east.

Ukraine's advantageous geographical position makes it a transit space for goods and passengers between Europe, Asia, and the Middle East.

Ukraine has long been a global breadbasket because of its extensive, fertile farmlands and is one of the world's largest grain exporters. The diversified economy of Ukraine includes a large heavy industry sector, particularly in aerospace and industrial equipment. The country has a very large heavy-industry base and is one of the largest refiners of metallurgical products in Eastern Europe. However, the country is also well known for its production of high-technological goods and transport products, such as Antonov aircraft and various private and commercial vehicles.

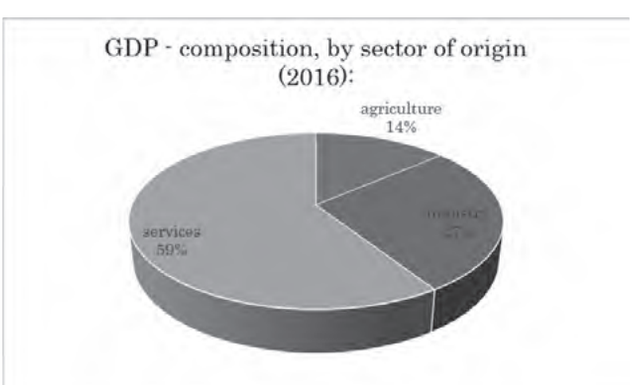


Chart 1 GDP composition by sector

Source: www.cia.gov , The World Fact-book, 2016

Agriculture - products: grain, sugar beets, sunflower seeds, vegetables; beef, milk.

Industries: coal, electric power, ferrous and nonferrous metals, machinery and transport equipment, chemicals, food processing.

Ukraine is regarded as a developing economy with high potential for future success, though such a development is thought likely only with new all-encompassing economic and legal reforms. (Refer to Annex II)

3. Main trading & trading partners

According to year 2016 world-Factbook's estimation the nation's export reached USD 33.56 Billion whereby exported commodities were ferrous and nonferrous metals, fuel and petroleum products, chemicals, machinery and transport equipment, foodstuffs.

The main export partners and their percentage share in export trade for the same period were Russia 9.9%, Egypt 6.2%, Poland 6.1%, Turkey 5.7%, Italy 5.3%, India 5.2%, China 5.1% (2016).

On the other hand imports for the same period were USD 40.57 Billion and the main imported commodities included consumer energy, machinery and equipment, chemicals.

From the same statistics main import partners and their percentage share to imports were Russia 13.1%, China 12%, Germany 11%, Belarus 7.1%, Poland 6.9%, US 4.3%.

4. Coastal line

Fig. 1 Ukrainian Coastal line with Crimean peninsula

The southern border of Ukraine stretches as the external boundary of the Ukrainian territorial waters. Ukrainian coastline of about 2,782 kilometers stretches from Romania on the west to Russia on the east. To the west Romania - Ukraine border stretches from the edge of its land segment across the Black Sea over the distance of 33 km, after that it is a boundary of the Ukrainian territorial waters and the Romanian Economic Zone. The Ukrainian territorial waters include the Snake Island. From there stretches the Ukrainian Exclusive Economic Zone (EEZ) towards the Kerch Strait stretching 22,224 m from its Black Sea coast.

One of country`s advantages is the existence of inland ports as shown in fig. 2.

Fig. 2 Inland Ports of Ukraine

5. Maritime Administration

The functions of the Maritime Administration in Ukraine including Flag State, Coastal State and Port State responsibilities are performed by the Ministry of Infrastructure.

The Ministry of Infrastructure has further formed institutions which carries out maritime responsibilities as identified above. Among them is the State Service of Ukraine for Transport Safety, State Agency of Fisheries of Ukraine (only for fishing vessels and fishing enterprises), Inspectorate for Training and Certification of Seafarers (ITCS), State Enterprise «Ukrainian Sea Ports Authority» (SE «USPA»). (Refer Annex no. I.).

However in 2017 the Cabinet of Ministers have approved the initiative of creating Maritime Administration of Ukraine as a single body for the implementation of state policy in the fields of sea and inland transport, merchant shipping, navigation on inland waterways of Ukraine, navigation and hydro-hydrographic provision of navigation, and in the field of maritime and river transport safety (except for the safety of navigation of fishing vessels).

6. Legal framework

According to the Statute of the Ministry of Infrastructure, it participates in the international cooperation and fulfils Ukraine's obligations arising from its membership in international organizations, concludes international agreements and implements its provisions into national legislation as well as provides proposals regarding their conclusion, termination or suspension, denunciation or accession to the international agreements in the field of transport.

According to the Act of the Cabinet of Ministers of Ukraine No. 1371 dated 13 September 2002 "On Participation of Central Executive Bodies of Ukraine in international organizations to which Ukraine is a Party" Ministry of Infrastructure, State Service of Ukraine for Transport Safety, Ministry of Foreign affairs and Ministry of Justice are responsible for the obligations arising from Ukraine's participation in International Maritime Organization and participates in its activity.

National procedure for accession to the International Instruments, fulfilment of obligations and their termination/denunciation is prescribed by the Law of Ukraine "On International Treaties" No.1906-IV dated 29 June 2004.

After the decision to access to the International Instruments is made by the relevant Ministry, the Ministry

of Justice prepare a legal solution regarding the form of internal act to be approved either in the form of decries and resolutions of Cabinet of Ministers or Act of Parliament or President.

In case when International Instrument requires changes to the national legislation, together with the mentioned above Decries/Resolutions/Act the respective Act is simultaneously drafted indicating exact national document which is to be amended accordingly.

7. Maritime Transport

A. Shipping

Private sector plays a major role in Ukrainian shipping as there are 20+ private owned ship owning / operating companies handling various activities.

The major among them are:

Governmental: Azov Sea Shipping Company, Black Sea Shipping Company, Ukrainian Danube Shipping Company, Ukrrichflot;

Private: UkrFerry, Kyiv River Port.

B. Shipping Traffic at Major Ports

The country`s trading in imports and exports have been slightly decreasing during past few years and its consequence is being reflected on the decreasing in shipping especially to the major sea ports of Odessa, Chornomorsk and Yuzhny. However in 2017 the growth of cargo turnover have been restored and the current forecast is positive. (Refer to Annexes IV and V).

C. Ports

Ukraine's advantageous geographical position makes it a transit space for goods and passengers between Europe, Asia, and the Middle East.

Ukraine possesses the most powerful port potential among all countries of the Black Sea region. Along its Black and Azov Seas coastline there are 18 merchant seaports: Reni, Izmail, Ust-Dunaisk, Belgorod-Dnestrovskiy, Ilyichevsk, Odessa, Yuzhniy, Nikolaev, Oktyabrsk, Kherson, Skadovsk, Yevpatoria, Sevastopol, Yalta, Theodosia, Kerch, Berdyansk, Mariupol, as well as 12 port points.

The waterfront and port territories are equipped with about 600 gantry cranes, thousands of lift trucks of different types and other units of port machinery. These ports have over 330,000 sq. m. of sheltered warehouses and over 2.5 million sq. m of open storage yards.

The most important Ukrainian ports are those of Odessa, Ilyichevsk and Yuzhniy, all situated not far from each other in the north-western part of the Black Sea. These three ports alone totally account for 56.6 % of the entire cargo turnover in Ukrainian merchant seaports and 38.28 % of cargo handling in all ports and terminals of the country. These ports offer the best approach ways (drafts of vessels accommodated are 11.5 – 14.5 m.). The other ports in Ukraine can only accommodate ships with considerably less draft.

The major container terminals in Ukraine are also located in the ports of Odessa, Ilyichevsk and Yuzhniy.

At the mouths of the largest Ukrainian rivers, the Dnepr and Yuzhniy Bug, there is another cluster of merchant seaports, namely Nikolaev, Kherson, Oktyabrsk, which handle both bulk and general cargoes.

On the northern coast of the Sea of Azov, there are Ukrainian merchant sea ports of Berdyansk and Mariupol, whose distinguishing feature is their closeness to the industrially developed regions of Donbass and Pridneprovye. The export of metals and other commodities from these regions provides the main workload for these two ports.

Ukraine has the most powerful port potential among all countries of the Black-Azov Sea basin. There are

13 seaports in the Black and Azov Seas.

The capacity of Ukrainian seaports is 232 million tonnes. The overall number of canals is 17, the total length of which is 239,6 km, including four largest with total length of 162,8 km. The port of Yuzhnyi has the deepest operational water area on the Black Sea.

The deepest ports

- Port of Yuzhnyi – 19 m (scheduled 21 m)
- Port of Illichivsk – 14 m (scheduled 15 m)
- Port of Odessa – 13 m

(Refer to Annexes III, IV and V),

Seaports of Ukraine have unique transit opportunities and conditions for free trade. Such unique location enables to optimize logistics cost for transportation by sea, river, road and rail routes.

D. Dry dock and Ship Yards

There are 49 shipbuilding companies registered in Ukraine. They are able to build a wide range of vessel types: powerboats, barges, bulk carriers (dry cargo ship), tankers, liquefied gas carriers, etc. Ukraine is one of the 10 largest shipbuilding countries in Europe.

Chernomorsk Shiprepair Yard

Chernomorsk Shiprepair Yard was established in 1951 in convenient harbour of Sukhoi Estuary (the northwestern Black Sea). It is situated close to Chernomorsk (ex Ilyichevsk) Sea port, ships calling at Chernomorsk in winter have the additional benefit of mild climatic conditions here.

Since the foundation of Shiprepair Yard, it has carried out repair works of all vessels types, using the latest technology. Today Chernomorsk Shiprepair Yard is the largest Ukrainian shiprepair who provides facilities for any kind of ship repair and conversion. Nowadays the company is capable to repair all types of ships up to Panamax size including technically advanced types of vessels such as car carriers, ro-ro, ferries, Panamax product tankers, multipurpose vessels and container carriers.

Shipyard «Ukraine», Odessa

Shipyard "Ukraine" of Odessa port for vessels repair of all types with displacement tonnage up to 30,000 tons was created on the base of the Odessa dockyard "Ukraine".

Shipyard "Ukraine" produces different metal constructions, carries out separate orders of industrial character. Ships of the foreign fleet, ships of CIS countries and ships of the Ukrainian maritime register of shipping are repaired at berths of Odesa shipyard “Ukraine”.

Mykolaiv Shipyard SMG

Mykolayiv shipyard is situated in the South-West of Nikolaev-city, on the bank of Bug Estuary having the direct gate to the Black Sea.

The shipyard possesses Design and Engineering Centre and auxiliary production workshops.

Kherson Shipyard

Public Joint Stock Company Kherson Shipyard is located in the mouth of the Dnieper river in the South of Ukraine. More than 300 vessels were built there for 26 countries. It carries out works with the variety of types of ships built: river-sea tankers, dry cargo ships, icebreakers, multi-purpose vessels, container carriers, Arctic suppliers, drilling vessels, etc.

Kiev shipbuilding and repair plant

Kuznya na Rybalskomu is a ship building and armament company in Kiev, Ukraine. Although situated on the Dnieper River and presently concentrated on river ships, the company is able to produce & repair small sea vessels (both civil and naval), as well as various military equipment.

Main production facilities of the company are situated on the Rybalskyi Island in Kiev since 1928. The shipyard specializes in shipbuilding, ship machines building, and propeller production. In the field of shipbuilding, the plant specializes in building medium fishing vessels, industrial ships and vessels of technical fleet, self-propelled and non-self-propelled barges. Machine building includes steam and hot-water automated boiler units, plate freezing apparatuses, and incinerators. Propeller production includes controllable-pitch propeller (CPP), blades, and lines of shafting.

E. Safety and security

Ukraine is providing its State Policy by approving National legislation and technical regulations to comply with the International and European ones in safety matters. Issues of safety are addressed in the Merchant Shipping Code of Ukraine. State Service of Ukraine for Transport Safety has the duty to oversee maritime safety issues in Ukraine.

Although accidents are inescapable but could be reduced by taking proper safety measures. There was 1 recent notable maritime accident within Ukrainian waters that have claimed a number of lives. 12 people were killed and one has been listed as missing after a passenger boat m/v Ivolga capsized near the Black Sea port city of Odessa. The accident took place near the small town of Bilhorod-Dnistrovkyi, about 40 kilometers southwest of Odessa, at about 4 p.m. local time on October 17. The accident report showed the boat had been overloaded, carrying more than twice as many people as were permitted. The passenger boat capsized as a result of stormy weather. There was not a sufficient number of life jackets on the boat for all 36 passengers on board.

State Enterprise Maritime Search and Rescue Service (hereinafter MSRS) providing measures towards the establishment of maritime search and rescue, safety of the human life in the high sea in accordance with international instruments Ukraine is a Party, as concerns the:

- organization, operation and maintenance of a relevant efficient search and rescue service;
- creation of a national body to generally coordinate search and rescue and provide the full extent of measures toward the maritime search and rescue in the SAR area of Ukraine.

8. Marine environment protection and preservation

Ukraine is providing its State Policy by approving National legislation and environmental regulations to comply with the International and European ones.

Ukraine is party to the International Convention for the Prevention of Pollution from Ships (MARPOL 73/78), 1973/1978. Provisions of the Convention are incorporated in the Law of Ukraine "On Transport" for the purposes of implementation. The Ministry of Infrastructure (through State Service of Ukraine for Transport Safety) and the Ministry of Ecology work together to ensure the protection and preservation of marine environment.

9. Registration of ships

Registration in the Ship Book of Ukraine is carried out by the State Service of Ukraine for Transport Security in the Register of the Ship's Book of Ukraine, subject to the ship:

- with power of main engines up to 55 kW (up to 75 hp);

- gross capacity up to 80 units. (Refer to Annex VI)

10. Seafarers and Maritime Education and Training

About 80,000 Ukrainian seafarers are engaged on board the ships all over the World. According to BIMCO, Ukraine ranks 5th in the world in the number of seafarers (sources: Manpower Report 2015 Executive Summary Final). In 2017 about 3,600 cadets were enrolled in marine universities of Ukraine to become future officers.

Seafarers' education in Ukraine is carried out in 4 Universities and 1 Academy, 2 institutes and 4 colleges. All establishments are state-owned and controlled by the Ministry of Science and Education. Specialized courses are provided by 49 training centers. About 90% of them are private. The training centers are coordinated by the Ministry of Infrastructure. All institutions are located in the cities of Odessa, Kiev, Kherson, Nikolayev, Mariupol and Izmail.

Educational institutions conduct studies for officers, as well as refresh and updating courses. Training centers provide appropriate simulator training. All educational and training is conducted in accordance with the requirements of the STCW Convention, IMO model courses and national requirements.

In addition, there are 2 colleges (Odessa and Kherson), which train seafarers for the fishing fleet in accordance with the requirements of the STCW-F Convention.

In Ukraine the challenges in the sector of seafarer`s training includes difficulties with gaining of practical training on board the ships for cadets and the training of teachers and instructors for maritime training institutions and training centers.

11. Non – Seafarers Maritime Education and Training

3 universities (in the cities of Odessa and Mykolaiv) and 2 colleges are engaged in the training of specialists for the maritime sphere. All institutions are state-owned and are controlled by the Ministry of Science and Education. Institutions train maritime lawyers, port managers, personnel for coastal infrastructure, shipping companies and the shipbuilding industry. There is also the Institute of Postgraduate Education, in which appropriate courses for the maritime sector are conducted. The Institute is managed by the Ministry of Infrastructure and currently is temporary unavailable due to the reorganization.

12. Relationship with Japan in the Maritime Field

The Government of Japan and its agency are providing great assistance to Ukraine.

Unfortunately, according to the information of the State Enterprise «Ukrainian Sea Ports Authority» and the Japanese Embassy in Ukraine, Relationship with Japan in the Maritime Field are not held.

13. Maritime Organisation and WMU Graduates distribution

There are 6 Ukrainian nationals who have graduated from WMU (4 of them Sasakawa fellows). (Refer Annex VII)

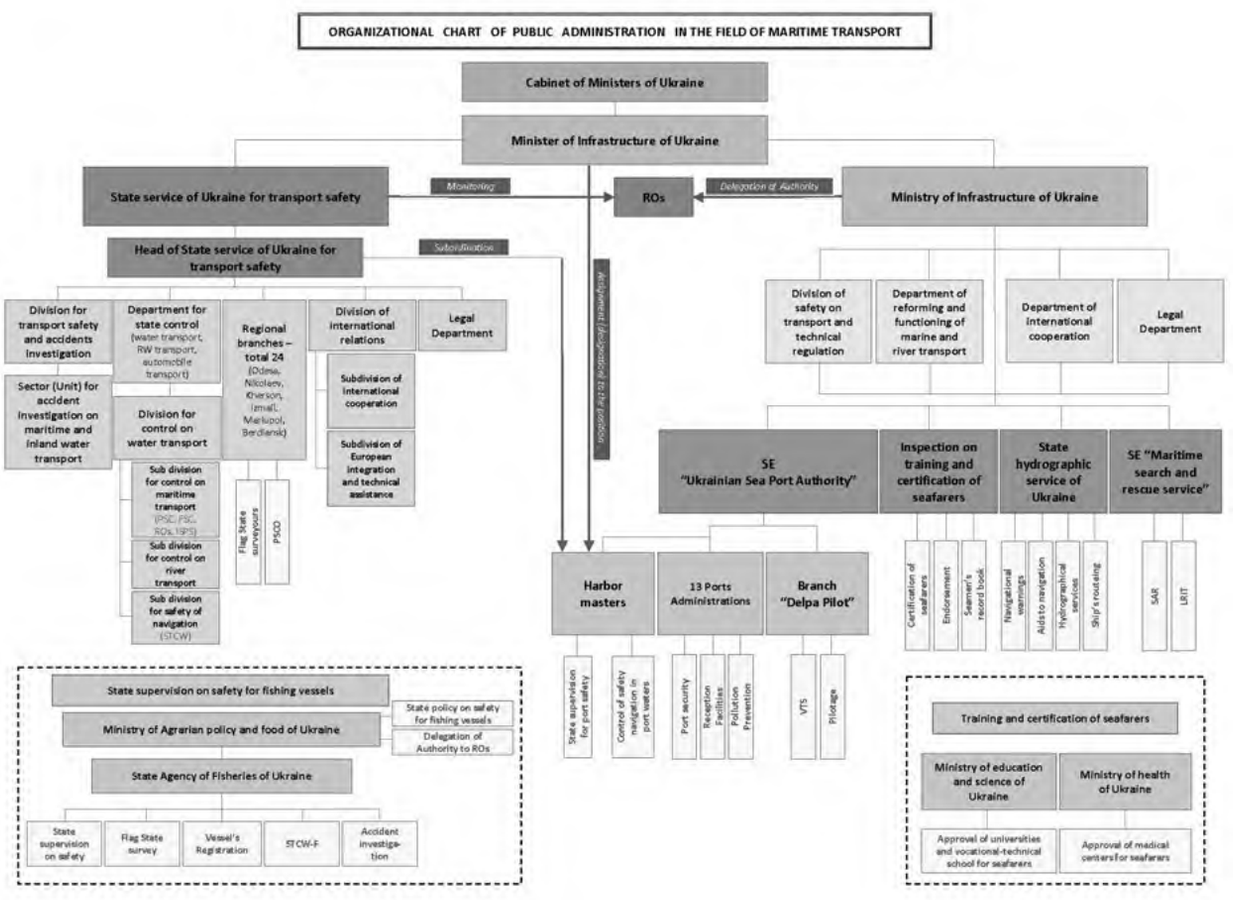
Currently, WMU Sasakawa fellows are working at Inspectorate for Training and Certification of Seafarers, Institute of water transport of State Infrastructure and Technology University and private sector.

There is no formally prescribed procedure for WMU candidates' selection process. However, individual institutions manage the procedure in accordance to their own relevant policies.

14. Comments

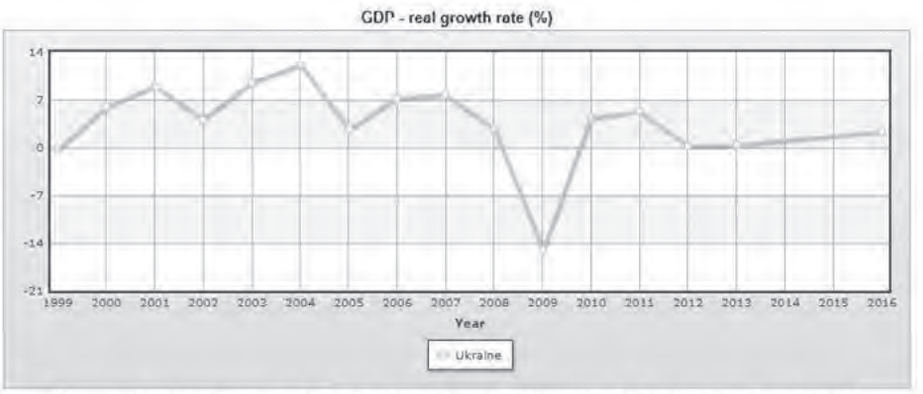
Taking into account the big opportunity to growth of the Ukrainian maritime sector, Ukraine is taking all the necessary measures to comply with the requirements of IMO instruments, EU legislation within the Association Agreement's implementation by means of relevant resources and processes. The country is improving in communication to the public of necessary information regarding International and European regulations in the field of Maritime Safety and Environment Protection as well as in provision of relevant services to Ship owners within Ukraine's obligations as the Flag State, Port and Coastal State.

Annex no. 1



Maritime Administrative Organization of Ukraine

Annex no. II

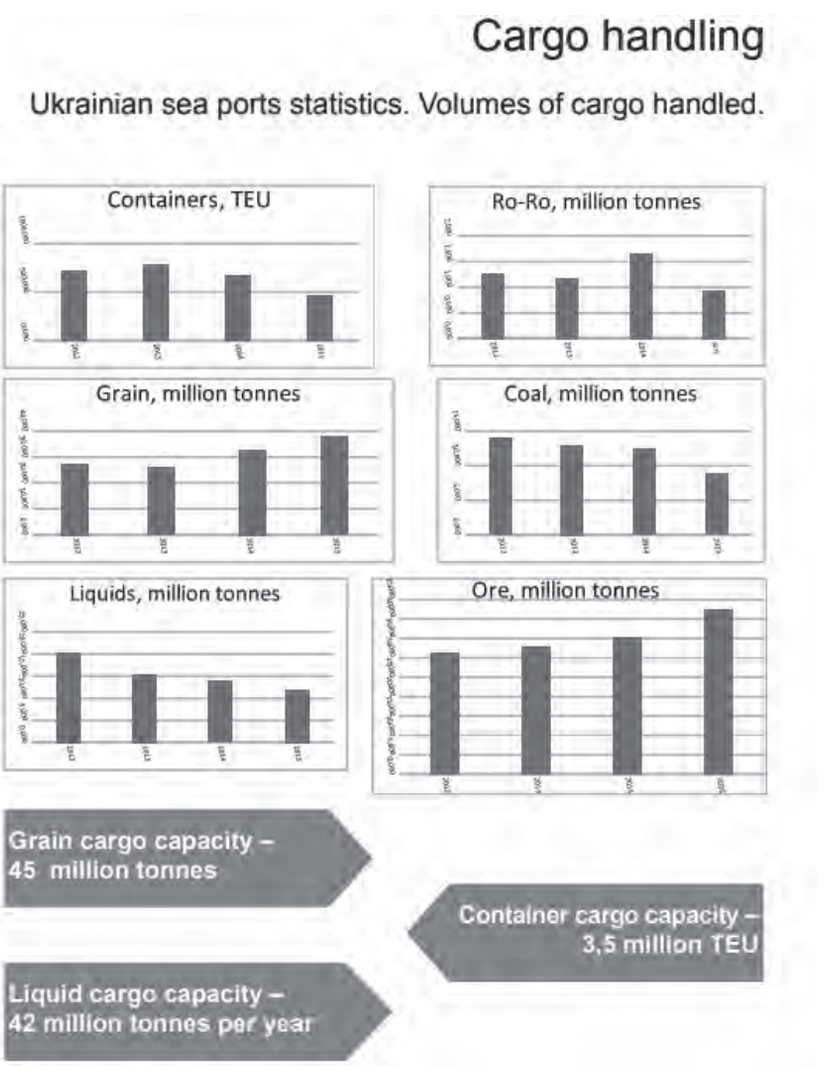


Country	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2016
Ukraine	-0.4	6	9	4.1	9.4	12	2.6	7.1	7.7	2.7	-15.1	4.2	5.2	0.2	0.4	2.3

Annual Growth rates of total GDP

Source: www.cia.gov/library/publications/the-world-factbook

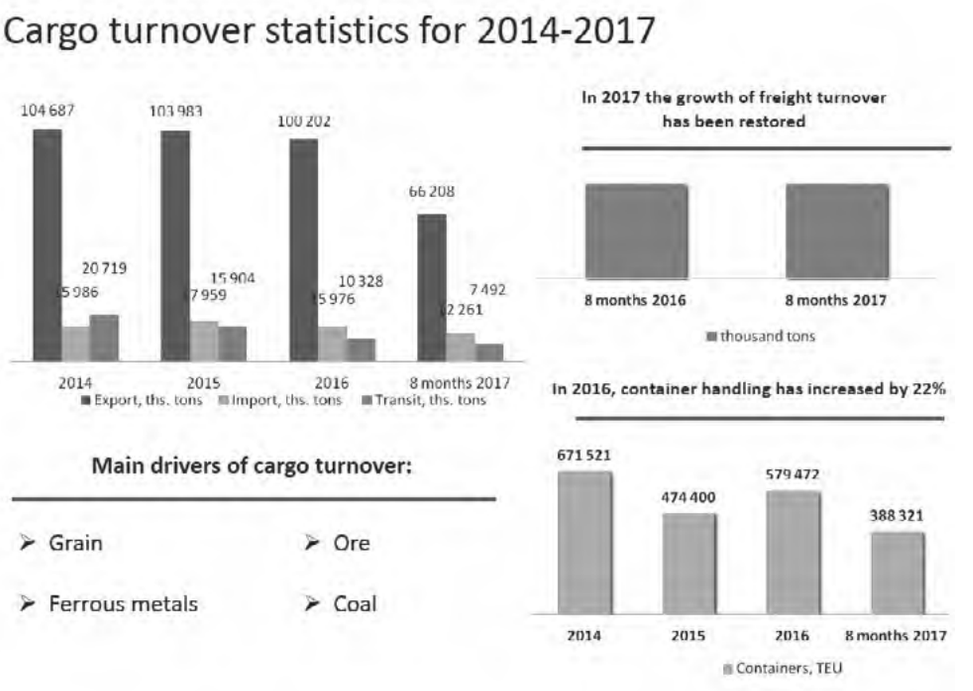
Annex no. III



Cargo Handling in Ports 2012-2015

Source: uspa.gov.ua

Annex no. IV



Cargo turnover statistics 2014 - 2017

Annex no. V

Year	Ship call (incl. river-sea ships)	Passengers
2008	171	70433
2009	118	51097
2010	132	66000
2011	123	66765
2012	125	72516
2013	148	91949

Ship	Length, m	Passenger capacity
COSTA DELIZIOSA	294	3570
MSC MUSICA	293,8	3013
NORWEGIAN JADE	294,13	2800
COSTA MEDITERRANEA	292,5	2680
QUEEN VICTORIA	294	2250

Black sea cruises
Port of Odesa
5 berths for cruise ships acceptance
Maximum draught - 11,5 m
Maximum length of ships - up to 330 m
Passenger capacity - 1 million pax.
Total length of berth line - 1370 m

Danube cruises
Port of Izmail
3 floating berths for river ships service
Maximum draught - 7 m
Maximum length of ships - up to 160 m
Total length of berth line - 256 m

Dniester cruises
Port of Kherson
1 berth to accept ships with the length of up to 120 m
Maximum draught - to 3.5 m

Port of Ust-Dunaisk (Vilkovo)
1 floating berth for passenger service
Maximum draught - 4 m
Maximum length of ships - up to 150 m
Berth length - 66 m

Passenger Traffic for Major ports from year 2008-2013

Source: uspa.gov.ua

Annex no VI

Ukrainian Registered Fleet, 2017

	Number
Passenger	73
Cargo	133
Fishing	124, including 11 oceanic
Other	296

(Source: uspa.gov.ua)

Annex no. VII

UKRAINE
WORLD MARITIME UNIVERSITY GRADUATES

S/NO.	NAME	YEAR OF GRADUATION	REMARKS
1.	**VICTORIA RADCHENKO** (SASAKAWA FELLOWS)	2001 MSEA	Docent, Institute of water transport of State Infrastructure and Technology University, Kyiv, UKRAINE
2.	**ANNA RABOTNOVA** (SASAKAWA FELLOWS)	2012 MSEA	DPA, Transship Ltd. Odessa, UKRAINE
3.	**NADIYA ISAKOVA** (SASAKAWA FELLOWS)	2012 MLP	private sector, GREESE
4.	**IGOR PISHENIN** (SASAKAWA FELLOWS)	2013 MET	Deputy Head, Inspectorate for Training and Certification of Seafarers, Kiev, UKRAINE
5.	**ALINA PRYLIPKO** (NON SASAKAWA FELLOWS)	2013 MET	Curriculum Manager Nautical Science, Fleetwood Nautical Campus, Blackpool and the Fylde College, UK
6.	**ANTON KULCHYTSKYY** (NON SASAKAWA FELLOWS)	2015 SML	temporarily not occupied, Odessa, UKRAINE

List of Participants

	Country	Year of Graduation	Name	Office Organization / Email Address
1	Albania	2008	 Mr. Ermal XHELILAJ	Professor, Head of Maritime Law Research Group Departament of Nautical Sciences University ""Ismail Qemali"" Vlore, Albania *er.xhelilaj@gmail.com*
2	Algeria	2014	 Mr. Mohamed TAALBI	Second Engineer Seafarer Enterprise National de Transport Maritime de Voyageurs *seafarer1983@hotmail.fr*
3	Azerbaijan	2017	 Ms. Aynur MAHARRAMOVA	Head specialist Ship Registration and Control on Ships The State Maritime Organization of the republic of Azerbaijan *s17067@wmu.se*
4	Egypt	2004	 Mr. Ehab Ibrahim OTHMAN	Vice Dean for Maritime Education Affairs Maritime Safety Institute Arab Academy for Science and Technology and Maritime Transport (AASTMT) *etmanehab@yahoo.com*
5	Egypt	2013	 Mr. Amr Moneer IBRAHIM	Senior Maritime Lecturer and Simulator Instructor Marine Simulators Arab Academy for Science and Technology and Maritime Transport (AASTMT) *amr_moneer@yahoo.com*
6	Egypt	2015	 Mr. Mohamed Nabil Elnabawi A. BAHRIZ	Maritime Lecture, Shipping and port courses coordenator and P&I Inspector Maritime Transport & Technology Arab Academy for Science and Technology and Maritime Transport (AASTMT) *s15058@alumni.wmu.se*
7	Egypt	2016	 Mr. Hossameldin bakr MOHAMED	Lecturer College of Maritime Transport & Technology Arab Academy for Science and Technology and Maritime Transport (AASTMT) *hossambakr@gmail.com*

	Country	Year of Graduation	Name	Office Organization / Email Address
8	Egypt	2017	 Mr. Mohamed Shawki Mohamed EL KHADRAWI	Judge, President of Class (A) Court Maritime and Commircial Department Egyptian Ministry of Justice. *mmmsss.egypt@gmail.com*
9	Latvia	2009	 Ms. Anete LOGINA	Legal Adviser Legal Department Maritime Administration of Latvia *anete.logina@inbox.lv*
10	Lithuania	1999	 Mr. Robertinas TARASEVICIUS	Director, Administration Lithuanian Maritime Safety Administration *robertinas.tarasevicius@gmail.com*
11	Lithuania	2005	 Mr. Andrius DAUJOTAS	Director Siauliai International Airport *daujotasand@gmail.com*
12	Malta	2017	 Mr. Mark Philip CASSAR	Flag & Port State Control Inspector Merchant Shipping Directorate - Technical Department Transport Malta *s17061@wmu.se*
13	Morocco	2005	 Mr. Nabil ANWARI	Deputy Head (National SAR Bureau) Directorate of Maritime Education, Seafarers and Search and Rescue Department of Fisheries *anwari_330@yahoo.fr*
14	Morocco	2016	 Ms. Fatima Zahra EL MARZOUKI	Legal Affairs & Autorizations Officer Aquaculture Projects Engineering Department National Agency of Development of Aquaculture *elmarzouki.zahra@gmail.com*
15	Tunisia	2015	 Mr. Chihebeddine BADIR	Harbour Officer Maritime Administration Office of Merchant Navy and Ports *tunisiantravler@gmail.com*

	Country	Year of Graduation	Name	Office Organization / Email Address
16	Turkey	2007	 Ms. Ozlem MULUN AKPINAR	Adviser to the DG / Expert in Maritime and EU Affairs Directorate General for Regulation of Maritime and Inland Waters Ministry of Transport, Maritime Affairs and Communications *ozlem.mulun@gmail.com*
17	Ukraine	2012	 Ms. Anna RABOTNOVA	Deputy DPA (Designated Person Ashore) Operational Department Transship Ltd. *anna.rabotnjova@gmail.com*
18	Ukraine	2013	 Mr. Igor PISHENIN	Deputy Head Inspectorate for Training and Certification of Seafarers *itcs@meta.ua*
Sasakawa Fellows of the U.K.				
19	Brazil	1999	 Ms. Sandra Rita ALLNUTT	Head, Marine Technology and GBS Maritime Safety Division International Maritime Organization *SAllnutt@imo.org*
20	China	2005	 Mr. Jun SUN	Technical Officer Marine Environment Division International Maritiime Organization *JSun@imo.org*
21	China	2005	 Mr. Xiao-Dong ZHANG	First Secretary (Maritime) Chinese Embassy in the U.K. *zxd@shmsa.gov.cn*
22	Egypt	2003	 Mr. Mohab. Mohamoud ABOU-ELKAWAM	Senior Lecturer Maritime School Liverpool John Moores University *elkawammohab@hotmail.com*
23	India	2010	 Mr. Aji VASUDEVAN	Audit and Implementation Support Department for Member State Member State Audit Officer International Maritime Organization *vaji@imo.org*

	Country	Year of Graduation	Name	Office Organization / Email Address
24	Japan	2012	 Mr. Yasuhiro URANO	Junior Professional Officer Sub-Division for Implementation, Marine Environment Division International Maritime Organization *YUrano@imo.org*
25	Lithuania	2002	 Ms. Nadezda KOVTUNOVA	Business Development Manager Business Development EMEA Guidewire Software UK Ltd. *m02013@gmail.com*
World Maritime University (WMU)				
26	Sweden		 Ms. Susan JACKSON	Registrar World Maritime University *sj@wmu.se*
The Sasakawa Peace Foundation (SPF)				
27	Japan		 Mr. Tsutomu AKITA	Senior Specialist The Sasakawa Peace Foundation *t-akita@spf.or.jp*
28	Japan		 Mr. Shinichi ICHIKAWA	Manager Ocean Research and Development Department The Sasakawa Peace Foundation *s-ichikawa@spf.or.jp*
29	Japan		 Mr. Atsushi KATO	Ocean Research and Development Department The Sasakawa Peace Foundation *a-kato@spf.or.jp*

WMU Sasakawa Fellows' Network Meeting
in the East European, Middle Eastern, and North African Regions

Ocean Policy Research Institute, The Sasakawa Peace Foundation
The Sasakawa Peace Foundation Building 1-15-16 Toranomon, Minato-ku, Tokyo 105-8524 JAPAN
TEL.81-3-5157-5263
FAX.81-3-5157-5230
E-mail : wmujapan@spf.or.jp
URL : http://www.wmujapan.net/

Editing Friends of WMU, Japan Secretariat

ISBN 978-4-88404-348-3

THE NIPPON FOUNDATION

THE SASAKAWA PEACE FOUNDATION

THE OCEAN POLICY RESEARCH INSTITUTE