EuropeAid/133051/C/SER/multi
Contract number : 2012/308-311

TRACECA Maritime Safety and Security II

Beneficiary Countries: Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, Moldova, Tajikistan, Turkmenistan, Ukraine, Uzbekistan

Report

Activity 3.1: VTMIS Needs Assessment

09 December 2012

This project is funded by

The European Union

A project implemented by

The NTU Consortium

TRACECA Maritime Safety and Security II

Contract number: 2012/308-311

Beneficiary Countries: TRACECA Region

	Name	Date
Written by:	Hartmut Rapp	09 December 2013
Approved by:	Albert Bergonzo	16 December 2013

Summary

Name of the Expert:	Hartmut Rapp
Expert position:	STE, Safety of Navigation Expert
Mission number:	
Mission start date:	23 September 2013
Mission end date:	09 December 2013
Number of working days:	40 working days
Mission objective:	Assessment of VTS/VTMIS systems in beneficiary countries
Main activities:	Assessment of prevailing systems as well as equipment and training needs
Main results:	Present status regarding legislation, VTS coverage, utilised equipment, provided services and qualification of personnel
Programme of next mission:	
Annexes (documents produced during the mission):	

Table of Contents

1 INTRODUCTION

The TRACECA Maritime Safety & Security II Project has been conceived as a follow-up of the previous EU-funded TRACECA project "Development of common security management, maritime safety and ship pollution prevention for the Black Sea and Caspian Sea, EuropeAid 127221/C/SER/Multi (SASEPOL). TRACECA Maritime Safety & Security II is linked to the topics and themes addressed in platform 2 of the Eastern Partnership on Economic Integration and Convergence of the EU Policies addressing the main transport challenges faced by the European Neighbourhood Partnership Instrument (ENPI) countries.

The NTU consortium proposed an approach with clearly defined components, tasks and phases, such as:

Component 1: Regional coordination

Component 2: Flag State implementation

Component 3: Safety of navigation

Component 4: Protection of the marine environment

Component 5: The Human Element

Component 6: Security of ships and ports

Component 7: Visibility and communication

Each component includes a number of related activities, outputs and deliverables.

The purpose of Component 3 is to support the project partners in complying with international regulations related to traffic monitoring instruments: AIS, VTMIS and LRIT. It is divided into three activities:

3.1. Needs assessment,
3.2. Development of training program, and
3.3. Delivery of training.

The following report deals with Activity 3.1 Needs Assessment.

2 ASSESSMENT OF PREVAILING SITUATION AND NEEDS

2.1 General Remarks

The assessment of VTS and AIS systems in the beneficiary countries is based on a review of the SASEPOL and MONINFO Reports, mission reports undertaken earlier in the course of this project and questionnaires recently submitted to and filled in by the concerned parties in the beneficiary countries.

The following sections 2.2 to 2.7 concentrate on Azerbaijan, Georgia, Kazakhstan and Ukraine. The sections summarise the findings in the before mentioned countries with regard to

2 2. Corresponding legislation;

More detailed information is provided per country in the country files in Appendix A.

The Republic of Moldova is dealt with separately in Section 2.8, as the water area under its jurisdiction and the traffic do not necessitate a VTS system.

As to Turkmenistan, the little and apparently outdated information obtained from SASEPOL reports indicated that a proper VTS system does not exist. Moreover, as the authorities did not respond to the questionnaire and enquiries submitted, and a mission during the limited time was not feasible, the situation in Turkmenistan cannot be assessed in this report.

2.2 Legal Matters

The establishment of VTS centres in Georgia, Kazakhstan and Ukraine is governed by national legislation. In Azerbaijan, however, corresponding legislation has not yet been finalised. Hence, international conventions were used for the establishment of the VTS centre in Baku.

In Azerbaijan, Kazakhstan and Ukraine the Competent Authority [i.e. the authority made responsible by the Government for safety, including environmental safety, and efficiency of vessel traffic and the protection of the environment as per IMO Resolution A.857(20)] is the respective ministry in charge of maritime transport, whereas in Georgia it is the Maritime Transport Agency (MTA) under the Ministry of Economy and Sustainable Development.

In Azerbaijan, the same ministry is also the VTS authority, i.e. the authority with responsibility for the management, operation and coordination of the VTS, interaction with participating vessels and the safe and effective provision of the service. Recognized VTS authorities in Kazakhstan and Ukraine are JSC National Company “Aktau International Sea Trade Port” and the Administration of Sea Ports of Ukraine / Delta Pilot respectively.

VTS services in the ports of Georgia are managed by private companies, which according to the Maritime Transport Agency do not provide the services as required, i.e. with the objective of safer and more efficient shipping, but rather for commercial reasons. The operating companies are not recognised and the operators are not certified by MTA. This situation shall be changed in the near future. New legislative acts on VTS in accordance with IMO Resolution A.857 and IALA recommendations are being drafted with the objective to have recognized VTS authorities and certified operators replace the present organisation.

2.3 Monitored Areas

In Ukraine, all major ports as well as most of the territorial waters are controlled by VTS or River Information Services (the latter on the Danube and Dnieper rivers).

In the other countries, i.e. in Azerbaijan, Georgia and Kazakhstan coastal VTS centres are not yet established. So far, VTS centres exist only in ports, and in Kazakhstan only in one port, namely Bautino.

The working radii of port VTS centres vary between 8 and 50 nm.

2.4 VTS Equipment

All VTS centres are provided with radar, VHF, CCTV and AIS, and most of them with hydrometeorological equipment. The centre in Baku is in addition equipped with ECDIS, LRIT, NAVTEX, INMARSAT-C and Digital Selective Calling (DSC).

Furthermore, all centres except the Georgian are furnished with complete sets of back-up equipment. In the Georgian centres only emergency power generators and back-ups for VHF stations are provided.

2.5 VTS Services

Services provided by VTS centres may be broadly divided into

a) information service, i.e. the broadcasting on the identities, positions and intentions/destinations of vessels, waterway conditions, weather, hazards and any other factors that may influence vessels' transits;
b) navigational assistance service which is especially important in difficult navigational or meteorological circumstances or in case of defects or deficiencies. Such service is normally rendered at the request of a vessel or by the VTS centre when deemed necessary.
c) traffic organization service, i.e. the operational management of traffic and the forward planning of vessel movements to prevent congestion and dangerous situations. This is particularly relevant in times of high traffic density or when the movement of special transports may effect the flow of other traffic.

According to the information received from the beneficiaries, all of the above services are provided by the VTS centres in Azerbaijan, Georgia and Ukraine, whereas the centre in Bautino ort/Kazakhstan provides only the information service (a).

All VTS centres request vessel and cargo details before vessels' arrival in their respective areas. Further data are collected from the AIS system.

So far, documented standard reporting procedures with regard to vessel traffic and communication with vessels only exist in Azerbaijan, however, solely in Azeri language. A corresponding reporting system is under development in Ukraine, while in Georgia and Kazakhstan related activities have not yet been undertaken.

The centres in Azerbaijan, Georgia and Ukraine share information on vessel traffic with the national Coast Guard, especially in cases of emergencies. In Azerbaijan this is done in accordance with a mutually elaborated cooperation plan. In Ukraine some centres are even jointly operated with the Coast Guard. However, in Kazakhstan, i.e. in the Port of Bautino there is apparently no such cooperation.

2.6 Management of VTS Stations

For the time being both legal directives specifying requirements for numbers and qualification of VTS staff as well as internal documented standards, instructions and manuals regarding operational procedures in the VTS centres only exist in Azerbaijan, albeit only in Azeri language.

In Georgia there are already internal documented standards, instructions and manuals regarding operational procedures in the VTS centres; however, legal documents specifying personnel requirements are not yet finalised. In contrast thereto, corresponding national regulations already exist in Ukraine while no information was made available with regard to internal procedures in the VTS centres. Finally, in Kazakhstan neither national regulations nor documented internal procedures exist so far.

The VTS centres in all four countries are permanently manned (24 hrs./day, 365 days/year) and work on shift bases. However, the hours per shift differ widely. In Azerbaijan there are 3 shifts of 8 hours each per day, while in Kazakhstan only 2 shifts of 12 hours are worked per day, and in Georgia and Ukraine one shift takes 24 hours.

2.7 VTS Personnel, Qualifications and Training

All authorities contacted in the beneficiary countries confirmed that their VTS centres are adequately staffed to cope with the prevailing traffic situations and corresponding requirements at all times.

In general, VTS operators are required to have a corresponding maritime background and aptitude, i.e. experience as masters or at least chief officers foreign going or as pilots with similar background, sufficient knowledge of the English language and physical fitness. These conditions were confirmed by the authorities in Azerbaijan, Georgia and Ukraine. No information was received in this respect from Kazakhstan.

All VTS operators and engineers participated successfully in training courses including simulator training before their employments. VTS operators in Azerbaijan received training courses in accordance with IALA Recommendation V-103/1 before and refresher courses thereafter during their employment Otherwise, little information was received about the extent and contents of such training courses. Answers to corresponding questions are still outstanding at the time of writing this report.

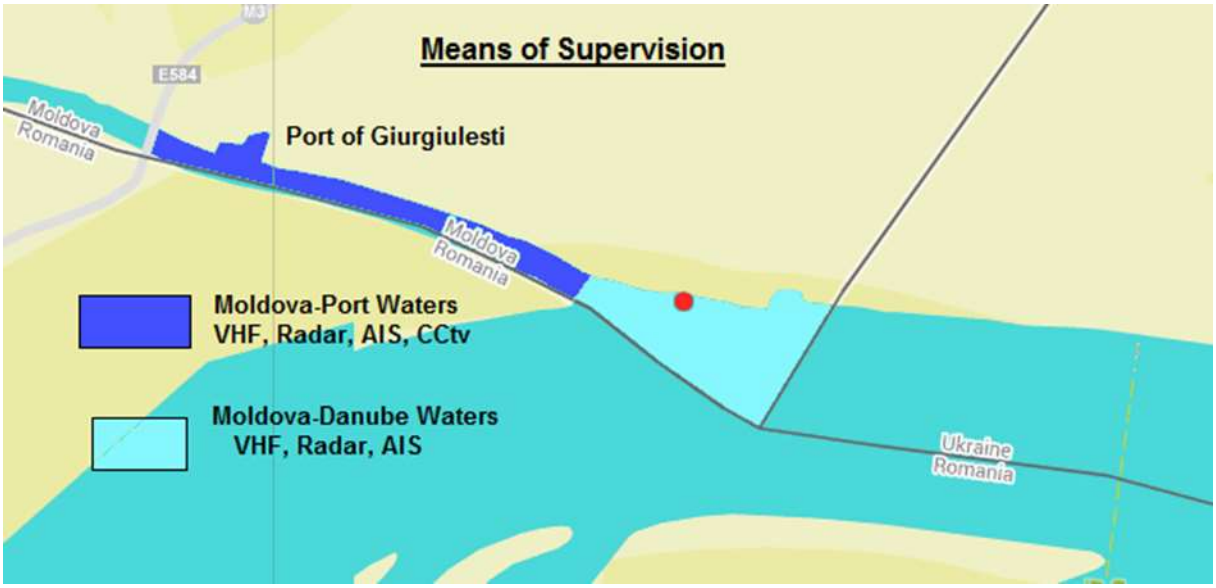
Refresher courses/repetition of training during the employment are apparently also offered in Ukraine.

All authorities voiced a request for more training activities and/or exchange of views with other established VTS centres and experienced operators.

2.8 Republic of Moldova

The Republic of Moldova has one port at the Danube River, the Giurgiulesti International Free Port, and only a limited water area under its jurisdiction (see Fig. 1).

Traffic to, from and passing the Port of Giurgiulesti is controlled by Romanian, Ukrainian and Moldovan authorities in their respective national waters. Information on traffic is exchanged between the authorities via VHF; however, there are no standard or approved communication procedures. The traffic on the Moldovan area on the Danube is controlled by Giurgiulesti Traffic Control by means of VHF and radar, in port waters CCTV is used in addition. AIS data are also collected and saved.



Source: Harbour Master Giurgiulesti

Figure 1: Giurgiulesti International Free Port

The traffic in the port is also limited. In 2012 a total of 477 vessels of different types and sizes called at the port and discharged or loaded some 420 mtons of cargo. The breakdown of cargoes is provided in Table 1.

Table 1: Cargo Traffic in Giurgiulesti

2012, Months I - XII			
Cargo Type	IN (MT)	OUT (MT)	TOTAL (MT)
Gravel	136.841,113	-	136.841,113
Oil-Products	87.573,748	9.210,221	96.783,969
Cereals	2.262,745	76.375,668	78.638,413
Sunflower Oil	-	50.901,483	50.901,483
Pet-coke	27.745,069	-	27.745,069
Containers	11.256,666	2.295,370	13.552,036
Livestock	438,900	4.177,312	4.616,212
Other	4.392,226	-	4.392,226
Salt in bulk	3.715,367	-	3.715,367
Malt	3.043,737	-	3.043,737
Gen Cargo	1.366,409	75,511	1.441,920
TOTAL:	*278.635,979*	*143.035,565*	***421.671,544***

Source: Harbour Master Giurgiulesti

According to the Harbour Master, dangerous cargoes according to the IMDG and IMSBC Codes have not been handled in Giurgiulesti International Free Port, nor were there any accidents reported during the past years.

Considering the limited territorial water area as well as the amount of traffic, the establishment of a national VTS centre in Moldova is not considered necessary.

3 REGIONAL AIS SERVER

A meeting with Permanent Secretariat of the Black Sea Commission (BSC, Commission on the Protection of the Black Sea against Pollution) took place in Istanbul on 28th November 2013 to obtain an update on the MONINFO Project and on the activities undertaken since its cessation.

The MONINFO Project commenced in the beginning of 2010 and ceased at the end of 2012. An extension of the project beyond December 2012 was not granted, as its successful conclusion within a limited extension period was not anticipated by the EU.

The MoU for the establishment of the regional AIS server was finalised and basically agreed upon by all members, with only one stumbling block: no agreement could be achieved on the location of the server. A further meeting to discuss that subject was planned for March 2013, but did not take place any more.

As no comprehensive solution to the server-problem could be seen towards the end of the project, Romania, Bulgaria, Turkey and Georgia discussed the option to have initially a regional server on a smaller scale, only including those four countries and have the other two countries join later. However, as Bulgaria eventually withdrew from that idea it was abandoned.

During the project period the EU opined that BSC should establish and manage the regional server. However, BSC did not have at its disposal sufficient funds, and hence this avenue was not pursued at that time. The subject was taken up again during the meeting on 28th November 2013. However, BSC did not believe that member states would increase their present contributions to the Commission.

No further initiatives have been taken since the closure of the project and no future activities are planned by BSC with regard to the regional server, except intensive networking with the member states in general regarding all tasks and obligations of BSC. This includes the AIS server, but present activities merely aim at keeping the subject going. According to BSC the members are only interested in national or bilateral matters, or trilateral at the most.

BSC expressed its great interest in having the regional server subject revived and its readiness to provide support in this respect.

4 CONCLUSION AND RECOMMENDATIONS

4.1 Legal Matters

In Azerbaijan national legislation governing the establishment and management of VTs centres is being drafted, but not finalised. Likewise, the Government in Georgia considers amendments to available legislation with the objective to regulate and control the management of VTS centres. The development in both countries should be monitored and assistance/guidance offered, if required.

4.2 Further Activities

Anticipated uncertainties and shortcomings with regard to knowledge and skills of VTS staff will be dealt with when related training programmes are developed and executed, i.e. in the course of Activities 3.2 and 3.3 of this project, as outlined in the Inception Report. Moreover, the workshop intended to be executed during Activity 3.3 shall contain an international comparison and best practices with regard to the provision of VTS services including internal and external procedures as well as utilisation of required equipment.

4.3 VTS/AIS Coverage and Regional AIS Server

The Black Sea is a Special Area according to MARPOL Annexes I and V and, hence, close surveillance of vessel traffic in this area is of high importance. This could be done through monitoring by means of VTS and AIS.

A prerequisite for such a service would be full VTS/AIS coverage of all coastal areas. This is not yet the case. While in Ukraine basically the entire coastline is under surveillance, coverage in Georgia is limited to the ports of Batumi, Poti and Kulevi, i.e. comprehensive coastal coverage is not available.

VTS/AIS services in Romania, Bulgaria, Turkey and Russia have not been assessed in the course of this project, but are assumed to cover the national coastlines.

Once full coverage will be achieved, surveillance would ideally be executed via a regional server as planned for in the MONINFO Project. However, following BSC's explanations it will be difficult to have a meaningful revival of the project. Main points to be discussed and clarified before a new start would include the following:

1. Location and management of the server?
2. How can a neutral server management be achieved?
3. If the server would be managed by BSC, how could the costs be recovered from the member states and what would be the modalities?

During the discussion with the BSC Permanent Secretariat it became also clear that the Regional Server problem cannot be solved on working level within this project, but solutions regarding above issues need to be discussed and found on apolitical level.

Appendix A: Country Profiles

A 1. Azerbaijan

A 2. Georgia

A 3. Kazakhstan

A 4. Ukraine

Country: Azerbaijan

1 General

1.1 **National legal basis for the establishment of VTS system:**

For the time being, there is no national legislation. Only international conventions are applied.

The appropriate work concerning implementation relevant requirements into national legislation is carried out by the State Maritime Administration, but adoption of the law or regulations require more time.

1.2 **Competent Authority responsible for safety, including environmental safety, and efficiency of vessel traffic in accordance with IMO Resolution A.857(20):**

State Maritime Administration of the Azerbaijan Republic

1.3 **Available VTS systems:**

Port VTS in Baku, i.e. Baku Traffic Control

1.4 **Areas controlled by VTS:**

For the time being, only Baku Harbour and Traffic Separation Scheme (TSS) of vessels from Zhiloy island to Boyuk Zira island.

Equipment is being installed along the national coast to control the whole coast by radar and land-based AIS remote control stations in the near future.

1.5 **Location of VTS centres:**

Premises of the Stat Marine Administration in Baku.

1.6 **Authority responsible for the management, operation and co-ordination of VTS services?**

State Maritime Administration of the Azerbaijan Republic.

1.7 **Communication with other VTS centres**

The VTS Centre of the State Maritime Administration exchanges information with the Coast Guard, Ministry of Emergencies and the Maritime Forces on a permanent basis in accordance with a commonly elaborated cooperation plan.

2 VTS equipment

2.1 **Equipment used for the provision of VTS services:**

AIS, ECDIS, RADAR, VHF and MF/HF, LRIT, hydrometeorological equipment, NAVTEX, INMARSAT-C, DSC (Digital Selective Calling).

2.2 **Back-up equipment (in case of breakdowns):**

Back-up equipment for all kinds of equipment available.

2.3 **Range of coverage:**

Identification and control of vessels is reliably ensured in the 50 miles zone by the Traffic Separation Scheme (TSS) from Zhiloy island to Boyuk Zira island.

3 Services

3.1 **Kind of services provided, e.g. (a) information on traffic, waterway conditions, weather, hazards, etc., (b) navigational assistance services, (c) organisation of smooth traffic flows to prevent congestions or dangerous situations:**

Full services (a – c) provided.

4 Communication with vessels

4.1 **Information required from vessels before entering a VTS area:**

Cargo details are required in addition to information taken from AIS.

4.2 **Availability of documented standard reporting procedures**

There are documented standard reporting procedures, however, only in Azeri language.

5 Management and Personnel

5.1 **National legal requirements with regard to manning of VTS centres and qualification of personnel:**

There is a "Statute for the Long Range Identification and Tracking National Centre (LRIT) of the State Maritime Administration of the Republic of Azerbaijan (No. S/04 of August 01, 2011)", specifying job descriptions and requirements for numbers and qualifications of staff, but only available in Azeri language.

5.2 **Internal documented standards, instructions and manuals regarding VTS operations**

In the VTS centre, there are documented standards, instructions and manuals regarding internal operational procedures, elaborated according to IMO requirements, but only available in Azeri language.

5.3 **Operation of VTS centres:**

The VTS centre is permanently manned (24 hrs./day, 365 days/year) and works on a shift basis (3 shifts/day).

5.4 **Staffing of VTS centres:**

The centre is staffed in accordance with the "Statute for the Long Range Identification and Tracking National Centre (LRIT) of the State Maritime Administration of the Republic of Azerbaijan"(see 5.1), i.e. 2 experts per shift (VTS operator and GMDSS operator).

5.5 **Qualification of VTS staff**

A VTS operator is required to

- have a higher navigation and working diploma as captain or navigator (foreign going);
- have knowledge of the English language to the extent necessary for the conduct of negotiations with the courts on topics related to the activities of the VTS and safety of navigation ;
- be found fit (without constraints) by a medical commission to work as VTS operator ;
- have received special training including simulator training and training on the equipment of the VTS centre.

5.6 **Training of staff**

VTS operators have completed training in “Vessel traffic services operator” at Makarov Training Centre of the Admiral Makarov State Maritime Academy in accordance with IALA Recommendation V-103/1 before their employment. Since then they have also been offered refresher courses.

However, there is a request for exchange of knowledge with LRIT and VTS centres with extended practice in leading European countries.

Country: Georgia

1 General

1.1 **National legal basis for the establishment of VTS system:**

Maritime Code of Georgia,

Order of the Director of LEPL Maritime Transport Agency on "Approval of Port Rules"

1.2 **Competent Authority responsible for safety, including environmental safety, and efficiency of vessel traffic in accordance with IMO Resolution A.857(20):**

Maritime Transport Agency

1.3 **Available VTS systems:**

Port VTS for ports of Batumi, Pot and Kulevi

1.4 **Areas controlled by VTS:**

Port areas including approaches and anchorages.

There is no coastal VTS surveillance.

1.5 **Location of VTS centres:**

In the ports of Batumi, Pot and Kulevi

1.6 **Authority responsible for the management, operation and co-ordination of VTS services?**

Should be the Maritime Transport Agency.

However, at present the VTS services in Georgian ports are operated by private companies. Those are not recognized and VTS operators are not certified by the Georgian Maritime Transport Agency.

New legislative acts on VTS for Georgia in accordance with IMO Resolution A.857 and IALA recommendations are being drafted with the objective to have recognized VTS authorities and certified operators.

1.7 **Communication with other VTS centres**

There is no communication between the individual port VTS centres.

However, there is permanent communication and exchange of information in case of accidents or emergencies with the Coast Guard via VHF and operational telephones.

2 VTS equipment

2.1 **Equipment used for the provision of VTS services:**

All Georgian ports use radar, CCTV, VHF and land-based AIS equipment.
In addition, in Kulevi there is hydrometeorological equipment.

2.2 **Back-up equipment (in case of breakdowns):**

Emergency power generator and VHF radio station.

2.3 **Range of coverage:**

Ports and areas within 20 – 25 nm range.

3 Services

3.1 **Kind of services provided, e.g. (a) information on traffic, waterway conditions, weather, hazards, etc., (b) navigational assistance services, (c) organisation of smooth traffic flows to prevent congestions or dangerous situations:**

All services (a – c) under supervision of harbour masters.

4 Communication with vessels

4.1 **Information required from vessels before entering a VTS area:**

Vessel's name, Maritime Mobile Service Identity (MMSI), length, forward and aft draft, GT, ETA, type and quantity of cargo.

4.2 **Availability of documented standard reporting procedures**

None

5 Management and Personnel

5.1 **National legal requirements with regard to manning of VTS centres and qualification of personnel:**

So far no national legal requirements. Drafting of relevant legislation is in progress.

5.2 **Internal documented standards, instructions and manuals regarding VTS operations**

In the VTS centres there are documented standards, instructions and manuals, e.g. log books, check lists and emergency check lists, also in English. Others, like regulations and instructions for VTS operators and engineers as well as job descriptions are also available, but only in Georgian language.

5.3 **Operation of VTS centres:**

The VTS centres are permanently manned (24 hrs./day, 365 days/year) and works on a shift basis (1 shift/day).

5.4 **Staffing of VTS centres:**

Per VTS centre there are in general 1 Head, 4 VTS operators and 2 engineers.

5.5 **Qualification of VTS staff**

Highest maritime qualifications.

5.6 Training of staff

As soon as future VTS operators and technical staff are certified by the Maritime Transport Agency, they should be comprehensively trained in training centres such as DELTA PILOT in Nikolaev/Ukraine.

Country: Kazakhstan

1 General

1.1 **National legal basis for the establishment of VTS system:**

Law of the Kazakhstan Republic "On Commercial Navigation" dated 17 January 2002, No 284-II (with amendments and annexes as of 4 July 2013)

Chapter 6. Seaport.

Chapter 7. State Control and Supervision at the Seaport.

"The rules of flying and mooring of vessels in seaports of the Kazakhstan Republic and on approaches to them" approved by the Resolution of the Government of the Kazakhstan Republic as of 18 July 2011, No827.

Paragraph 2. Organization of Vessel Traffic Control

1.2 **Competent Authority responsible for safety, including environmental safety, and efficiency of vessel traffic in accordance with IMO Resolution A.857(20):**

Ministry of Transport and Communications

1.3 **Available VTS systems:**

Bautino Port, Tupkaragan Gulf/Mangystau Region

Note: In 2006 a feasibility study was commissioned regarding the establishment of VTS systems in the ports of Aktau, Kuryk and Atyrau. While the study was successfully concluded, the establishment of further VTS centres has not been budgeted yet.

1.4 **Areas controlled by VTS:**

Bautino Port with a radius of 15 nm.

1.5 **Location of VTS centres:**

Bautino Port

1.6 **Authority responsible for the management, operation and co-ordination of VTS services?**

JSC National Company "Aktau International Sea Trade Port"

1.7 **Communication with other VTS centres**

None

2 *VTS equipment*

2.1 **Equipment used for the provision of VTS services:**

- RADAR, 25 kW, 8900 MHz,
- AIS "TRANSAS" *(ТРАНЗАС),*
- VHF communicator, 10 W,
- Video control system,
- Hydrometeorological control station

2.2 **Back-up equipment (in case of breakdowns):**

Back-up equipment for all kinds of equipment available.

2.3 **Range of coverage:**

Tupkaragan Gulf, 15 nm

3 *Services*

3.1 **Kind of services provided, e.g. (a) information on traffic, waterway conditions, weather, hazards, etc., (b) navigational assistance services, (c) organisation of smooth traffic flows to prevent congestions or dangerous situations:**

Information on traffic, waterway conditions, weather, hazards, etc.

4 *Communication with vessels*

4.1 **Information required from vessels before entering a VTS area:**

Vessel and cargo details.

4.2 **Availability of documented standard reporting procedures**

Documented standard reporting procedures are not available.

5 *Management and Personnel*

5.1 **National legal requirements with regard to manning of VTS centres and qualification of personnel:**

None

5.2 **Internal documented standards, instructions and manuals regarding VTS operations**

None

5.3 **Operation of VTS centres:**

The VTS centre is permanently manned (24 hrs./day, 365 days/year) and works on a shift basis (2 shifts/day).

5.4 **Staffing of VTS centres:**

The VTS centre in Bautino Port is staffed by 14 persons:

- 1 Head
- 1 Deputy Head
- 4 VTS operators/heads of shift
- 4 VTS operators
- 4 Shift engineers

There are 3 persons work per one shift at the same time: VTS operator/head of shift, VTS operator and shift engineer

5.5 **Qualification of VTS staff**

5.6 **Training of staff**

All operators (VTS heads and operators) of Bautino Port VTS participated successfully in a 4-weeks VTS Operator's course, i.e. simulator-based training in the maritime training simulator centre of the State Maritime Academy named after Admiral S.O. Makarov.

All shift engineers of Bautino Port VTS participated successfully in a 2-weeks simulator-based course about the technical operation of the VTS equipment in the maritime training simulator centre of the State Maritime Academy named after Admiral S.O. Makarov.

No other training was provided before or during the employment of the operators and engineers, nor are refresher courses foreseen.

There is a need for advanced courses for the Head, Deputy Head and 4 VTS operators/heads of shift.

Country: Ukraine

1 General

1.1 **National legal basis for the establishment of VTS system:**

Orders of the Ministry of Infrastructure

- "Standard Regulations on Vessel Traffic Service",
- "Regulations for Pilot Operator"

1.2 **Competent Authority responsible for safety, including environmental safety, and efficiency of vessel traffic in accordance with IMO Resolution A.857(20):**

Ministry of Infrastructure

1.3 **Available VTS systems:**

Port VTS centres: Mariupol, Feodosia, Illichevsk, Odessa, Yuzhnyi and Ochakov.

Coastal VTS centres:

1. Bug-Dnieper-Kherson (Russkaya Kosa, Shyrokaya Balka, Ochakov, ARP (*automated radar point)* – Dneproka, Bogdanovka, Korenikha)
2. Danube: Vilkovo, Izmail *(automated radar point)* and RIS *(River Information Service)* Orlovka *(automated radar point*).
3. Sevastopol (Streletskaya, Mikhailovskiy revelin – ARS, Cape Fiolent is in the status of commissioning and start-up.
4. Kerch: VTS+ 3 ARP

1.4 **Areas controlled by VTS:**

Major ports and partially state territorial waters.

1.5 **Location of VTS centres:**

Ports: Mariupol, Feodosia, Illichevsk, Odessa, Yuzhnyi and Ochakov

Coastal/regional: Kerch, Izmail, Nikolaev and Sevastopol

1.6 **Authority responsible for the management, operation and co-ordination of VTS services?**

Administration of Sea Ports of Ukraine – Delta Pilot

1.7 **Communication with other VTS centres**

All VTS centres managed by Delta Pilot.

Coastal stations in Ochakov, Sevastopol and Vilkovo are jointly operated with Coast Guard. Otherwise, information on daily operations is exchanged between VTS centres and Coast Guard via telephone.

2 *VTS equipment*

2.1 **Equipment used for the provision of VTS services:**

The VTS centres are equipped with the radar complexes, CCTV systems, land-based AIS monitoring system for the whole coast of Ukraine and inland waterways, maritime band mobile services and hydrometeorological station

2.2 **Back-up equipment (in case of breakdowns):**

Back-up equipment is available for all kinds of equipment, including power supply.

2.3 **Range of coverage:**

Ports: 8 – 20 nm

Coastal/regional:

Sevastopol with approaches,

Kerch-Yenikale channel,

Danube – the Ukrainian part, delta arm Bystroye until the border with Moldova,

Ochakov-Kherson-Nikolaev,

River Dnepr – River Information Service.

3 *Services*

3.1 **Kind of services provided, e.g. (a) information on traffic, waterway conditions, weather, hazards, etc., (b) navigational assistance services, (c) organisation of smooth traffic flows to prevent congestions or dangerous situations:**

All services (a - c).

4 *Communication with vessels*

4.1 **Information required from vessels before entering a VTS area:**

Vessel and cargo details in accordance with IMO Resolution A.851(20). These are standard requirements for the whole coast and monitored by Delta Pilot.

4.2 **Availability of documented standard reporting procedures**

A “Ship Reporting System” is under development.

5 *Management and Personnel*

5.1 **National legal requirements with regard to manning of VTS centres and qualification of personnel:**

Orders of the Ministry of Infrastructure

- “Standard Regulations on Vessel Traffic Service”,
- “Regulations for Pilot Operator”

5.2 **Internal documented standards, instructions and manuals regarding VTS operations**

No information

5.3 **Operation of VTS centres:**

The VTS centre is permanently manned (24 hrs./day, 365 days/year) and works on a shift basis (1 shift/day, 1 day after 3).

5.4 **Staffing of VTS centres:**

As a rule, there are 4 shifts of operators and engineers. Number of persons per shift depends on traffic volumes and ranges from 2 to 4 persons.

5.5 **Qualification of VTS staff**

VTS operators are certified. They have maritime background and experience as masters or in exceptional cases as chief officers (foreign going).

5.6 **Training of staff**

VTS personnel is trained before and during employment in the training institute in Nikolaev; refresher courses after five years.

There is a need for regulations on training of engineers on the utilisation and maintenance of equipment.