PHARE 2006 PROJECT FICHE

1 BASIC INFORMATION

1.1 CRIS Number: HR2006/018-113/5/2
1.2 Title: Maritime safety: Enforcement of Administrative Capacity - Monitoring and Management of Vessels - PHASE 2
1.3 Sector: 43010
1.4 Location: Croatia
1.5 Duration: 36 months

2 OBJECTIVES

2.1 Overall Objective(s)


2.2 Project purpose

Enhancement of administrative and technical efficiency of Maritime Administration in monitoring and management of vessels, flag state implementation and port waste reception facilities evaluation

2.3 European Partnership (EP) and NPIEU priority

European Partnership (April 2004)

3.2. Medium-term priorities - Sectoral policies – Transport: “Continue alignment with the acquis and develop adequate administrative capacity in the areas”...”of maritime transport (in particular in the area of maritime safety)”.

Accession Partnership with Croatia (2005)

3.1. Short-term priorities - Ability to Assume the Obligations of Membership - Transport policy: „Continue implementation of EU standards in the field ...of safety standards in maritime transport”.

3.2. Medium –Term Priorities - Ability to Assume the Obligations of Membership - Transport policy: „Continue alignment in maritime transport and ensure adequate flag state control.”
The NPIEU short term and medium term priority is maritime safety and marine environment protection. Specifically the establishment of vessel traffic monitoring and information system as the administrative tool of the Maritime Administration.

**2.4 Contribution to National Development Plan (and/or Structural Funds Development Plan/SDP)**

Not applicable

**2.5 Cross Border Impact**

Not applicable until interconnected with the VTMIS centers of the neighbouring countries (regional centres) to exchange vital traffic and SAR information.

### 3 Description

**3.1 Background and justification**

The establishment of the integral Croatian Vessel Traffic Monitoring and Information System (CVTMIS) is conceived and based on the Commission White Paper on the European transport policy as well as the requirements of the Directive 2002/59/EC establishing a Community vessel traffic monitoring and information system and repealing Council Directive 93/75/EEC, in particular, (Article 8 of the Directive stresses the need for permanent monitoring of the ships’ movements based upon the basic IMO requirements on VTS as laid down in Chapter V of the SOLAS Convention) and clearly articulated as the high level priority in the sectoral multi-annual strategic approach envisaged by the Pre-accession Maritime Transport Strategy of the Republic of Croatia (Section 2.3.2. Lines 5, 7 and 8 -Annex 6. of Phase 1) as well as the VTMIS Development Strategy (Annex 6. of Phase 1).

The introduction of Croatian Vessel Traffic Monitoring and Information System has been initiated through PHARE 2005 Project “Maritime safety: Enforcement of Administrative Capacity -Monitoring and Management of Vessels” (Phase 1) that is currently in implementation stage.

Project in Phase 1 covers the supply, installation and integration of 13 AIS Base Stations in the existing system of 4 AIS Base Stations, AIS Control Center in MRCC Rijeka, VHF/MF/HF Radio Communication network and VHF/MF/HF Digital Selective Call (DSC) network as well as accompanying technical assistance and twinning for establishment of procedural and organizational structures, adjustments of legislation and human resources development. With this project full coverage of the eastern part of the Adriatic Sea with AIS subsystem services is going to be completed.

AIS subsystem is only one segment of VTMIS System that enables monitoring of only those vessels equipped with appropriate apparatus thus not enabling MA to monitor real situation at sea. VTMIS system consists of a number of subsystems that at present do not exist in Croatia such as Radar subsystem,
Direction Finder subsystem, Video surveillance systems, Meteorological subsystem, Vessel Traffic Control Application, Information Management Subsystem, Recording and Replay Subsystem, Communication Link Subsystem, Earthing and Protection Subsystem and pertinent other (see Annex 6 of Phase 1 Project fiche).

Due to the limited resources for the Phase 1 of the Project and the need for completing preparatory documentation none of these subsystems have been established including the radar and RDF subsystem as vital sensors for systematic monitoring of vessel movements and their physical tracking without which the VTMIS System is not functional.

Therefore the Project “Maritime safety: Enforcement of Administrative Capacity-Monitoring and Management of Vessels - Phase 2” is the continuation of Croatian MA strivings to reach Member States practices in implementation and enforcement of maritime safety and marine pollution prevention Acquis by the time of accession by addressing technical insufficiency (such as radars) as well as related human resources enhancement and procedural and systems development in the field of maritime safety and marine environment protection.

Besides the above presently existing maritime traffic as well as traffic projected to take place in the Adriatic area, particularly along the east Adriatic coast, produces a significant amounts of oily-waters, waste and cargo residues. Unfortunately, presently existing facilities are not capable to provide environmentally friendly treatment of these substances. Consequently, since the number of ships, their characteristics as well as a number and locations of ports are increasing it is necessary to develop a technologically coherent and economically viable system of port facilities along the east Adriatic coast. It must be capable to receive and recycle or take care in some other environmentally acceptable manner all ship-generated oily-waters, waste and cargo residues.

Legislation harmonization

The project is designed in order to facilitate necessary administrative capacity strengthening (covering human resources expansion and enhancement planning, procedural and institutional development as well as accompanying equipment) for regulatory and enforcement activity partially covering following legislation:

1) Ordinance on Handling Dangerous Goods, Conditions and Method of Performing Carriage in Marine Transport, Loading and Unloading of Dangerous Goods, Bulk and Other Cargoes in Ports, and Methods for Preventing the Spreading of Oil Spills in Ports (OG 51/2005) partially harmonized with following Directives and Regulations:

2) Ordinance on Maritime Safety and Security Inspection (OG --/----) partially harmonized with following Directives and Regulations:
standards for ship safety, pollution prevention and shipboard living and working conditions (port State control).

3) Ordinance on Conditions to be Met by Ports (OG 110/04) fully harmonized with following Directives and Regulations:

4) Ordinance on Requirements and Manner of Maintaining Order in Ports and other Parts of Internal Sea Waters and Territorial Sea of the Republic of Croatia (OG 90/2005) harmonized with following Directives and Regulations:


Sequencing between Phase 1 and Phase 2 Projects

This Project Phase 2 is complimentary to Project Phase 1 that has been launched with the support of PHARE 2005. Project Phase 2 is composed of activities that are logical continuation of some of the activities and results provided in the Project Phase 1.

Having in mind the implementation of Project Phase 1 proceeding as programmed (see Project Fiche 2005) and also baring in mind the absorption capacity of MA staff as well as the tendering (Financial Agreement signed) for Phase 2 starting in May 2006 or later and taking into account overlapping safety periods of not less than 3 month following sequencing of the results/activities shall be applied:

<table>
<thead>
<tr>
<th>Project Phase 2</th>
<th>Project Phase 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Implementation of the VTMIS System</td>
<td>No sequencing or conditionality.</td>
</tr>
</tbody>
</table>
to be initiated in **January 2007**

Installation of AIS subsystem sensors (Component A) has no direct implication on installation of other subsystems due to the fact that AIS Control Centre and central AIS DB/IT have been established and are not in the scope of Phase 1 nor 2.

Component C- development of the CVTMIS Study finalized in **December 2006** may complement. Development of the study is envisaged in three stages with appropriate deliverables. The whole study is not the precondition for installation of equipment. Stage 1 of the study shall produce the required system configuration and technical overview for equipment installation.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Start Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1. Education and training of VTMIS Operators</td>
<td>August 2008 or later</td>
</tr>
<tr>
<td>Component B1– AIS Operators Training</td>
<td><strong>February 2008</strong></td>
</tr>
<tr>
<td>Component B3- Preliminary VTMIS Procedures and Arrangements Manual</td>
<td>Drafted shall be delivered in <strong>April 2007</strong> and shall be used as an input for activity 2.1. Education and training of the VTMIS personnel to be initiated in August 2008</td>
</tr>
<tr>
<td>Component B5- Study visit to VTMIS resources and authorities in EU Member States</td>
<td>Finalized in <strong>January 2008</strong></td>
</tr>
<tr>
<td>Component C- CVTMIS Study</td>
<td>Finalized in <strong>December 2006</strong></td>
</tr>
</tbody>
</table>

2.2. Study visit to VTMIS resources and competent authorities in EU Member States including simulator training | No sequencing or conditionality.

2.3. Administrative capacity building for the Flag State Implementation to be initiated in **July 2008** | Component B4 - Educated and properly trained personnel on marine casualty investigation shall be finished in **April 2008**. The same MA staff is to be trained as a part of 2.3. Capacity building for the Flag State Implementation.

3. Port Reception Facilities Study | No sequencing or conditionality.

4. Technical assistance | No sequencing or conditionality.

Therefore no extra workload in sequencing of Phase 1 and Phase 2 have been identified.

Having in mind capacities of administrative entities dealing with tendering and contracting (SPO, PIU, CFCU and NF) implementation of Phase 2 shall not generate extra workload. There will be not more than 2 parallel tendering and
contracting procedures at the same time for all activities in both phases of the Project.
Involvement of Stakeholders and Civil Society in the programming process

The beneficiary of the project is the Croatian Maritime Administration, i.e. Ministry of Sea, Tourism, Transport and Development (MSTTD) and its Maritime Safety and Marine Environment Protection Directorate with National Center for Search and Rescue at Sea and Management of Maritime Traffic (MRCC Rijeka) in particular. Project completion will undeniably increase the administrative and technical efficiency of the services rendered by the Ministry to the EU, national and international community.

The stakeholders have been identified, selected, contacted and introduced with the proposed project through correspondence, public media and meetings (minutes available on request) in respect of proposed project in the Project Phase 1 (see section 3.1.). Project was well received by all stakeholders:

In addition, EC, EMSA, wider regional (neighbouring EU member states, other South East Mediterranean countries) and international stakeholders have been introduced with the project on the presentation of the Pre-accession Maritime Transport Strategy of the Republic of Croatia held on 22 November 2005 in Dubrovnik. The Project was well received.

3.2 Sectoral rationale

Not applicable (This is a stand alone project) if needed see Pre-accession Maritime Transport Strategy of the Republic of Croatia (Annex 6. of Project Fiche Phase 1)

3.3 Results

The project, aiming to give a full and complete effect to the requirements of the Directive 2002/59/EC of the European Parliament and of the Council establishing a Community vessel traffic monitoring and information system and repealing Council Directive 93/75/EE, is divided in two major parts: a part dealing with technical matters of the Vessel Traffic Monitoring and Information System (VTMIS) and a part dealing with institutional capacity building of the Croatian maritime administration relating to vessel traffic monitoring.

3.3.1 Vessel Traffic Monitoring and Information System

The purpose of this part of the project is to provide the basic technical support (hardware and software) for full and complete implementation of the Directive 2002/59/EC, in particular in respect of the requirements specified in the Articles 4 - 8.

Supply and implementation of the CVTMIS, particularly radar and AIS surveillance and tracking systems, will significantly contribute to the safety and pollution prevention in the area along east Adriatic coast, particularly in respect of ships maneuvering in congested areas, ports and adjacent waters as well as non-SOLAS ships and yachts. In addition, safety of non-SOLAS ships and yachts will be greatly improved by installation and use of the Radio Direction Finding that will make possible tracking of crafts impossible to be observed by the radars or transmitting incorrect or false
radio emissions. Finally, the full, reliable and real-time information on ships positions and their movements will, besides improving the safety of navigation, also positively impact economic efficiency of the maritime traffic.

After completion of this part of the project following results will be achieved:

- Vessel traffic monitoring and management system covering the East Adriatic area will be fully operational and available to the Croatian maritime administration,
- existing systems (information support, AIS, etc) used to ensure the required level of the safety of navigation and pollution prevention in the east Adriatic area will become a part of the integrated monitoring and management system,
- the level of safety of navigation and pollution prevention will be increased through shortened response time in case of an emergency (accidents, pollutions) as well as through real-time traffic data processing (particularly in respect of identification of rogue vessels and tracking of non-SOLAS ships, recreational boats and yachts),
- data exchange system interconnected with similar systems in neighbouring countries as well as data distribution system capable to communicate with information systems of relevant data users and providers (governmental bodies and agencies, port authorities, etc) will be in place.

### 3.3.2. Institutional Capacity Building

The part of the project dealing with institutional capacity building of the Croatian maritime administration is divided in three segments. This part of the project will be a **Twinning** of 30 man months and the following activities will be undertaken:

#### 3.3.2.1. Education and training of the VTMIS personnel

The essential prerequisite for efficient vessel traffic monitoring is well educated and trained personnel. Consequently, this part of the project has to provide the initial training as well as foundation for refreshment training and continual knowledge upgrade of the CVTMIS personnel.

After completion of this part of the project following results will be achieved:

- a systematic and sustainable training programme, including all supporting materials and guidelines designed,
- a dedicated training facility will be set up with 5 trainers educated,
- a sufficient number (at least 30) of properly educated operators and maintenance managers will be trained.

#### 3.3.2.2. Study tour to VTMIS resources and competent authority in the EU member state(s)
It is a well-known fact that overall efficiency of the vessel-traffic monitoring heavily depends on expertise and experience.

Consequently, the purpose of this part of the project is to minimize expenses and to reach the target level of efficiency as soon as possible through a closer cooperation with similar, more experienced services in the EU member state(s). The transfer of practical knowledge and experience will take a form of study visits to respective facilities.

Visits are planned to one (two visits) or two EU countries (one visit to each country) operating the most advanced systems in respect to equipment and organization. The study visit will be planned in coordination with the experts of the visited country.

After completion of this part of the project following results will be achieved:
- means to transfer the knowledge and experience through institutional cooperation as well as through personal communications on case-by-case basis will be established,
- a common analyse and inspection of the technical aspects and possibilities of the newly acquired equipment will be accomplished,
- a revision of the VTMIS Procedures and Arrangements Manual will be completed.

3.3.2.3. Administrative capacity building for the Flag State Implementation

The aim of this part of the project is to increase the present level of education and training of personnel responsible for the Flag State Implementation. In other words, it is accomplishment of the task clearly expressed in the Pre-Accession Maritime Transport Strategy of the Republic of Croatia, 2005, as it is approved by the Government of the Republic of Croatia.

After completion of this part of the project following results will be achieved:
- Level of the safety, security and pollution prevention on Croatian ships, sailing either in national or international waters, will be comparable with the level commonly enforced in EU member states;
- Finalized proposal for amendments of quality management system aimed at improving effectiveness of Flag State Control;
- Human resource management system and training policy developed and implemented;
- Enforced FSI operational procedures specifying responsibilities of Maritime Administration;
- Continuous training programme for the MA and its inspectors developed and tested, (based on inter-active tools and computer based simulation);
- Educated and properly trained personnel (at least 15) and number of trainers (at least 3) capable to carry out continuol refresher and upgrade courses involved in flag state implementation;
- systematic education and training programme (including Flag State Implementation course curricula, supporting handouts, publications and
guidelines as well as the knowledge assessment system) will be designed;
3.3.3 Port Reception Facility Study

After completion of this part of the project the following result will be achieved:

− the study, outlining the technologies, capacities and locations, requirements, project timeline (including milestones) and possible financial arrangements for development of the port reception system covering all ports of the Republic of Croatia open for international trade, will be developed and disseminated to MA staff and stakeholders.

3.3.4 Technical Assistance

The purpose of this part of the project is to provide necessary assistance to MA to prepare, on time and in line with common EU procedures, a procurement of the equipment assumed within this Phare project. In particular, the main goal of the proposed activities is to ensure that time critical activities are completed as required and in due time

After completion of this part of the project the following results will be achieved:

− Tender dossier and technical specifications for complex Vessel Traffic Monitoring and Information System equipment and installation will be finalized,
− requirements to be implemented during to tendering process will be satisfied,
− communication with tenderers will be carried out according to good EU practices.

3.4 Activities (including Means)

The activities and means required to complete the project successfully and on time are enlisted for each project part in following paragraphs.

3.4.1 Vessel Traffic Monitoring and Information System establishment

Implementation of the VTMIS system consists of following activities:
− complete technical system design in accordance with the Croatian VTMIS Development Strategy (see Annex 6), CVTMIS Feasibility study (see Annex 4), Tender Dossier and Contract,
− supply and setting up of the radar sub-system consisting of 8 – 11 remote stations and covering at least 95% of the Croatian area of responsibility (including internal waters, territorial sea and protected ecological and fishing zone) with communication links,
− supply and setting up of 7 - 9 RDF sub-system covering areas with high-density traffic, particularly areas with dense traffic of non-SOLAS ships, yachts and boats,
− supply and setting up of CCTV/infrared surveillance systems covering the maritime traffic in narrows and restricted areas,
– supply and setting up of the meteorological data monitoring systems on remote stations,
– upgrade of the existing radio-communication system ensuring reliable communication between the MRCC and all mobile units within the MRCC’s area of the responsibility,
– upgrade the data bandwidth of the existing telecommunication system in order to make it capable to broadcast data between MRCC and remote stations in real-time mode,
– supply and setting up of the VTMIS information system (hardware and software) capable of data integration, management, storage (data and voice) and presentation (including the data provided by the AIS sub-system) as well as interconnection with similar systems in neighbouring countries and information systems of the relevant data providers;
– supply and setting up of the simulation module offering efficient education of staff;
– supply and setting up of the power supply systems (primary and secondary and UPS), fire protection systems and security surveillance systems;
– experimental run and acceptance tests of integrated VTMIS system,
– initial education of the staff for operation and basic maintenance management,
– small scale construction works covering minor infrastructure (including antenna posts).

Means required to carry out the activities include:
– Supply contract (5.2 M€)

3.4.2. Institutional Capacity Building

Implementation of the project segments dedicated to improve the institutional capacity of the Croatian maritime administration will, depending on assignment, require a number of differing activities and means. In order to coordinate all these activities, particularly in respect to implementation and installation of the Vessel Traffic Monitoring and Information System, one Twinning Resident Advisor (TRA) shall be engaged for a period of 14 months as well as short term experts for 16 man months.

The main tasks assigned to TRA will include advices on coordination, implementation, supervision of the supply and installation of the equipment and training of personnel. The expert must have sufficient experience in administrative- and maritime-related activities, with a particular emphasis on vessel operations and traffic monitoring. Task description for the TRA is included in the Twinning Project Fiche (Annex 7).

Following activities are to be accomplished:

3.4.2.1. Education and training of the VTMIS personnel

The initial training will consist of introductory training and management-level training. Introductory training will be delivered by the equipment
manufacturer (see VTMIS General Requirements Annex 7). The management-level training is based on preliminary VTMIS Procedures and Arrangements (to be provided as part of the current Phare 2005 Project Phase 1) and has to cover traffic monitoring, surveillance, remedial actions, enforcement support and cooperation with services from neighbouring countries.

The part dealing with refreshment and knowledge upgrade has to provide an institutional framework (train-the-trainer course programme, as the most important part) that will permanently ensure the satisfactory level of training and knowledge of the VTMIS personnel.

Education and training of VTMIS management and operational staff consists of the following activities:

- In-depth examination of the VTMIS sub-systems and evaluation and updating of the preliminary VTMIS Procedures and Arrangements Manual,
- Evaluation of the operational procedures and arrangements (both existing and anticipated to be introduced in due time) and their workload and development of the sustainable VTMIS Operator Training Plan,
- Preparation of the training programme (curricula, timelines, milestones) for the assumed number of operators, with particular attention to available simulator training,
- Preparation of the supporting materials (handouts, exercises, case studies, etc.),
- Initial training course for at least 5 VTMIS operators making them capable to carry on the future training and refresher courses,
- Training courses (8 seminars) for not less than 30 operators and supervisors,
- Establishment of the documentary control system for the operational manuals, working procedures and planned and carried out training.

Means required to carry out the activities include:

- Twining Resident Advisor (TRA)
- 1 short term expert – 6 months

3.4.2.2. Study tour to VTMIS resources and competent authority in the EU member state(s)

The following activities will be necessary to achieve the expected results:

- Elaboration of a study visit plan to two EU countries including proposed activities,
- Selection of up to 15 staff members responsible for routine VTMIS operation as well as for maintenance work,
- Contact and agreement with the concerned authorities of the countries to be visited,
- Preparation of the visit program, with particular attention to subjects to be discussed and methods to be used (it is assumed that visit programme will be agreed and approved by the both sides),
- Travel and accommodation arrangements - five working days for each site plus travels,
- Visit to the premises and facilities - one day for introduction, four working days per visit,
- Workshop after each visit to discuss the technical aspects and to interchange opinions and experiences - one day per country,
- Debriefing at the Maritime Administration of the Croatia to analyze the results of the study visit.

Means required to carry out the activities include:
- **Twining Resident Advisor (TRA)**
- **Travel and accommodation expenses (0.05 M€).**

### 3.4.2.3. Administrative capacity building for the Flag State Implementation

The following activities will be necessary to achieve the expected results in due time and as planned for this item:
- In-depth assessment of the international and national legal sources and obligations, particularly those related to delegation of authority to recognized organizations;
- Evaluation of the existing organization and practice in respect of the FSI, including evaluation of the relationship with recognized organization (RO), as well as evaluation of present level of knowledge and skills of inspectors involved in Flag State Control;
- Drafting recommendations for improving present status of FSI and strengthening of personnel skills;
- Assisting MA in drafting proposal of national legislation related to delegation of authority to ROs and to carry out effective oversight of ROs in line with relevant EU legislation (if needed);
- Drafting proposal of Plan for improvement of the effectiveness of the implemented quality management system at the MA, including preparation of FSI operational procedures and arrangements and analysis of the resulting operational workload and administrative needs (human resources, competencies),
- Development of Internal Human Resource Management System and training policies in the MA;
- Develop a method for periodical revalidation of FSC/PSC inspectors competencies;
- Development of a sustainable continuous training programme for the MA and its inspectors (curricula, timelines, milestones), including the preparation of the supporting materials (handouts, exercises, case studies, etc.);
- Conducting training courses, workshops and seminars covering at least 90% of staff with duties in relation with FSI (approximately 4 seminars with ≈15 participants);
- Study tour to EU member state FSC/PSC inspectorate – 7 MA staff;

Means required to carry out the activities include:
- **Twining Resident Advisor (TRA)**
- **2 Short Term Experts (total 10 man months)**
- **Travel and accommodation expenses (0.01 M€)**
Short-term experts should demonstrate high experience and knowledge to provide expertise in the fields relating to activities described under item 3.4.2.3.

3.4.3. Port Reception Facility Study

Following activities will be accomplished under this item:

− Developing of the Study on Port Reception Facilities including:
  − Analysis of existing quantities and characteristics of the ship-generated oily-waters, waste and cargo residues and estimated quantities based on the estimated traffic for at least next 20 years,
  − Outline of the functional requirements and minimum technical standards,
  − Approval of the functional requirements and technical standards,
  − Preliminary design of the national system including the number, capacities, target users and technical specifications,
  − Pre-feasibility study with particular emphasize to investment alternatives and possible financial arrangements,
  − Drafting of the Port Reception Facilities Study,
  − Verification, rectification and approval of the study;
  − Dissemination of the results of the Study to MA staff dealing with Port Reception Facilities and stakeholders.

Means required to carry out the activities include:

− Documentation development – TA contract (0,25 M€).

3.4.4 Technical Assistance

Following activities ought to be accomplished under this item:

− commissioning of a tender dossier,
− analysis of the CVTMIS Feasibility study,
− update of the Feasibility study, as necessary, particularly in respect of the recent technical developments and options,
− drafting the Tender dossier and technical specification for the installation and equipment assumed to be a part of the VTMIS system (as described in details in respective chapter),
− approval of the Tender dossier and technical specifications,
− assistance in preparation and announcement of the tender call,
− assistance in communication with prospective tenderers.

In respect of duration these activities should cover assisting MA during:

− Drafting of the Tender dossier and technical specifications,
− Approval of the Tender dossier and technical specifications,
− Call for tender (preparations and announcement),
− Communications during tender period.

These activities will NOT cover or influence in any manner any decision-making based on the mentioned Tender dossier and technical specification.

Means required to carry out the activities include:
- TA contract (0,15 M€).
3.5 Linked Activities


Project CARDS 2004; Mission Nº LOT2/CARDS/Croatia/354 “Support to PHARE Programming and Development of Project/Tender Documentation in Maritime Transport Sector” that produced the following:

1. Report on Assessment and Gaps and Needs Analyses of Croatian Maritime Administration
2. Pre-accession Maritime Transport Strategy
3. VTMIS Development Strategy including Pre-feasibility study as technical annex (see Annex 4 and 6) covering associated investment based on the assessment of existing technical and administrative capacities related to the implementation of AIS and VTMIS systems and related IT equipment

CVTMIS Feasibility study (see Annex 4) financed by MA.

TAIEX (INFRA 20977) and EMSA “Workshop on VTMIS in the Mediterranean” held in EMSA headquarters in Brussels 21/22 November 2005 on which Project Team participated.

From the technological standpoint the project is functional implementation of conclusions of the EU RTD Project VTMIS-NET (1998-2000).

Project is a preparation for the inclusion of Croatian VTMIS into existing EU SafeSeaNet system.

Project Study on the development of Real Time Data Exchange Information Systems (RTDEIS) currently tendered by EMSA should define standards for regional real time VTMIS data exchange as the first step in the establishment of Community VTMIS.

Shore Based Traffic Monitoring Infrastructure Database developed and maintained by EMSA is the 2002/59/EC implementation monitoring tool on GIS platform containing data on all EU states VTMIS structures.

In respect of the similar projects carried out in the EU, particularly in pre-accession countries, the project can be broadly compared with projects carried out recently in Bulgaria and Malta. It has to be emphasized that proposed project differs from mentioned projects by the fact that surveillance area covers archipelagic sea with more than 1.000 islands, thus requiring sophisticated technical solutions.

In the framework of the Netherlands Management Corporation programme/ Project for Advisory missions of Government Officials - Short Sea Shipping Feasibility Study “Short Sea Shipping in the Adriatic” (NMCP Project number...
Project is closely related with “Feasibility study on introduction of the PSSA in the Adriatic” of the Croatian Hydrographic Institute and the Croatian Register of Shipping, such as (financed by the Government of the Norway).

Aiming to improve navigational safety and marine environmental protection, the MSTTD developed project documentation, set up and put into operation equipment provided in the First Phase of the Automatic Identification of Ships (AIS) introduction. In very short time it becomes an extremely valuable tool used to improve the efficacy of the existing Mandatory Ship’s Reporting System in the Adriatic Sea and the Traffic Separation Scheme in the Adriatic, as it is accepted by the International Maritime Organization. During 2005 in addition to existing Control Centre at the MRCC Rijeka and 1 base station located on the Island of Vis, 3 AIS base stations on the Savudrija Peninsula, Island of Susak and in the vicinity of Pula were installed. This PHARE project proposal is logical continuation of these efforts.

In respect of the overall functionality of the maritime transport the project is closely interconnected with the Port Information Management Systems (PIMS) in three major Croatian ports. In the port of Rijeka the installation of the PIMS is underway. It is financed by World Bank as a part of the overall restructuring plan. The similar system, yet less complex, is planed in port of Ploče, also as a part of the restructuring plan financed by the World Bank. The last port to be equipped with a PIMS is port of Split where decision on how and when it will be introduced and financed is not yet made.

In the framework of the Netherlands Management Corporation programme/Project for Advisory missions of Government Officials - Short Sea Shipping Feasibility Study “Short Sea Shipping in the Adriatic” (NMCP Project number 29672 A CB) was developed in November 2004.

3.6 Lessons learned

Experience gained in acquiring technical assistance through CARDS shows the need for precise programming tendering and contracting periods.

Experience gained during Phase 1 Project regarding professional and technical activities of MA in the tendering process call for introduction of TA for technically sophisticated equipment as envisaged here.

Experience gained through the analysis and contacts with person responsible for carrying out similar PHARE projects completed or underway (Malta, Bulgaria) in other countries shows that merging of radar subsystem with AIS subsystem is technically carried out more easily if AIS IT/DB is established prior to merging such being the case here than vice versa where AIS is to be integrated in the existing VTS system.

Project implementation process should not be hindered in any manner. Therefore, the preparatory work (such as drafting a tender documents) should be done as precisely as possible and on time. The next important measure is the project quality monitoring, agreed and implement before the project begins, in order to solve the possible difficulties on time.
In order to complete the project as planned and as smoothly as possible the project quality monitoring will be introduced and implemented before the project begins. It will be based on and in line with presently existing quality system (ISO 9000) of the MSTTD.

4 INSTITUTIONAL FRAMEWORK

The beneficiary of the project is the Croatian Maritime Administration, i.e. Ministry of Sea, Tourism, Transport and Development (MSTTD) and specifically:

1. Maritime Safety and Marine Environment Protection Directorate
2. National Center for Search and Rescue at Sea and Management of Maritime Traffic (MRCC Rijeka) and
3. Department for Maritime Safety Inspection

Project managers at the technical level are staff of the central MA and are working within the Project Team:
- Mr Stjepan Vuk, head of department (stjepan.vuk@pomorstvo.hr)
- Mr Boško Ercegovac, senior advisor (bosko.ercegovac@pomorstvo.hr)
- Mr Lukša Čičovački, expert assistant (project manager) (luksa.cicovacki@pomorstvo.hr).

Project Team will be assisted by:
- Technical Assistance Expert engaged under Contract item 4 will be assisting Project Team in the part of the tendering procedures.
- TRA designated in the Twinning Project Fiche (Annex 7) shall be involved in the management and monitoring of project implementation.

The CFCU will be responsible for the implementation of the project, which will act under the general supervision of the Ministry of Finance (PAO).

The Beneficiary institution has established PIU.

Senior Project Officer (SPO) has been determined from MoTC.

Depending on the specific tasks, the experts will predominantly stay in Central MA or in National Center for Search and Rescue at Sea and Management of Maritime Traffic (MRCC Rijeka) in Rijeka.

There are no human resources constraints in respect of effective project management and absorption.

General information

Within the MSTTD two administrative units are responsible for implementation of relevant acts and regulations in the maritime transport sector as follows:

1. Maritime Transport, Maritime Domain and Ports Directorate,

Maritime Transport, Maritime Domain and Ports Directorate consists of following departments:
1. Department for Administrative, Legal and International Affairs,
2. Maritime Traffic Department,
3. Sea Ports and Maritime Demesne Department,

These departments are dealing with preparation of legal instruments in line with the determined sector policy as well as preparation of development strategies; reports, analysis and draft measures concerning maritime transport, maritime traffic, safety at sea, maritime infrastructure, protection of the sea from vessel pollution; sea ports, the maritime domain and the determination of maritime domain borders, maritime insurance and maritime agencies.

Maritime Safety and Marine Environment Protection Directorate responsible for implementation and enforcement of maritime legislation consists of four departments as follows:
1. Department for Maritime Safety Inspection,
2. Maritime Transport and Search Rescue Management Department
3. Department for Administrative and Technical Matters
4. National Center for Search and Rescue at Sea and Management of Maritime Traffic (MRCC Rijeka)

The Maritime Safety and Marine Environment Protection Directorate is also responsible for the Maritime Search and Rescue Centre Rijeka (MRCC) as well as for eight Harbour Master’s Offices located in Pula, Rijeka, Senj, Zadar, Šibenik, Split, Ploče and Dubrovnik. These offices are responsible for coordinating 64 Harbour Master’s Branch Offices, located along the east Adriatic Sea coast with a total of 331 employees.

## 5 Detailed Budget

<table>
<thead>
<tr>
<th></th>
<th>PHARE support</th>
<th>Co-financing</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>€</td>
<td>National Public Funds (*)</td>
<td>Other Sources (**)</td>
</tr>
<tr>
<td><strong>Year 2005 - Investment support jointly co funded</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contract 1: VTMIS Supplies</td>
<td>3.900.000</td>
<td>1.300.000</td>
<td>0</td>
</tr>
<tr>
<td>Investment support – sub-total</td>
<td>3.900.000</td>
<td>1.300.000</td>
<td>0</td>
</tr>
<tr>
<td>% of total public funds</td>
<td>max 75 %</td>
<td>min 25 %</td>
<td></td>
</tr>
<tr>
<td><strong>Year 2005 Institution Building support</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contract 2: Twinning</td>
<td>500.000</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Contract 3: TA- Port waste facilities</td>
<td>250.000</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
1. All investment sub-projects supported by PHARE must receive co-financing from national public funds. Minimum requirement for co-financing from national public funds is 25% of the combined PHARE and national contributions to the overall investment support.

2. Many Institution building projects will also have a degree of co-financing – this should be quantified and included wherever possible.

3. Expenditure related to equipment (regulatory infrastructure or ESC-related) and to Technical Assistance supporting investment (e.g. pre feasibility study / supervision of works / technical specifications) should be considered as Investment support in the project fiche.

4. All co-financing must be provided on a joint basis. Parallel co-financing will, in principle, not be accepted. Exceptions to this rule have to be agreed with the Commission in advance.

5. All co-financing should be clearly quantified, also the degree of certainty of such co-financing (i.e. for National Public Funds: is it already earmarked in local or national budget, for FI loans, private funds: are they already approved/under appraisal, etc.).

6. Where parallel co-financing is accepted and justified per exception to the normal rule it should be provided in monetary form. If this is not possible there should be clear criteria set out for the valuation of any non-monetary contributions (that should be quantified in the table).

7. If twinning is involved, clearly state the expected budget of the twinning covenant.

8. The financial engineering of the project should be closely monitored against actual delivery during implementation and against the objectives that were set in the project fiche so that corrective actions may be taken where required.

6 IMPLEMENTATION ARRANGEMENTS

6.1 Implementing Agency (CFCU)

The Central Financing and Contracting Unit (CFCU) at the Ministry of Finance is responsible for the tendering, contracting and disbursement of all the project’s components in line with DIS principles and the PRAG

Programme Authorising Officer
Mrs Vladimira Ivandić
Assistant Minister
Ministry of Finance
Katanciceva 5
6.2 Twinning

Twinning National Contact Point
Ms Ivana Kovačević
Advisor
Ministry of Finance
Katanciceva 5
10000 Zagreb, Croatia
Phone: 385 1 4591-329
E-mail: ivana.kovacevic@mfin.hr

6.3 Non-standard aspects

There are no non-standard aspects.

The Practical Guide to contract procedures financed from the General Budget of the European Communities in the context of external actions (the PRAG) will be strictly followed.

6.4 Contracts

Contract 1: supply contract in 2007 – indicative amount of 5.2 M€

Contract 2: twinning covenant in 2007 - indicative amount of 0.5 M€

Contract 3: TA contract in 2006 - indicative amount of 0.25 M€

Contract 4: TA contract in 2006 - indicative amount of 0.15 M€
7 IMPLEMENTATION SCHEDULE

7.1 Start of tendering/call for proposals: August 2006

7.2 Start of project activity: December 2006

7.3 Project completion: April 2009

<table>
<thead>
<tr>
<th>Component</th>
<th>Start of Tendering</th>
<th>Start of Activity</th>
<th>Completion of Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contract 1: Supplies</td>
<td>1Q/2007</td>
<td>1Q/2008</td>
<td>2Q/2009</td>
</tr>
</tbody>
</table>

8 EQUAL OPPORTUNITY

Based on the fundamental principles of promoting equality and combating discrimination, participation in the project will be guaranteed on the basis of equal access regardless of sex, racial or ethnic origin, religion or belief, disability, age or sexual orientation.

Specifically in relation to the issue of equality between men and women, Croatia’s population (2001 census) constitutes 51.87% women and 48.13% men, with those in active employment (based on Labour Force Survey statistics, conducted in accordance with ILO methodology, for the second half of 2002) divided 45.31% women and 54.69% men.

All contractors shall be requested to provide monitoring data recording the participation of men and women in terms of expert inputs (in days) and of trainees benefiting under the project (in days) as an integral component of all project progress reports.

9 ENVIRONMENT

The execution of the project proposal, i.e. installation of remote VTMIS base stations, implies small construction works on locations where necessary installations already exist, including all power and possible communicational cables. Consequently, the project assumes no activities or constructions having significant environmental impact, particularly no activities or projects subject to

There are no environmental screening requirements under the present Croatian legislation.

10 Rates of Return


The project aims to significantly increase the public benefit by increasing the level of the maritime safety and pollution prevention of the Adriatic Sea area. Therefore, the return of the investment will be evident in two different but highly interrelated areas.

The first major benefits will be experienced in the area of maritime safety, particularly in respect of search and rescue operations. The proposed equipment will significantly reduce the alert time in case of an emergency as well as decrease response time to persons in distress. Consequently, it will minimize the efforts needed by direct reduction of operational costs while increasing the probability of success.

In respect of pollution prevention, the monitoring of ships sailing to or from Croatian ports or in transit will undeniably decrease the quantities of intentional pollution of residual or oily waters from ships. On the other side, in case of pollution the time to response as well as necessary equipment will be reduced. In addition, the effectiveness of operations aiming to reduce the damage to the environment as well as detection of ships responsible for pollution will be significantly improved. Both effects will appreciably decrease the operational costs of the responsible authorities and increase the benefits to related industries (i.e. tourism).

Conclusively, the implementation of the project will provide a significantly higher quality of service to general public at lower operational costs. The detailed estimation of the projects benefits is not carried out having in mind that benefits experienced in the field of safety of human lives and environmental protection are not reliable or even possible.

Pre-feasibility and Feasibility study – see Annex 4 (for details contact MA).
11 INVESTMENT CRITERIA (APPLICABLE TO ALL INVESTMENTS)

11.1 Catalytic effect

In view of the national State Budget allocations projections for the period 2005-2007 implementation of the project could not be realized in medium-term timeframe. Budgetary allocations for establishment of VTMIS System provide for installation of not more than 2 VTMIS Remote Stations per year therefore being evident that with PHARE 2005 co-financing implementation of the project shall accelerate four times enabling MA timely adaptation to accession driven priority processes.

11.2 Co-financing

All investment components of the project are co-financed by the national public fund by 25%. Investments related technical assistance contracts are co-financed by the national public fund by 50%.

11.3 Additionality

No other sources of funding available. PHARE grant does not displace other sources of funding.

11.4 Project readiness and size

Draft procurement documents as set out in Annex 7 are:

1. Twinning Project Fiche for the Component 2 of the project,
2. Terms of Reference for the Component 3 of the project,
3. Terms of Reference for the Component 4 of the project,
4. Technical Specifications and General Requirements for supply as required for in the Component 1 of the project.


CVTMIS Pre-feasibility Study completed in 2005. (Annex 6)

CVTMIS Feasibility Study completed in February 2006. (Annex 6)

VTMIS Development Study contracted under Phase 1 Project – completed in December 2007

Basic Technical Design of Automated Identification of Ships (AIS) is contracted and finished in year 2002.

Detailed Technical Design of Automated Identification of Ships (AIS) - First Phase (including CC Rijeka and base stations on: Island of Vis, Savudrija peninsula, island of Susak and in the vicinity of Pula) is contracted and finished in 2003.

The Control Centre Rijeka and AIS Base Stations “Island Vis”, Savudrija peninsula, island of Susak and in the vicinity of Pula are operational; remaining base stations shall be installed in 2006, 2007 and 2008.

Detailed Technical Design of Automated Identification of Ships (AIS) - Second Phase is contracted and completed in 2005.
Locations for all VTMIS remote stations are tenable and are property of the Republic of Croatia. All Remote Stations (except 3) shall be installed on the existing infrastructural objects of the AIS Base Stations.

From total cost of the PHARE project amounting to 6.1 M€, the amount of 3.9 M€ is provided from PHARE allocation for installation of 11 remote VTMIS stations and related IT/DB equipment and 0.9 M€ for institutional building component.

All studies available at MA (please contact luksa.cicovacki@pomorstvo.hr).

**Sustainability**

All operating costs are assured in the national budget. In that regard the existing communication infrastructure presently used by the MA will be made available as necessary.

The VTMIS equipment supply contract shall provide for at least 5 years of maintenance guarantee, including supply of repair parts, as necessary. The Maintenance Plan extending beyond the timeframe shall be defined by the provider in accordance with the supply contract requirements for at least 15 years. The plan will be used to enable responsible authorities to plan further allocations from the national budget.

Effective management of the project is guaranteed through the national budget as well as sustainable capacity building provided by **Institutional Capacity Building** component (2) of the project including maintenance management training.

**11.5 Compliance with state aids provisions**

Non applicable
12 CONDITIONALITY AND SEQUENCING

Conditionality

Phase 1 project co-financed with PHARE 2005 is implemented as programmed (see Section 3.1. and Phase 1 Project Fiche).

The completion of Component C- development of the CVTMIS Study (to be finalized in December 2006 within PHASE 1 of the Project co-financed through PHARE 2005) is not the precondition for installation of equipment in PHASE 2 Project due to the fact that the development of the Study is envisaged in three stages with appropriate deliverables to be produced successively. Stage 1 of the study shall produce the required analysis of technical system configuration and overview of equipment installation. Also Technical Assistance (see 3.4.4) is programmed to support the finalization of tender dossier based on the CVTMIS Feasibility Study, while the context of CVTMIS Development Study is oriented primarily towards the determination of appropriate administrative structures and accompanying measures.

Sequencing

In order to have a smooth transition between sequential phases of the project it is necessary to assure that:

– The tendering and contracting of TA for tender dossier (Activity 4) starts immediately after project approval because VTMIS tendering and contracting (Activity 1) is directly dependant on its timely completion;

– Twinning component starts in the first phase of implementation of VTMIS equipment in order for TRA to monitor installation of equipment and prepare educational process to start on time, thus enabling to complete two activities (installation and education) as simultaneously as possible;

– Testing of VTMIS equipment be carried out approximately within the same time frame as education and training carried out by twinning VTMIS expert;

– Study tour (Activity 2.2) to be executed in the second phase of VTMIS training (Activity 2.1).
**LIST OF ABBREVIATIONS**

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AP</td>
<td>Accession Partnership</td>
</tr>
<tr>
<td>AIS</td>
<td>Automatic Identification of Ships System</td>
</tr>
<tr>
<td>CARDS</td>
<td>Community Assistance for Reconstruction, Development and stabilisation</td>
</tr>
<tr>
<td>CBC</td>
<td>Cross Border Impact</td>
</tr>
<tr>
<td>CC</td>
<td>AIS Control Centre</td>
</tr>
<tr>
<td>COSS</td>
<td>Committee on Safe Seas and the Prevention of Pollution from Ships</td>
</tr>
<tr>
<td>CFCU</td>
<td>Central Finance and Contracts Unit</td>
</tr>
<tr>
<td>CVTMIS</td>
<td>Croatian VTMIS</td>
</tr>
<tr>
<td>EU</td>
<td>European Union</td>
</tr>
<tr>
<td>FSI</td>
<td>Flag State Implementation</td>
</tr>
<tr>
<td>GMDSS</td>
<td>Global Maritime Distress and Safety System</td>
</tr>
<tr>
<td>IALA</td>
<td>International Association of Marine Aids to Navigation and Lighthouse Authorities</td>
</tr>
<tr>
<td>IMDG</td>
<td>International Maritime Dangerous Goods</td>
</tr>
<tr>
<td>IMO</td>
<td>International Maritime Organization</td>
</tr>
<tr>
<td>ISMC</td>
<td>International Safety Management Code</td>
</tr>
<tr>
<td>MA</td>
<td>Maritime Administration</td>
</tr>
<tr>
<td>MARPOL</td>
<td>International Convention on Prevention of Marine Pollution from Ships</td>
</tr>
<tr>
<td>MRCC</td>
<td>Maritime Rescue Coordination Centre</td>
</tr>
<tr>
<td>MS</td>
<td>Member state</td>
</tr>
<tr>
<td>MSC</td>
<td>Maritime Safety Committee (IMO)</td>
</tr>
<tr>
<td>MA</td>
<td>Maritime administration</td>
</tr>
<tr>
<td>MSTTD</td>
<td>Ministry of the Sea, Tourism, Transport and Development (Croatia)</td>
</tr>
<tr>
<td>NPAA</td>
<td>National Programme for the Adoption of the Acquis</td>
</tr>
<tr>
<td>NPPEU</td>
<td>National Programme for Joining the European Union</td>
</tr>
<tr>
<td>OPRC</td>
<td>Oil Pollution Preparedness and Response Convention</td>
</tr>
<tr>
<td>Paris MOU</td>
<td>Paris Memorandum of Understanding</td>
</tr>
<tr>
<td>PIU</td>
<td>Project Implementation Unit</td>
</tr>
<tr>
<td>PL</td>
<td>Project leader</td>
</tr>
<tr>
<td>PSC</td>
<td>Port State Control</td>
</tr>
<tr>
<td>RDF</td>
<td>Radio direction Finder</td>
</tr>
<tr>
<td>SOLAS</td>
<td>International Convention on Safety of Life at Sea</td>
</tr>
<tr>
<td>STE</td>
<td>Short Term Expert</td>
</tr>
<tr>
<td>ToR</td>
<td>Terms of Reference</td>
</tr>
<tr>
<td>TRA</td>
<td>Twinning Resident Advisor</td>
</tr>
<tr>
<td>VDR</td>
<td>Voyage Data Recorder</td>
</tr>
<tr>
<td>VTMIS</td>
<td>Vessel Traffic Monitoring and Information System</td>
</tr>
<tr>
<td>VTS</td>
<td>Vessel Traffic Service</td>
</tr>
<tr>
<td>WAN</td>
<td>Wide Area Network</td>
</tr>
</tbody>
</table>
Annexes to the Project Fiche

Annex 1 – Logframe
Annex 2 – Detailed Implementation Chart
Annex 3 – Contracting and Disbursement Schedule
Annex 4 – List of Feasibility Studies, Financial Appraisals
Annex 5 – Reference List of relevant laws and regulations
Annex 6 - Reference list of relevant strategic plans and studies
Annex 7 –
# ANNEX 1

## LOGFRAME PLANNING MATRIX FOR

**Project:** Maritime Safety: Enforcement of Administrative Capacity - Monitoring and Management of Vessels – PHASE 2

<table>
<thead>
<tr>
<th>Programme name and number:</th>
<th>HR2006/018-113/5/2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ministry of Sea, Tourism, Transport and Development</td>
<td></td>
</tr>
<tr>
<td>Contracting period expires:</td>
<td>30.11.2008</td>
</tr>
<tr>
<td>Disbursement period expires:</td>
<td>30.11.2009.</td>
</tr>
<tr>
<td>Total budget:</td>
<td>€ 6.100.000</td>
</tr>
<tr>
<td>PHARE budget:</td>
<td>€ 4.725.000</td>
</tr>
</tbody>
</table>

### Overall objectives

To improve maritime safety and marine environment protection in line with the EU requirements

<table>
<thead>
<tr>
<th>Objectively verifiable indicators</th>
<th>Sources of Verification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of safety measures implemented in process of adoption of EU standards/full implementation of related acquis</td>
<td>NPIEU report</td>
</tr>
<tr>
<td></td>
<td>Progress Report</td>
</tr>
</tbody>
</table>

### Project purpose

Enhancement of administrative and technical efficiency of the Maritime Administration in the field of monitoring and management of vessels, flag state implementation and port waste reception facilities evaluation

<table>
<thead>
<tr>
<th>Objectively verifiable indicators</th>
<th>Sources of Verification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decreased number of maritime accidents (10%) one year from implementation</td>
<td>EC reports</td>
</tr>
<tr>
<td>Decreased response time of Search and Rescue operations (10%) one year from implementation</td>
<td>Annual Report of the National Statistical Bureau</td>
</tr>
<tr>
<td>Decreased response time of interventions in cases of marine pollution accidents (10%) one year from implementation</td>
<td>Annual Maritime Authority Statistical Report</td>
</tr>
<tr>
<td>Decreased number of marine pollution incidents by unknown causes (10%) one year from implementation</td>
<td>Annual Marine Accidents Statistical Report</td>
</tr>
<tr>
<td>Increased number of identified rogue vessels (30%) one year from implementation</td>
<td>Paris MoU statistics</td>
</tr>
<tr>
<td></td>
<td>Final project report</td>
</tr>
</tbody>
</table>

**Assumptions**

- cooperation with Member States/exchange of information with other participants
<table>
<thead>
<tr>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. VESSEL TRAFFIC MONITORING AND INFORMATION (VTMIS) SYSTEM ESTABLISHED AND OPERATIONAL</td>
</tr>
</tbody>
</table>

- Decreased number of pollution incidents from ships (10%) one year from implementation
- Croatian flag on the White list of the Paris MOU in 2009

<table>
<thead>
<tr>
<th>Objectively verifiable indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. VTMIS equipment satisfies international technical standards</td>
</tr>
<tr>
<td>2. VTMIS data available and exchangeable with Member States</td>
</tr>
<tr>
<td>3. Increased number of vessels covered by VTMIS (full coverage- SOLAS and non-SOLAS vessels)</td>
</tr>
<tr>
<td>4. 8 seminars held and at least 30 VTMIS Operators and Maintenance Management Staff trained and certified</td>
</tr>
<tr>
<td>5. Course material developed, tested and finalized with 5 trainers trained for delivery of courses</td>
</tr>
<tr>
<td>6. Training facility established</td>
</tr>
<tr>
<td>7. Report on the findings of the study tour</td>
</tr>
<tr>
<td>8. Continuous training program in place for training of MA staff on FSI</td>
</tr>
<tr>
<td>9. FSI Course materials developed, tested and finalized with 3 trainers trained for delivery of courses</td>
</tr>
<tr>
<td>10. 4 seminars held and at least 15 MA staff trained on FSI</td>
</tr>
<tr>
<td>11. Human resource management system</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sources of Verification</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Maritime administration reports</td>
</tr>
<tr>
<td>2. Contractor reports</td>
</tr>
<tr>
<td>3. Tender dossier</td>
</tr>
<tr>
<td>4. EU experts reports</td>
</tr>
<tr>
<td>5. All documentation –analysis, studies, training plans, reports available</td>
</tr>
<tr>
<td>6. VTMIS data available</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Assumptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Proposed equipment and information technology systems are maintained and continuously upgraded</td>
</tr>
<tr>
<td>2. Qualified staff employed</td>
</tr>
<tr>
<td>3. Continued training of qualified staff</td>
</tr>
</tbody>
</table>

| 2. INSTITUTIONAL CAPACITY BUILDING |

2.1. Educated and properly trained personnel – VTMIS Operators on VTMIS Procedures and Arrangements

2.2. Study tour to VTMIS resources and competent authorities in EU Member States including simulator training executed

2.3. Administrative capacity for the Flag State Implementation - enhanced

<table>
<thead>
<tr>
<th>Sources of Verification</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Maritime administration reports</td>
</tr>
<tr>
<td>2. Contractor reports</td>
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<td>6. VTMIS data available</td>
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<table>
<thead>
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<tr>
<td>1. Proposed equipment and information technology systems are maintained and continuously upgraded</td>
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<tr>
<td>2. Qualified staff employed</td>
</tr>
<tr>
<td>3. Continued training of qualified staff</td>
</tr>
</tbody>
</table>
3. Port Reception Facilities Study elaborated and disseminated

4. Technical assistance- tendering process in line with EU rules and practices

<table>
<thead>
<tr>
<th>Activities</th>
<th>Means</th>
<th>Cost</th>
<th>Assumptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. IMPLEMENTATION OF THE VTMIS SYSTEM</td>
<td>1. Supply, installation of technical and IT equipment</td>
<td>Equipment</td>
<td></td>
</tr>
<tr>
<td>1.1. VTMIS equipment</td>
<td></td>
<td>Contract 1: Supplies: <strong>5,2 M€</strong></td>
<td></td>
</tr>
<tr>
<td>• Procurement of VTMIS technical and IT equipment</td>
<td>Institution Building</td>
<td>Contract 2: Twinning: <strong>0,5 M€</strong></td>
<td></td>
</tr>
<tr>
<td>• Small scale construction works</td>
<td>Contract 3: TA: <strong>0,25 M€</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Installation of VTMIS equipment and software</td>
<td>Contract 4: TA <strong>0,15 M€</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Establishments of telecommunication links</td>
<td></td>
<td>• Adequate expertise is assigned to activities</td>
<td></td>
</tr>
<tr>
<td>• Testing VTMIS equipment</td>
<td></td>
<td>• No delay in contract procedures</td>
<td></td>
</tr>
<tr>
<td>• Training of VTMIS operation and maintenance</td>
<td></td>
<td>• Precise tender documentation and technical specifications</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Phare 2005 Project (First Phase) implementing as programmed</td>
<td></td>
</tr>
</tbody>
</table>
### 2. Institutional Capacity Building

#### 2.1. Education and Training of VTMIS Operators
- Analysis of needed new knowledge and skills on VTMIS
- Drafting human resources needs assessment
- Developing sustainable VTMIS Operator Training Plan
- Conducting training courses, workshops and seminars (train-the-trainers) on VTMIS usage and international and national maritime safety legislation implementation
- Establishment of sustainable training facility

#### 2.2. Study Tour to VTMIS Resources and Competent Authorities in EU Member States Including Simulator Training

#### 2.3. Administrative Capacity Building for the Flag State Implementation
- Analysis of international, EU and national legislation, Statistical sources, existing working procedures and of needed knowledge and skills
- Improvements of quality management system, including development of human resource management system and training policy
- Developing a continuous Training Programme
- Conducting training courses, workshops and seminars (train-the-trainers) on flag state implementation and international and national maritime safety legislation implementation

| 2. Twinning experts for 30 man months (TRA 14 months, 1 STE 6 months, 2 STE 10 man months) |
| 3. Study visit (15 VTMIS Operators/5-10 days each) |
| 4. Training at foreign universities and training institutions |
| 5. Training at EU members MA |
3. Port Reception Facilities Study

- Analysis of existing facilities and assessment of current and future demand for port waste reception facilities in each port
- Drafting study
- Dissemination

4. Technical assistance

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>6.</td>
<td>TA</td>
</tr>
<tr>
<td>7.</td>
<td>TA</td>
</tr>
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</table>

Preconditions
## ANNEX 2

<table>
<thead>
<tr>
<th>Contract</th>
<th>PHARE 2006</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
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</thead>
<tbody>
<tr>
<td>Contract I: VTMIS Establishment</td>
<td>Tendering and contracting</td>
<td>T T T T T T T T T T C</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Installation</td>
<td>R I I I I I I I I I I I I I</td>
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</tr>
<tr>
<td></td>
<td>Testing</td>
<td></td>
<td>I I I R</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Training</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contract 2: Twinning</td>
<td>Tendering and contracting</td>
<td>T T T T T T T T C C</td>
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<td></td>
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<tr>
<td></td>
<td>TRA 14 months</td>
<td></td>
<td>R I I I I I I I I I I I</td>
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</tr>
<tr>
<td></td>
<td>2.1. Training of the VTMIS personnel (STE 6 months)</td>
<td></td>
<td>R I I I I I I</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>2.2. Study tour to VTMIS authorities in EU Member States</td>
<td></td>
<td>I R</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>2.3. Capacity building for FSI (2 STE 10 man months)</td>
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<tr>
<td>Contract 3: Port Reception Facilities Study</td>
<td>Tendering and contracting</td>
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<tr>
<td></td>
<td>Implementation</td>
<td>R I I I I I I I R</td>
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<td></td>
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<tr>
<td>Contract 4: Technical Assistance</td>
<td>Tendering and contracting</td>
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<td>Implementation</td>
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### Annex 3 – Contracting and Disbursement Schedule

<table>
<thead>
<tr>
<th>&lt;Project name&gt;</th>
<th>Cumulative CONTRACTING schedule by quarters in EUR (provisional)</th>
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<tr>
<td></td>
<td>2006</td>
</tr>
<tr>
<td></td>
<td>III</td>
</tr>
<tr>
<td>Contract 1: Supplies - VTMIS equipment</td>
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<tr>
<td>Contract 2: Twinning</td>
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<tr>
<td>Contract 3: TA for port reception facility</td>
<td>250.000</td>
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<td>Contract 4: TA for Tendering</td>
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<td>Audit</td>
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<td>TOTAL (EUR):</td>
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<table>
<thead>
<tr>
<th>&lt;Project name&gt;</th>
<th>Cumulative DISBURSMENT schedule by quarters in EUR (provisional)</th>
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<tbody>
<tr>
<td></td>
<td>2006</td>
</tr>
<tr>
<td></td>
<td>III</td>
</tr>
<tr>
<td>Contract 1: Supplies - VTMIS equipment</td>
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<td>Contract 2: Twinning</td>
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<td>Contract 3: TA for port reception facility</td>
<td>125.000</td>
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<tr>
<td>TOTAL (EUR):</td>
<td>200.000</td>
</tr>
</tbody>
</table>
Annex 4 – List of Feasibility Studies and Financial Appraisals

1. VTMIS Development Strategy, 2005
2. Pre-feasibility study, 2005
3. CVTMIS Feasibility study, 2006
**Annex 5 – Reference List of Legislation**


2. Regulation V:8-2 SOLAS Convention, 1974, as amended

3. IMO Resolution A.857(20) “Guidelines for Vessel Traffic Services”

4. IMO Guidelines on the Recruitment, Qualifications and Training of VTS Operators, MSC/Circ.578 and MSC/Circ.1065

5. IALA Recommendation on Standards for Training and Certification of VTS Personnel (IALA Recommendation V-103)

6. IALA Guidelines on the aspects of the training of VTS personnel relevant to the introduction of AIS


14. Regulation (EC) No 2099/2002 establishing a Committee on Safe Seas and the Prevention of Pollution from Ships (COSS) and amending the Regulations on maritime safety and the prevention of pollution from ships

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3 Official Journal L 64, 07/03/2002.
Annex 6 - Reference list of relevant strategic plans and studies

1. VTMIS Development Strategy, 2005
2. Pre-accession Maritime Transport Strategy, 2005