PHARE 2005 PROJECT FICHE

1 Basic Information

1.1 CRIS Number: HR2005/5/3
1.2 Title: Maritime safety: Enforcement of Administrative Capacity - Monitoring and Management of Vessels
1.3 Sector: 43010
1.4 Location: CROATIA - Maritime Transport, Maritime Domain and Ports Directorate and Maritime Safety and Marine Environment Protection Directorate of the Ministry of Sea, Tourism, Transport and Development of the Republic of Croatia in Zagreb including Maritime Search and Rescue Centre Rijeka (MRCC) and Harbourmaster’s Offices
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 with a special regard to vessels carrying dangerous and polluting goods

2.3 European Partnership (AP) 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)”.

NPIEU 2005

NPIEU 4.2.9.2. Short-term and Mid-term measures – Maritime safety belongs to the priorities spelt out in the NPIEU. Within that context, the implementation of the VTMIS System is of exceptional importance for the safety of navigation and prevention of pollution from ships in the Adriatic. In 2005 with regards to the strengthening administrative capacity set up and put into operation the devices and equipment of the second stage of the Automatic Ship Identification System (AIS System) as a sub-system of the VTMIS System, as well as further develop that system during 2006 and 2007. It, will be used for the purposes of the existing Mandatory Ship Reporting System in the Adriatic Sea, and for the implementation of the new Traffic Separation Schemes in the Adriatic Sea. Furthermore in the process of implementation of this priority project the creation of preliminary design for the VTMIS System is planned in 2006 which could then be implemented in the period 2006-2010.
NPIEU 3.9.5.2. Mid-term priorities- projections for 2006 and 2007: Harmonization of Croatian subsidiary maritime legislation is being promulgated in order to ensure complete alignment with Community law is under way and has been programmed in detail in NPPEU 2005 in a way to ensure completion by accession date. Following the Council Decision of the European Union on the principles, priorities and conditions contained in the European Partnership with Croatia, the priority will be the harmonization of regulations from the area of maritime navigation safety.

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

Not applicable

2.5 Cross Border Impact

Not applicable

3 DESCRIPTION

3.1 Background and justification

In respect of the EU policy papers the project proposal is based on the Commission White Paper on the European transport policy, in general, and on the Directive 2002/59/EC establishing a Community vessel traffic monitoring and information system and repealing Council Directive 93/75/EEC, in particular. Beside these two basic documents, the project proposal takes into account all other legal sources as enumerated in the Article 2 of the 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, as amended by Regulation (EC) No 415/2004. It is assumed that project outcomes will take into account and implement any subsequent amendments of documents enlisted in the Article 2 paragraph 2 of the mentioned Regulation (EC) No 2099/2002 as well as any other changes of the relevant international instruments.

Safety at sea, pollution prevention and consequently, the preservation of biological diversity of the Adriatic Sea are condition sine qua non of sustainable development of the Republic of Croatia. The primary responsibility for execution of these tasks lies mainly with Ministry of Sea, Tourism, Transport and Development (MSTTD) as a recognized Maritime Administration. Apart from organizational aspects, the efficiency of an administration lies upon its three main components: personnel, equipment and operational proficiency.

The most notable strength of the Croatian Maritime Administration is traditionally high level of education and training of its personnel. Consequently, it can be concluded that existing level of education and training, apart from highly specialized training that could be required to operate some sophisticated equipment, satisfies present and near-future needs.

On the other side, the weaknesses identified in the past mainly relate to equipment and operational proficiency. In respect of operational proficiency, considerable drawbacks were noticed within the area of administrative work in
the field and in cases of high complexity tasks requiring cooperation with other
governmental and non-governmental services.

On the other hand, inevitable increase of maritime traffic volume in the Adriatic
Sea, particularly the traffic of ships carrying dangerous goods and marine
pollutants, can be expected in the near future. In that respect, the impact of
motorways of the sea provided for in the Community guidelines for the
development of the trans-European transport network (Decision No.
884/2004/EC amending Decision No 1692/96/EC) must be taken into account.
Consequently, the most important activities, the systematic monitoring of vessel
movements and their physical and information tracking, will become much more
important and will have to cover the significant part of the Adriatic Sea. In that
case, the major constraints to be expected are lack of equipment (as required by
Directive 2003/59/EC) and inability of presently existing organizational and
operational structure of the Maritime Administration to provide sufficient level
of support required by newly created workload, obligations and responsibilities.

Still, the opportunities to enhance the administrative and technical efficiency of
Maritime Administration are several. The most notable is cooperation with
comparable administrations from the EU in order to share and/or transfer
experiences regarding organizational structure, institutional cooperation and
information support. The next step is to set up the essential equipment and
required know-how necessary to monitor areas of the Adriatic Sea where
increase of traffic volume is expected and actually occurring and to connect the
pertinent information system with systems of other adjacent EU countries.

The government’s policy in the sector is broadly outlined in several official
documents. The most prominent is The Program of the Government of the
Republic of Croatia for the 2003-2007 mandate, 23 December 2003, where
comprehensive programme for the protection of the Adriatic Sea in accordance
with the standards and regulations of the European Union and international law
is proclaimed. The project is part of an existing long-term programme initiated
by the Ministry of the Sea, Tourism, Transport and Development (MSTTD) and
laid down as a mid-term priority in the National Programme for the Integration
of the Republic of Croatia into the European Union 2004 and 2005 which aims
at reaching Member States practices in the field of maritime safety and marine
pollution prevention by the time of accession.

Notwithstanding mentioned documents as well as numerous stand-alone actions
carried out by responsible Ministry and government agencies, the clearly
articulated sector strategic approach is envisaged by the Pre-accession Maritime
Transport Strategy (Annex 6.) as well as the VTMIS Development Strategy
(Annex 6.) delivered in accordance with the Opinion on Croatia's Application
April 2004 and the Report on gaps and needs analysis in the sector of maritime
transport drafted with technical assistance within Administrative Capacity
Building/Project Preparation Facility-CARDS 2004.

The project is specifically defined as a high level priority in the section 2.3.2.-
lines 5,7 and 8 of the Pre-accession Maritime Transport Strategy.

Based on gaps and needs analysis in the sector of maritime transport the Pre-
Accesion Maritime Transport Strategy (Annex 6.) as well as the VTMIS
Development Strategy (Annex 6.) both defining the multi-annual approach
towards the achievement of the overall objective of the project through enhance
administrative and technical efficiency of Maritime Administration in
monitoring and management of vessels within Adriatic Sea area, with a special regard to vessels carrying dangerous and polluting goods.

In particular, the following specific objectives are targeted:

- Improving the response of authorities to accidents and incidents at sea,
- Facilitating search and rescue operations at sea,
- Contributing to a better prevention and detection of pollution by ships,
- Assisting in the development of an effective Vessel Traffic Monitoring and Information System (VTMIS) as a Coastal VTS mainly concerned with vessel traffic passing through a sea area,
- Continue the transposition of the *acquis communautaire* in the field of maritime safety and in particular the Directives linked to the vessel traffic monitoring and information system,
- Enhancing the efficiency of maritime traffic in the Adriatic Sea contributing to a better development of Short Sea Shipping and Motorways of the Sea.

Mentioned strategic documents identify also a number of projects to be possibly co-financed with PHARE or similar in the future including possible continuation of activities on the development and upgrade of VTMIS System with co-financing through PHARE 2006 in line with VTMIS Development Strategy.

Financing as provided by the NPIEU (Section 4.9.2.3.) of maritime safety projects planned for 2005 with the purpose of developing administrative capacity in the maritime transport, specifically in the area of navigation safety, will be financed from the State Budget in the total amount of 2.8 M € from that amount 0.5 M € is planned for establishing VTMIS system within which it is planned to set up and put into operation the devices and equipment of the second stage of the Automated Identification of Ships System (AIS System). With regards to the long-term character of the implementation plans of the mentioned projects, it is planned to set aside 2.9 M € for the same purpose from the State Budget in 2006, and 3.0 M € in 2007.

Therefore, the results and activities of the present Project Fiche are fully in line with the mid-, and long-term development concepts of the MSTTD and its law enforcement structures, and the development of this Project Fiche was also done on the basis of these strategies and plans. Namely, Pre-Accession Maritime Transport Strategy and VTMIS Development Strategy.

**Legislation harmonization**

With the aim of protection of the sea from pollution, the Act on the Gradual Phasing-Out of Single-Hull Oil Tankers, which is completely harmonized with the relevant EU regulations, was adopted in 2004.

Technical standards concerning devices and equipment in accordance with the EU standards and the SOLAS convention (VDR system) have been applied on ships engaged in international navigation.
The EU has in place legislation regarding the sulphur content in Marine fuels and will soon adopt an amendment to it in order to expedite the reduction of harmful emissions. The Republic of Croatia is in the process of ratifying Annex VI of MARPOL 73/78.


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 (MSTTTD) and its Maritime Safety and Marine Environment Protection Directorate in particular. Project completion will undeniably increase the administrative and technical efficiency of the services rendered by the Ministry to the community.

It has to be emphasized that in addition to the primary beneficiary there is also secondary beneficiaries whose benefits stem from the fact that enhanced administrative and technical capabilities directly increase their own effectiveness. The list includes subjects responsible for law enforcement at sea Ministry of the Interior, Ministry of Defence, Ministry of Finance and Ministry of Environmental Protection, Physical Planning and Construction as well as Croatian Hydrographical Institute and Plovput.

It has to be emphasized that secondary beneficiaries at the same time take a role of stakeholders. Besides them some other social and economic entities should be regarded as stakeholders (both national as well as international) such as port
authorities, shipping companies and numerous other SMEs whose activities are closely interrelated with maritime transport and depend on live resources (mostly fishing industry, but also other aquaculture and seafood production subjects), tourist industry in Croatia and neighbouring countries, and general public as a whole.

The selected stakeholders have been consulted in respect of proposed project in two groups as follows:

- Governmental bodies and ministries - within the framework of the Coordination of the Government of the Republic of Croatia for Harmonization of Monitoring and Protection of Internal Waters, Territorial Sea and Protected Ecological-Fishery Zone of the Republic of Croatia established on 27 August 2004 by which common coordinated use of resources is defined;

- All stakeholders have been contacted and introduced with the proposed project through correspondence. Project was well received by all stakeholders.

3.2 Sectoral rationale

Not applicable (This is a stand alone project)

3.3 Results

The project will produce the following series of results leading to the implementation of the VTMIS and related Directives:

A) AUTOMATED IDENTIFICATION OF SHIPS (AIS) SYSTEM ESTABLISHED AND OPERATIONAL

The fully operational Automated Identification of Ships (AIS) System with a total of 17 AIS Base Stations located along the coast and on islands that satisfy international technical standards able to monitor maritime traffic lanes within internal waters as well as entire area of the territorial sea of Croatia as an essential part of vessel traffic monitoring and information system.

B) INSTITUTIONAL CAPACITY BUILDING

This project will enhance the administrative and technical efficiency of the Croatian Maritime Administration in the specific sector of monitoring and management of vessels that is one important initiative of the European Union in the fields of maritime safety and the protection of the marine environment.

Contributing to the important priorities related to safety and pollution prevention, considered in the European Partnership, will constitute another general objective of the project. This contribution will be clearly defined through the continuation of alignment with the EU legislation, the improvement – as necessary- of the institutional capacity to ensure effective enforcement of new and existing legislation and the installation of the equipment necessary to implement the EU rules, in particular the requirements of Directive on vessel traffic monitoring and information system (VTMIS).
The expected results of this component of PHARE project will complement the relevant efforts made by the Croatian Government for the transposition and implementation of the *acquis communautaire* and the recent reorganization of the Maritime Administration to undertake the application of the modern technologies in the maritime transport.

The project will produce the following series of results leading to the implementation of the VTMIS and related directives:

**B1 Educated and properly trained personnel – AIS Operators**

Following particular documents and training courses shall be achieved:

- AIS Operator Training Plan,
- AIS Operator Training Programme,
- Supporting materials (handouts, exercises, case studies, etc.) elaborated,
- Two workshops for staff of MA,
- One training course for at least 3 future trainers,
- Mobility Programme and Working Visit Scheme.

**B2 Conceptual model of Dangerous and Polluting Goods Database elaborated**

A Conceptual Model of the Dangerous and Polluting Goods Database elaborated and containing the following main functions will enable the Croatian maritime authorities to supervise and control the transport of dangerous and polluting goods in Croatian ports as well as along the eastern coast of the Adriatic sea in line with EU requirements emerging from the Directive 2002/59/EC (exchange of data with compatible systems of other EU countries), particularly in respect of ships carrying dangerous or polluting goods and bound for or leaving Croatian ports hence enabling the Croatian MA to swiftly integrate into the common European system.

**B3 The preliminary VTMIS Procedures and Arrangements Manual drafted**

Manual drafted satisfying the requirements outlined in the relevant IALA recommendations, particularly as provided in IALA Recommendation on Standards for Training and Certification of VTS Personnel (V-103) complementing integral approach to full implementation of Directive 2002/59/EC.

**B4 Educated and properly trained personnel on marine casualty investigation**

The following results are expected under this item:

- As at least 3 future trainers trained on marine casualty investigation
- Approved Marine Casualty Investigation Training Plan,
− Approved Casualty Investigation Human Resources Needs Assessment,
− Draft of revised casualty investigation procedure (flow chart),
− Training Programme,
− Course materials for the training programme.

B) Study visit to VTMIS resources and competent authorities in EU Member States

The expected results of this study visit are the following:
− Visit plan describing the countries to be visited and the equipment and installations to be observed
− Documental evidence of the visit realized
− Report on the findings of the study visit presented.

C) BASELINE FUNCTIONAL AND TECHNICAL STUDY ON VTMIS

The VTMIS Development Study shall determine framework and basic structure of the system to be developed in the fourth phase of the VTMIS development as provided by the VTMIS Development Strategy (Annex 6). The study shall set up technical standards in respect of equipment and in respect of related IT framework and system requirements. Study shall describe in details the functional requirements of the VTMIS system, particularly in respect of data dissemination, and its interrelation with other monitoring systems, such as radar surveillance systems, either long-term (not operational presently) and short-range systems (presently existing in several ports) and AIS. Finally, the study shall describe implications of the system under development on existing databases and their maintenance or upgrade.

3.4 Activities (including Means)

A) IMPLEMENTATION OF THE AIS SYSTEM

Technical implementation of the AIS system consists of following activities in accordance with Technical Specification (Annex 7):
− Procurement of AIS technical and IT equipment,
− Progressive setting up of power supply lines, implementation of appropriate security measures and installation of AIS equipment,
− Installation of telecommunication equipment (where needed) and tuning of radio links,
− Testing and calibration of AIS equipment,
− Installation of master base station, monitoring and control equipment in MRCC Rijeka,
− Experimental run.
B) INSTITUTIONAL CAPACITY BUILDING

The activities proposed under this item are giving special attention to the human element as the main factor in the occurrence of maritime accidents. Advanced education and training of personnel involved in the operation and maintenance of the sophisticated equipment used in the modern technology for the vessel monitoring and information systems is a key point to update the institutional capacity of the Maritime Administration to be adapted to similar institutions in the European Union.

In addition, the modernization of dangerous and polluting goods databases will also contribute to a better control of such cargoes that present a potential threat to the safety at sea and marine pollution.

Complementing these activities is the preparation of personnel to carry out efficient marine casualty investigations as a useful tool to detect the causes of maritime accidents and to find conclusions that will help to design future training of personnel aimed to reduce the human factor impact in the origin of accidents.

In order to coordinate institution capacity building and follow the execution of AIS System establishment (Activity A) by advice on its implementation, including supervision of the procurements, installation of the equipment and training of personnel one Twinning Resident Advisor (TRA) shall be engaged for a period of 18 months and assigned to. The expert must have sufficient experience with 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:

B₁ Education and training of AIS Operators

For successful performance of the education and training of AIS operators following activities are necessary:

- Analyze the AIS sub-system and preliminary design of the VTMIS system as well as the outline (if existing at the time) of the VTMIS Procedures and Arrangements Manual and Baseline functional and technical study on VTMIS,
- Analyze the number of operators, operational procedures and arrangements (both existing and anticipated to be introduced in due time) and their workload and develop sustainable AIS Operator Training Plan,
- Prepare the training programme based on the assumed number of operators,
- Prepare the supporting materials (handouts, exercises, case studies, etc.),
- Perform seminars and training for at least 3 future trainers,
- Perform training courses for staff of MA.
– Develop mobility programme and working visit scheme with partner Member state’s AIS and VTMIS Control Centres and relevant Administration (preferably from the neighbouring country)

B2 Elaboration of a Conceptual model of Dangerous and Polluting Goods Database

For the development of the Conceptual Model of the Dangerous and Polluting Goods Database following activities are to be accomplished:

– Analysis of the presently existing Integral Maritime Information System, existing data, communication channels and accessible data collection methods at the Maritime Transport, Maritime Domain and Ports Directorate and Maritime Safety and Marine Environment Protection Directorate

– Analysis of existing information system and present and prospective data providers,

– Analysis of Baseline Functional and Technical Study on VTMIS,

– Analyze present cargo traffic patterns and volumes as well as their estimated progresses for each Croatian port and ports in neighbouring countries

– Analyze data flow within the existing organizational structure of the MSTTD,

– Estimate a conceivable development of organizations and institutions providing information and effects of new organizational modes and/or technologies,

– Estimate the future needs of other governmental services (EU Member States competent authorities) and commercial enterprises depending on or using data collected by CVTMIS or participating as a data source (quick and efficient monitoring of vessels within territorial waters, and reporting on carriage of dangerous and polluting goods),

– Outline the data structure, forms, relations, structures and outputs,

– Analysis of needs and requirements and outline of measures aimed to define technical arrangement for development of the Dangerous and Polluting Goods Database and its procedures,

– Compatibility testing and draft proposal of upgraded procedure,

– Drafting Conceptual Model of the Dangerous and Polluting Goods Database in line with EU requirements emerging from the Directive 2002/59/EC having in mind basic input, storage and output formats, data relations, data flow and data import procedures (for importing data from external sources i.e. port information management systems, AIS, ADRIAREP, VTMIS services of the neighbouring countries, agents, etc.), basic procedures for data integration as well as for data export as well as exchange of data with compatible systems of other EU countries particularly in respect of ships carrying dangerous or polluting goods and bound for or leaving Croatian ports.
B3 Preliminary drafting of VTMIS Procedures and Arrangements Manual

To design the preliminary VTMIS Procedures and Arrangements Manual for which it is necessary to:

− Analyze baseline functional and technical study on VTMIS, as it is developed, and estimate the system’s structure and arrangements,

− Analyze present passenger and cargo traffic patterns and volumes, identify the most critical areas and define the target traffic images for selected areas (Data on traffic volumes for Croatian ports and ports in neighbouring countries),

− Analyze The Conceptual Model of Dangerous and Polluting Goods Database, as it is developed,

− to interview personnel presently performing duties that will be partly or entirely assigned to the future Croatian VTMIS,

− Estimate the most probable circumstances and define the desirable courses of action,

− Define data flow within the existing organizational structure of the MSTTD for foreseeable circumstances,

− Outline the desired level and content of actions carried out by external participants,

− Outline the operational procedures, emergency procedures and procedures to be performed by external participants,

− Draft the preliminary text of the manual.

The VTMIS Procedures and Arrangements Manual shall consider the following services that the system must perform:

− Information Service: to ensure that essential information is in time available on time to persons carrying the shipboard navigational decision making process,

− Navigational Assistance Service: to assist the navigational decision making process onboard and to monitor the effects, especially in complex navigational or meteorological circumstances or in case of emergencies or deficiencies,

− Traffic Organization Service: to prevent the development of dangerous situations and to provide for the safe and efficient movement of traffic within the VTMIS area of responsibility,

− Co-operation with Allied Services, Emergency Services and adjacent VTS: to support all activities of each VTS in order to increase the safety and efficiency of the traffic, the protection of the environment and the effectiveness of the VTS without burdening the reporting from the ships.
B4  Education and training of personnel on marine casualty investigation

In order to reach the mentioned goals it is necessary to:

− Analyze present organizational structure of the MSTTD in part dealing with accident prevention and remedial functions in case of an emergency,
− Analyze the existing legal procedure applicable in case of maritime casualty,
− Analyze the existing accident history and thus determine the prevailing accident patterns,
− Analyze casualty statistic procedures in respect of record keeping and data maintenance,
− Draft the revised casualty investigation procedure (flow chart),
− Prepare the training programme based on the assumed number assigned personnel,
− Prepare the supporting materials (handouts, exercises, case studies, etc.),
− Deliver the seminars.

B5  Study visit to VTMIS resources and competent authorities in EU Member States

A selected group of persons working with Croatian MA and directly involved in the management and operation of the equipment related to the vessel monitoring and information services would visit one or two EU countries having the most advanced equipment and organization. The study visit will be planned, in coordination with the experts of the visited country, to observe in situ the equipment and its operation and to have joint discussion meetings to analyse the technical aspects of the operations for the best application of findings to the Croatian established structures and organization.

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

− Elaboration of a study visit plan to two EU countries including proposed activities,
− Selection of approximately 10 managers and experts involved in the VTMIS operation,
− Contact and agreement with the concerned authorities of the countries to be visited,
− Travel and accommodation arrangements - five working days: two days per country plus travels,
− Visit to the premises and facilities - one day per country,
− 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 analyse the results of the study visit.
C) ELABORATION OF A BASELINE FUNCTIONAL AND TECHNICAL STUDY ON (VTMIS)

Following activities ought to be accomplished under this item:

− Commissioning of a study on Vessel Traffic Monitoring and Information System including:
  − Analysis of existing VTMIS Development Strategy,
  − Outline of the functional requirements and minimum technical standards,
  − Approval of the functional requirements and technical standards,
  − Preliminary design of the VTMIS structure and technical specification,
  − Drafting of the Baseline Functional and Technical Study of the Vessel Traffic Monitoring and Information System,
  − Verification, rectification and approval of the VTMIS study.

Means: Project documentation development TA contract (0.45 M€) in accordance with ToR in Annex 7.

3.4 Linked Activities

Technical assistance through Administrative Capacity Building/Project Preparation Facility - CARDS 2004 has been engaged in order to:

− Assist MA with drafting the Pre-accession Maritime Transport Strategy for Croatia containing recommendations for improving the existing maritime transport sector as well as 'project pipeline' to meet national maritime transport needs. The strategy was based on legislative gap analysis, comparing Croatia’s maritime transport legislation with EU maritime legislation, gap analyses related to administrative and organizational capacities of the central MA as well as harbourmaster’s offices, in order to ensure alignment with EU requirements by identification of priorities and appropriate measures in the field of legislative approximation, institution building and associated investments including an indication of a clear timetable for their implementation as a part of the EU accession process;

− Ensure preparation of the VTMIS Development Strategy with a list of associated investment projects based on the assessment of existing technical and administrative capacities related to the implementation of AIS and VTMIS systems and related IT equipment;

− Assist the Project Implementation Unit within the MSTTD in preparing this PHARE Project Fiche.

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.

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. At present, the AIS system comprises of a Control Centre set up at the MRCC Rijeka and one base station located on the island of Vis. By the end of 2005 the First Phase of the project will be concluded by setting up of additional 3 AIS base stations on the Savudrija peninsula, island of Susak and in the vicinity of Pula. This PHARE project as it is proposed is a logical continuation of these efforts.

### 3.5 Lessons learned

The MSTTD had not managed similar projects financed from other donors yet. Notwithstanding, the experience gained through the analysis of previous similar PHARE projects completed or underway in other countries shows that the most important part is a compilation of the logical project proposal (identifying the problems, set realistic objectives, results, activities, management organisation, selecting the objectively verifiable indicators, monitoring of the process dynamics). To accelerate the programming process it is necessary to have all feasibility studies in place before the project can actually start. After the proposal has been considered the tendering should be as smooth as possible. In conclusion, the 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.

### 4 INSTITUTIONAL FRAMEWORK

Project managers at the technical level are staff of the MA and are working within the Project Implementation Unit:

1. Mr Stjepan Vuk, head of department (stjepan.vuk@pomorstvo.hr)
2. Mr Boško Ercegovac, senior advisor (bosko.ercegovac@pomorstvo.hr)
3. Mr Lukša Čičovački, junior advisor (project manager) (luksa.cicovacki@pomorstvo.hr).

TRA designated in the Twinning Project Fiche (Annex 7) shall also be involved in the implementation of the project.

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:

4. Maritime Transport, Maritime Domain and Ports Directorate,

Maritime Transport, Maritime Domain and Ports Directorate consists of following departments:

6. Department for Administrative, Legal and International Affairs,
7. Maritime Traffic Department,
8. 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 three departments as follows:

10. Department for Maritime Safety Inspection,
11. Maritime Transport and Search Rescue Management Department
12. Department for Administrative and Technical Matters

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.

In August 2004, the Croatian Government adopted the decision on the establishment of the Coordinating body of the Government of the Republic of Croatia for the coordination of supervision and protection of internal sea waters, territorial sea and the Protected Ecological and Fishing Zone of the Republic of Croatia. The purpose of the Coordinating body is to ensure the collaboration of several responsible ministries in the supervision of implementing legislative measures at sea under the jurisdiction of the Republic of Croatia.
5 Detailed Budget

<table>
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<tr>
<th>Year 2005 - Investment support jointly co-funded</th>
<th>Phare support</th>
<th>Co-financing</th>
<th>Total Cost</th>
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<tr>
<td>Contract A: Supplies</td>
<td>1.100.000</td>
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<td>Investment support – sub-total</td>
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<td>% of total public funds</td>
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<th>Year 2005 - Institution Building support</th>
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<td>Contract B: Twinning</td>
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<td>Contract C: Technical Assistance</td>
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<td>IB support – sub total</td>
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| Total project 2005                          | 2.150.000     | 400.000      | 0         | 400.000   | 2.550.000 |

(*) contributions form National, Regional, Local, Municipal authorities, FIs loans to public entities, funds from public enterprises

(**) private funds, FIs loans to private entities

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 a 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 FIs 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

Programme Authorising Officer
Mrs Vladimira Ivandić
Assistant Minister
Ministry of Finance
Katanciceva 5
10000 Croatia

Senior Programme Officer
Mr Željko Tufekčić
Assistant Minister
Ministry of the Sea, Tourism, Transport and Development
Krnulja Gvozd 1a
10000 Zagreb
Croatia
Tel.: +385 1 3783 986
Fax.: +385 1 3783 989
E-mail: financije@ws.mmtpr.hr

6.2 Twinning

Twinning National Contact Point
Mr Davor Čilić
Assistant Minister
Ministry of European Integration
Petretićev trg 2
10000 Zagreb
Croatia
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 A: supply contract – indicative amount of 1.5 M€

Contract B: twinning covenant- indicative amount of 0.6 M€

Contract C: TA contract- indicative amount of 0.45 M€

7 IMPLEMENTATION SCHEDULE

7.1 Start of tendering/call for proposals: January 2006

7.2 Start of project activity: April 2006

7.3 Project completion: December 2007

<table>
<thead>
<tr>
<th>Component</th>
<th>Start of Tendering</th>
<th>Start of Activity</th>
<th>Completion of Action</th>
</tr>
</thead>
</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 AIS 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 Article 4 and Annexes 1 and 2 of the Council Directive 85/337/EEC on the assessment of the effects of certain public and private projects on the environment, as amended.

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.

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 AIS System provide for installation of not more than 3 AIS Base 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 including investments related to study contract are co-financed by the national public fund by 33%.

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:

13. Twinning Project Fiche for the Component B of the project,
14. Terms of Reference for the Component C of the project,
15. Technical Specifications for supply as required for in the Component A of the project.

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 Base Station “Island Vis” are operational; remaining base stations shall be installed in 2005.

Detailed Technical Design of Automated Identification of Ships (AIS) - Second Phase is contracted and completed in August 2005. Preliminary findings define 13 base stations in addition to already present station in order to attain required level of coverage, reliability and accuracy

Locations for all AIS base stations are tenable and are property of the Republic of Croatia. All Base Stations (except one) shall be installed on the existing infrastructural objects.

From total cost of the PHARE project amounting to 2.6 M€, the amount of 1.1 M€ is provided from PHARE allocation for installation of 13 base stations and 1.05 M€ for institutional building component.
**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 AIS 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. 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 **Institution Building** component (B) of the project.

11.5 **Compliance with state aids provisions**

Non applicable.

12 **CONDITIONALITY AND SEQUENCING**

*Conditionality*

None

*Sequencing*

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

- The procurement of AIS and IT equipment starts immediately after project approval because all other activities are directly or indirectly dependant on its timely completion;

- Contracting of twinning component starts at the later phase of implementation of AIS and IT equipment in order to start educational process starts on time, thus enabling to complete two activities (installation and education) as simultaneously as possible;

- Training for maritime accident investigation terminate approximately at the same time with VTMIS P&A Manual completion, thus enabling their harmonization in respect of activities in case of an accident;

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

- Study visit to be executed after all training components are completed.
<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>SOLAS</td>
<td>International Convention on Safety of Life at Sea</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 I

### LOGFRAME PLANNING MATRIX FOR

Project: **Maritime safety: Enforcement of administrative capacity - monitoring and management of vessels**

<table>
<thead>
<tr>
<th>Overall objectives</th>
<th>Objectively verifiable indicators</th>
<th>Sources of Verification</th>
</tr>
</thead>
</table>
| To improve maritime safety and marine environment protection in line with the EU requirements | Number of safety measures implemented in process of adoption of EU standards | • NPIEU report  
• Progress Report |

<table>
<thead>
<tr>
<th>Project purpose</th>
<th>Objectively verifiable indicators</th>
<th>Sources of Verification</th>
</tr>
</thead>
</table>
| • Enhancement of administrative and technical efficiency of the Maritime Administration in the field of monitoring and management of vessels with a special regard to vessels carrying dangerous and polluting goods | • Decreased number of maritime accidents (10%) one year from implementation  
• Decreased response time of Search and Rescue operations (10%) one year from implementation  
• Decreased response time of interventions in cases of marine pollution accidents (10%) one year from implementation  
• Decreased number of marine pollution incidents by unknown causes (10%) one year from implementation  
• Increased number of identified rogue vessels (20%) one year from implementation  
• Increased number of processed maritime offences (10%) one year from implementation | • EC reports  
• Annual Report of the National Statistical Bureau  
• Annual Maritime Authority Statistical Report  
• Annual Marine Accidents Statistical Report  
• Final project report |

<table>
<thead>
<tr>
<th>Programme name and number: PHARE 2005</th>
<th>Contracting period expires: 30.11.2007</th>
<th>Execution of contracts period expires: 30.11.2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ministry of Sea, Tourism, Transport and Development</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total budget: 2,55 million EUR</td>
<td>PHARE budget: 2,15 million EUR</td>
<td></td>
</tr>
</tbody>
</table>
| Assumptions | | • cooperation with Member States/exchange of information with other participants  
• development of Dangerous and Polluting Goods Database |
<table>
<thead>
<tr>
<th>Results</th>
<th>Objectively verifiable indicators</th>
<th>Sources of Verification</th>
<th>Assumptions</th>
</tr>
</thead>
</table>
| A) AUTOMATED IDENTIFICATION OF SHIPS (AIS) SYSTEM ESTABLISHED AND OPERATIONAL | • AIS equipment satisfies international technical standards  
• AIS statistical data available  
• Increased percentage of sea area covered by AIS  
• 6 seminars held and at least 40 AIS Operators trained  
• Course material developed, tested and finalized with 5 trainers trained for delivery of courses  
• Elaborated Conceptual model of Dangerous and Polluting Goods Database finalized  
• VTMIS Procedures and Arrangements Manual finalized, approved and disseminated  
• 4 seminars held and at least 20 MA staff trained on marine casualty investigation  
• Casualty investigation Course materials developed, tested and finalized with 3 trainers trained for delivery of courses  
• Report on the findings of the study visit  
• Drafted study on VTMIS (documentation finalized) | • Maritime administration reports  
• Contractor reports  
• Tender dossier  
• EU experts reports  
• All documentation –analysis, studies, training plans, reports available | • Proposed equipment and information technology systems are maintained and continuously upgraded  
• Continued training of qualified staff |
<p>| B) INSTITUTIONAL CAPACITY BUILDING | | | |
| B1 Educated and properly trained personnel – AIS Operators | | | |
| B2 Conceptual model of Dangerous and Polluting Goods Database elaborated | | | |
| B3 Preliminary VTMIS Procedures and Arrangements Manual drafted | | | |
| B4 Educated and properly trained personnel on marine casualty investigation | | | |
| B5 Study visit to VTMIS resources and competent authorities in EU Member States | | | |
| C) BASELINE FUNCTIONAL AND TECHNICAL STUDY ON (VTMIS) | | | |</p>
<table>
<thead>
<tr>
<th>A) IMPLEMENTATION OF THE AIS SYSTEM</th>
<th>B) INSTITUTIONAL CAPACITY BUILDING</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AIS equipment</strong></td>
<td><strong>B1 Education and training of AIS Operators</strong></td>
</tr>
<tr>
<td>• Procurement of AIS technical and IT equipment</td>
<td>• Analysis of needed new knowledge and skills on AIS</td>
</tr>
<tr>
<td>• Small scale construction works</td>
<td>• Drafting human resources needs assessment</td>
</tr>
<tr>
<td>• Installation of AIS equipment</td>
<td>• Developing sustainable AIS Operator Training Plan</td>
</tr>
<tr>
<td>• Establishments of telecommunication links</td>
<td>• Conducting training courses, workshops and seminars (train-the –trainers) on AIS usage and international and national maritime safety legislation implementation</td>
</tr>
<tr>
<td>• Testing AIS equipment</td>
<td><strong>B2 Elaboration of a Conceptual model of Dangerous and Polluting Goods Database</strong></td>
</tr>
<tr>
<td></td>
<td>• Existing data, communication channels and accessible data collection methods assessment</td>
</tr>
<tr>
<td></td>
<td>• Drafting elaborated conceptual model of Dangerous and Polluting goods Database</td>
</tr>
<tr>
<td><strong>B) INSTITUTIONAL CAPACITY BUILDING</strong></td>
<td><strong>B3 Preliminary drafting of VTMIS Procedures and Arrangements Manual</strong></td>
</tr>
<tr>
<td><strong>B1 Education and training of AIS Operators</strong></td>
<td>• Existing regulation, present institutional framework and procedures evaluation</td>
</tr>
<tr>
<td>• Analysis of needed new knowledge and skills on AIS</td>
<td>• Drafting VTMIS Procedures and</td>
</tr>
<tr>
<td>• Drafting human resources needs assessment</td>
<td></td>
</tr>
<tr>
<td>• Developing sustainable AIS Operator Training Plan</td>
<td></td>
</tr>
<tr>
<td>• Conducting training courses, workshops and seminars (train-the –trainers) on AIS usage and international and national maritime safety legislation implementation</td>
<td><strong>B2 Elaboration of a Conceptual model of Dangerous and Polluting Goods Database</strong></td>
</tr>
<tr>
<td>• Existing data, communication channels and accessible data collection methods assessment</td>
<td>• Adequate expertise is assigned to activities</td>
</tr>
<tr>
<td>• Drafting elaborated conceptual model of Dangerous and Polluting goods Database</td>
<td>• No delay in contract procedures</td>
</tr>
<tr>
<td><strong>B3 Preliminary drafting of VTMIS Procedures and Arrangements Manual</strong></td>
<td>• Precise tender documentation and technical specifications</td>
</tr>
<tr>
<td>• Existing regulation, present institutional framework and procedures evaluation</td>
<td></td>
</tr>
<tr>
<td>• Drafting VTMIS Procedures and</td>
<td><strong>Equipment</strong></td>
</tr>
<tr>
<td></td>
<td>Contract A: Supplies <strong>1,5 M€</strong></td>
</tr>
<tr>
<td></td>
<td>Contract B: Twinning <strong>0,6 M€</strong></td>
</tr>
<tr>
<td></td>
<td>Contract C: TA <strong>0,45 M€</strong></td>
</tr>
<tr>
<td></td>
<td>• Twinning experts for 30 man months</td>
</tr>
</tbody>
</table>
B4 Education and training of personnel on marine casualty investigation

- Training for marine casualty investigations in line with the VTMIS Directive
- Statistical sources, national regulation and existing working procedures analysis
- Analysis of needed knowledge and skills
- Developing a sustainable Training Plan
- Conducting training courses, workshops and seminars (train-the-trainers) on AIS usage and international and national maritime safety legislation implementation

B5 Study visit to VTMIS resources and competent authorities in EU Member States

C) ELABORATION OF A BASELINE FUNCTIONAL AND TECHNICAL STUDY ON (VTMIS

- Analysis of existing the VTMIS Development Strategy
- Development of the Vessel Traffic Monitoring and Information System Study (Feasibility study/Sustainability assessment, Baseline functional and technical study, Design Documentation)

- Project documentation development contract (TA)
## ANNEX 2

### Detailed Implementation Chart

<table>
<thead>
<tr>
<th>COMPONENTS</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
</tr>
</thead>
</table>

### Contract A: Supplies - AIS equipment

- **Procurement of AIS technical and IT equipment**: T T T T T T C C C
- **Installation of AIS equipment**: I I I I I I I I I I I I I I I I
- **Testing AIS equipment**: R I I I I

### Contract B: Twinning

- **Tendering and contracting**: T T T T T T T T T T C C
- **One TRA (18 man months) +**
  - **Three short term experts (12 man months each)**: R I I I I I I I I I I I I I I I I I I R
- **B1 AIS operator training (4 man months)**: R I I I I R
- **B2 Dangerous and Polluting Goods Database Model (6 man months)**: R I I I I I I R
- **B3 VTMIS Procedures and Arrangements Manual (TRA)**: I I I
- **B4 Training for Marine casualty investigations (2 man months)**: R I I R
- **B5 Study tour**: I R

### Contract C: Development of VTMIS Study

- **VTMIS Study**: T T T T T C I I I I I I R
### ANNEX 3 – CONTRACTING AND DISBURSEMENT SCHEDULE

#### Cumulative contracting schedule by quarters in EUR (provisional)

<table>
<thead>
<tr>
<th>maritime safety</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>I</td>
<td>II</td>
</tr>
<tr>
<td>contract A: Supplies - AIS equipment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>contract B: Twinning</td>
<td>600 000</td>
<td></td>
</tr>
<tr>
<td>contract C: Development of VTMIS Study</td>
<td></td>
<td>450 000</td>
</tr>
<tr>
<td>TOTAL (EUR):</td>
<td>600 000</td>
<td>1 700 000</td>
</tr>
</tbody>
</table>

#### Cumulative disbursement schedule by quarters in EUR (provisional)

<table>
<thead>
<tr>
<th>maritime safety</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>I</td>
<td>II</td>
<td>III</td>
</tr>
<tr>
<td>contract A: Supplies - AIS equipment</td>
<td></td>
<td>200.000</td>
<td>400.000</td>
</tr>
<tr>
<td>contract B: Twinning</td>
<td>100.000</td>
<td>300.000</td>
<td>600.000</td>
</tr>
<tr>
<td>contract C: Development of VTMIS Study</td>
<td>200.000</td>
<td>450.000</td>
<td></td>
</tr>
<tr>
<td>Audit</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL (EUR):</td>
<td>100.000</td>
<td>100.000</td>
<td>700.000</td>
</tr>
</tbody>
</table>
Annex 4 – List of Feasibility Studies and Financial Appraisals

Annex 5 – Reference List of Legislation


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

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

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

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

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


23. Directive 2001/106/EC1 concerning the enforcement, in respect of shipping using Community ports and sailing in the waters under the jurisdiction of the Member States, of international standards for ship safety, pollution prevention and shipboard


25. Regulation (EC) No 417/20023 on the accelerated phasing-in of double hull or equivalent design requirements for single hull oil tankers.


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3 Official Journal L 64, 07/03/2002.
29. 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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