

PHARE 2002
STANDARD SUMMARY PROJECT FICHE

1. Basic Information

- 1.1 *Desiree Number:* **RO-2002/000-586.04.10**
- 1.2 *Title:* Management and professional training for the road, inland waterway and air sectors
- 1.3 *Sector:* Transport
- 1.4 *Location:* Romania: Bucharest

2. Objectives

2.1 Overall Objective(s):

- Ability to comply with the *acquis communautaire* in the field of transport

2.2 Project purpose:

- Improvement of the training centres and increase their capacity to raise awareness of managers of transport companies about the need of training (road, inland waterway and air transport).

2.3 Accession Partnership and NPAA priority:

- NPAA 2001 - short-term priorities: "recognition, by the relevant bodies, of the professional training institutions of the staff working in the transport field (education and training)";
- NPAA 2001 - medium-term priorities: "continuing of recognition, by the relevant bodies, of the professional training institutions of the staff working in the transport field (education and training)";

2.4 Link with the Acquis:

- EU Council Directives for the road sector: CPC for Road transport operators 98/76, 91/439 for Driving Licences and the new 2000/56; 76/914 for the minimum level of training for road transport drivers; 96/86 for transport of dangerous goods; 2000/18 for the minimum examination requirements for Safety Advisors;
- EU Council Directive for the air sector: 91/670/16 Dec. 1991 on mutual acceptance of personnel licences for the exercises of functions in civil aviation;
- EU Council Regulation for the Air Transport sector: No. 3922/91 on the harmonisation of technical requirements and administrative procedures in the field of civil aviation;
- EU Council Directives for the inland navigation sector: 96/35, CEE 91/672, CE 96/75, CE 87/540, CE 94/58, CE 98/35, EU 2001/25 regarding "The minimum requirements of training for seafarers on internal navigable lines.

3. Description

3.1 Background and justification:

The movement of people and goods is increasing and will continue to do so. Mobility is now an integral fact of society so much so that the modern economy is dependent upon it.

However, while the increase in mobility is essential for the development of competitive economies, the increased traffic has also resulted in increased social and health care costs because of increased accident rates. It is therefore imperative that the improvement of transport safety be a priority.

There are two basic concepts to improved transport safety: prevention and infrastructure. Prevention mainly concerns the human factor, the experience and behaviour of transport users. The human factor is the cause of the vast majority of accidents.

Now, the transport organisations have requested and the Romanian Government has understood and gave priority to the development of the Centres for vocational training within the transport sector. The strengthening of the administrative capacity and increase of these centres activity will create benefits, as:

- Increase traffic safety;
- Give access to profession to the road carriers;
- Awareness of the managers in the transport companies about the need of permanent training;
- Increasing the ability of the transport managers on the organisation of the transport activity;
- Allow mutual acceptance of personnel licences for the exercises of functions in civil aviation;
- Improving the quality of training of the sailing personnel to achieve a high standard of professional competency.

3.1.1. Road sector

The training improves skills and therefore reduces accidents and within the legal framework Governments can make certain skills obligatory when entering a profession / market. Through the training centres it will be possible to acquire certain skills which in turn allows to transport professions and transport markets which lead to better skilled people in transport and less accidents. Training for trainers is recognised as a necessity for ADR (ADR is the European Agreement concerning the transport of the dangerous goods with the road vehicles), ADR counsellors, Transport Managers (CPC) and Driving instructors. Training centres according to EU standards should facilitate mutual acceptance of training certificates and therefore facilitate the free movement of people and goods.

There are several centres in the field of road sector which assure the improvement of the professional drivers skills or road carriers activity: 3 training centres, professional schools and other schools providing training for professional drivers only. In general, the training centres within the road sector are well equipped. The international recognition of the certificates issued by the training centres represents one of the main obstacles for them, with the related implications at the level of the road carriers.

There are 3 main training centres in the field of road transport, with branches in all (8) regions over the country - IFPTR, SETAR Institute and SETAR Foundation, which are

functioning with 15 trainees each and with other trainers on a part-time contractual basis. These three centres are authorised by the Ministry of Public Works, Transport and Housing and they are self financing. They are not only focused on technical skills (like driving), but also on managerial skills, ADR, ADR counsellors, Transport Managers (CPC). Safety starts with good management and a good organisation. About ten thousands persons per year are trained in each of the three training centres.

The other training centres existing in the field of road transport are focused on the training courses for professional drivers and most of them are professional schools.

The training of the trainers is necessary in order to allow them to sustain new training programmes within the Training Centres, such as :

A) Professional Training Programme for ***“The Person Designated to Manage Permanently and Effectively the Road Transport Activity”***. The programme is according to provisions of the Minister of Transport, Order no. 761/1999 and complying with the provisions MLPTL Order no. 1842/2001, and complying with the provisions of Council Directive 98/76/EC from 1 October 1998 and of Council Directive 96/26 from 29 April 1996.

- These directives and national regulations have stipulated that every road transport company must appoint at least one person designated to manage permanently and effectively the road transport activity.
- These directives specify the professional competencies of the person designated to manage permanently and effectively the road transport activity and who must be included in the training programme.
- The training programmes are organized in all districts with trainers/lecturers trained by the Training Centers and MPWTH, ARR and RAR specialists included.
- Romanian Road Authority (ARR) performs the periodical examination.

B) Professional Training Programme for ***“Dangerous Safety Advisors for the Transport of Dangerous Goods – DGSA”***. The programme is according to provisions of the Minister of Transport, Order no.226/1999 and complying with provisions from Council Directive 96/35/EC from 1996 and Council Directive 2000/18/EC from 17 April 2000.

- These directives adopted by our legislation stipulate the obligation of road transport undertaking to appoint at least one safety adviser who is familiar with ADR provisions.
- The training and improvement programme is according with the provisions of restructured ADR.

C) ***Professional Training and Improvement of ADR Drivers and National and International Traffic***. The programme is according to the provisions from the Minister of Transport, Order no. 82/1994 and complying with the provisions of restructured ADR.

- The vehicles involved in national and international traffic must be driven only by the well trained and authorized drivers.
- The training is developing according with the provisions of restructured ADR.

D) Professional Training and Improvement Programmes for the Instructors and Teachers of Road Legislation. The programme is according to national regulations elaborated by the Ministry of Transport and by the Ministry of Internal Affairs.

- Driving schools are accredited by the Ministry of Public Works, Transport and Housing – Romanian Road Authority;
- Driving schools personnel, instructors and teachers of road legislation are authorized through the courses organized by the Training Centers.

E) Professional Training and Improvement Programme of the Defensive Driving Techniques. The programme is especially designed for the transport companies, for the car fleet holders according to their task book.

- The specialized training programmes are designed for the road transport companies.

The specific aims of these courses are the diminution of road traffic accidents and their consequences, as well as, the improvement of vehicle drivers performances, including through the reduction of fuel consumption and of environment pollution.

3.1.2. Air sector

Main relevant institutions within the sector and beneficiaries of the project:

- Romanian Civil Aeronautic Authority (RCAA) - regie autonome under the MPWTH authority;
- Romanian Aviation Academy (RAA) - self financed public institution under the MPWTH responsibility

Since December 2000, the Romanian Civil Aeronautic Authority (RCAA) is a full Joint Aviation Authority (JAA) member and it is its main concern to assure that all international safety regulations, practices and standards are observed within the operation of the Romanian airports. The RCAA is not only a regulatory body, but also in charge of providing the operational safety and balancing its standards with the economical development requirements. The Directorate for Airport and Technical Services for Air Navigation is the airports branch of the RCAA, (RCAA – ATSAND). The short-term strategy is focusing on the following issues:

1. Creating of a steering frame concerning the establishment of the complete airport authority on the agents operating in the airport: licensing of the agents, by taking into account minimal conditions, economical capacity, personnel and operation periods;
2. Establishing the two steps to authorize regional airports in Romania as handling agents;
 - 2.1. Qualification of the aircraft handling personnel – theoretical training followed by practice with the airports specific equipment;
 - 2.2. Complex programs for all handling operations, regulatory frames, personnel authorization / certification / licensing and finally qualification of airport training instructors.
3. The Directorate for Airports and Technical Services for Air Navigation (DATSAN) is developing a set of national specific requirements for airports design and

operation, technical and operational requirements for low visibility operation, procedures for inspection of airports, operation safety in the airside, etc.

The RCAA is supporting the operational safety of the Romanian airports by following means:

- Enforcing application of international regulations, standards and requirements by the Romanian airport operators;
- Issuing of standards and national regulations in aerodromes operational safety;
- Safety certification of aerodromes;
- Safety inspections, certification and supervision for aerodromes and airport aeronautical agents;
- NAVAIDS flight inspection and calibration;
- Consulting on technical issues for aerodromes operators and aviation agents operating on the aerodromes;
- Approving of constructions, work and operations within the safety areas of the airports;
- Supervision and certification of all agents/organizations operating within airports, which could influence in way the operational safety.

RCAA – DATSAN is performing technical inspections for all aerodrome operators as well as operators of other airfields (mainly helicopter landing platforms), checking that all national and international standards and regulations shall be observed in order to assure safe operation.

The part of this PHARE project concerning the air sector concerns both RCAA and the Romanian Aviation Academy as possible beneficiaries. The proposed project will be focused on three issues : A) the Airport Certification; B) Adequate training for RCAA inspectors in aerodrome field and C) Training of flight instructors and Flight Training Organization Licensing for the RAA.

A) The Airport certification is a new type of activity introduced according to the latest issue of ICAO Annex 14. National regulations according to the upgraded Annex 14 are already developed and are in the approval process by the Ministry of Public Works, Transports and Housing. This certification includes the following steps:

1. Training of airport inspectors to perform the necessary activities;
2. Training of airport personnel trainers able to disseminate information for specific activities to require licensing of personnel according to applicable regulations;
3. Training of airport personnel involved in providing operational safety;
4. Assessment of the current situation of the RCAA in order to take necessary action to upgrade activity and organisation;
5. Assessment of the current situation of the Romanian Airports;
6. Providing and adequate database for airport certification;
7. Personnel licensing according to applicable regulations, including airport inspectors and airport personnel trainers;
8. The certification itself and supervision of the certified aerodromes/airports.

From the previous stated steps the RCAA has to complete the steps 1, 2, 4, 5, and 6 in its own structure. The reason is that there is a new kind of activity, involving also its own personnel and its own operations.

One of the most important airport certification issue is that RCAA should have its own trained and authorized personnel with adequate practical knowledge. Under the

circumstances of Annex 14 ICAO Amendments, the training in Safety Management Systems must focus on the practical experience. There is required that the practical activities and on site training should develop inside medium and high traffic airports since in Romania the practical training would be restricted as the actual traffic level is low.

The implementation of licensing requirements and personnel training in airport safety activities involve close knowledge of other European countries experience. The procedures shall focus on:

- ? Aerodrome Safety Management Systems;
- ? CAA Aerodrome Inspectors;
- ? Airport Safety and Handling Trainers;
- ? Training of the Trainers;
- ? Aerodrome handling Supervisors;
- ? Licensing of handling Services Suppliers.

B) Adequate training for RCAA inspectors in aerodrome field in order to carry out the aerodrome certification and subsequent safety inspection tasks.

The typical duties of an RCAA aerodrome inspector should include but not be limited to: verification and audits of aerodrome operating procedures, checking and testing of aerodrome facilities and equipment, the overall aerodrome safety system, prevention of unauthorised entry to the movement area, etc.

C) Concerning the flight training responsibilities, the RCAA is focussing on training of pilot instructors, mainly with the purpose to certify the training pilots and to enable the certification of the Romanian Aviation Academy (RAA) as Flight Training Organization according to the Joint Aviation Regulations in power in Europe. This will include also own personnel and the FTO licensing personnel for RAA.

It is widely recognized the paramount importance of training in civil aviation and in 1999 the Romanian Aviation Academy was established as a center for training pilots, maintenance personnel, flight attendants, ATC personnel and other aviation personnel. Since its establishment, the MPWTH invested more than 2 MEURO in renewing and refurbishing its facility and for purchasing of the training airplanes and simulator. However, in order to acquire the status of recognized Flight Training Organization (FTO), the RAA would require technical assistance for the implementation of the relevant standards, training for its trainers in modern training techniques that will enable the RAA to become a regional training center in civil aviation.

3.1.3. Inland waterway sector

Due to the high level of education and professional training, as well as seafarers' training certification and attestation, Romania is on the "White List" (IMO-MSC) of nations which fully implemented the provisions of the International Convention on training standards for seafarers, certification / attestation and watch-keeping, adopted in London, on 7th of July 1978 (STCW 1978). As recognition, several maritime administrations (e.g. United Kingdom) expressed their intention to ensure the training of their seafarers in Romania. At the same time, crewing agencies from countries with tradition in navigation (e.g. Norway) were established and are operating in Romania.

The only training centre for the inland waterway sector is functioning in Galati, with 37 employees. The centre is in the subordination of the MPWTH and is self financed, through the fees applied for the training courses. About 4,500 trainees are trained per

year and the courses are dedicated to the qualification, improvement of capabilities and also special courses for the auxiliary non-qualified employees. During one year Galati Training Centre organise almost 450 training programmes. One training group has 25 trainees and it last usually for:

- 5 weeks for adapted courses;
- 2 weeks for conventional courses and for the training courses according to IMO requirements.

According to the international standards, 50% of the time dedicated to a training course represents ***practical applications***.

Because of the training centre budget constrains, the practical applications are made with the support of other equipment providers (fire fighters, ambulance, etc.), on a contractual basis which is not always available at the requested time, or not in a suitable condition.

According to the identified needs, the improvement of services provided by the training centre needs the organisation of training for trainers and also purchase of its own equipment for the practical applications.

The present PHARE project will be limited to:

- training for trainers,
- updating/purchasing the documentary material (conventions, resolutions, recommendations, directives, CDs and video cassettes) and
- purchase of small equipment for practical applications.

The main topics for the training courses are as follows:

1. Courses for inland and maritime sailing personnel:
 - Intervention in case of an emergency situation occurred on board;
 - Human relations and social responsibilities on board
2. Basic training programme for maritime safety
3. Safety familiarization for uncertified personnel
4. Specialised technical training
5. Training programmes for the persons who want to have the occupation of cargoes carrier (UE Directive 87/540/CEE/09.11.1987).

The documentary material to be purchased under the project will be related mainly to the provided training courses. Additional documentation needed for the centre will be proposed and recommended by the Consultant, under the available project budget.

The indicative list of small equipment to be purchased for the practical applications includes instruments, devices, equipment for the following courses:

1. Life-saving on water;
2. Prevention and fire fighting;
3. Personal protection;
4. Medical first aid.

Additional equipment for the practical applications performed by the Training Centre in Galati could be the subject of another PHARE project, after a proper needs assessment made under a PPF in order to check the feasibility of such investment for the Centre.

As it was mentioned in the NPAA document, Romania has to prove that is able to get accreditation for its training centres by the relevant bodies.

3.2 *Linked activities:*

- RO 9402-02-01-L001 "Airports Master Plan and Training": under this project was prepared the "Noise Monitoring System to Bucharest – Otopeni International Airport" and was delivered the training of the noise monitoring equipment in the implementation phase
- PHARE COP'96 - RO 9604-01-03-03 "Equipment for Romanian Railway Training Centre": the aim of this sub-project was the improving the training conditions for the railway personnel in the main Training Centre of the Romanian Railway (there were poor training conditions due to missing or obsolete relevant equipment);
- PHARE Multi-country Transport Programme 98-0605 "Vocational Training Centres in PHARE countries": Through this project were established 13 vocational training centres, one for each Phare country. Institutional strengthening of the centres had comprised three major areas that included:
 - provision of training (training the trainers, training the senior management staff)
 - provision of training equipment
 - provision of training materials
- PHARE RO 0107.11 "Improvement of Road Safety and Institutional Building in the field of transport" - sub-project 1: Twinning to further harmonise the road safety legislation and strengthen the related institutions in order to comply with EU requirements: this sub-project involves the following:
 - further transposition of the acquis in the field of road safety and finalisation of the legal harmonisation;
 - elaboration of secondary legislation;
 - strengthening of enforcement structures;
 - preparation of set of procedures and training of controllers.

3.3 **Results:**

3.3.1. Road sector

- Business plans reviewed for the three training centres;
- Access to profession to the road carriers;
- Trained trainers to be able to disseminate information;
- Training materials available for the training centres;

3.3.2. Air sector

- Business plan reviewed for Romanian Aviation Academy;
- Adequate training for RCAA inspectors in aerodrome field;
- Trained trainers in the aviation sector;
- Training materials available for the training centre;
- Romanian Aviation Academy become a recognised Flight Training Organisation and regional training centre;

3.3.3. Inland waterway sector

- Business plan reviewed for the Training Centre in Galati;
- Trained trainers in the field of inland waterway sector;
- Training materials available for the training centre;
- Small equipment purchased for the practical applications;

3.4 **Activities:**

3.4.1 Road sector:

- Assessment of the current activities of the 3 training centres - SETAR Institute, SETAR Foundation and IFPTR;

- Updating/purchasing of the training materials and of the teaching aids;
- Training for trainers/lecturers and examiners of the 3 training centres.

To respond to the objectives described in the background, the programme proposals for the training of the trainers are:

1. Training Managers Program:
2. ADR Trainers Improvement Program:
3. Improvement Trainers for the Person Designated to Manage Permanently and Effectively the Road Transport Activity Program
4. Road Safety Trainers Improvement Program
5. Provisions Program for the training institutes with a library of transport, management and marketing literature and EC legislation (also the *Acquis Communautaire* for Road Transport).

The detailed list of training for road transport and the envisaged didactic materials are given under Annex 4.

3.4.2. Air sector:

3.4.2.1 Airport certification.

The implementation of licensing requirements and personnel training in airport safety activities involve close knowledge of other European countries experience. The procedures shall focus on:

- ? Aerodrome Safety Management Systems;
- ? CAA Aerodrome Inspectors;
- ? Airport Safety and Handling Trainers;
- ? Training of the Trainers;
- ? Aerodrome handling Supervisors;
- ? Licensing of handling Services Suppliers.

To support these steps following courses will be organised under the present project:

N o	Course Subject
1	Senior Civil Aviation Management
2	Aerodrome Regulation
3	Advanced Terminal Design for the Commercial Airport
4	Airport Marketing&Air Service Development
5	Airport Advanced Business Management
6	Airport Management and Ground Handling Operations
7	Airport Strategic Management
8	Management of Aviation Facilitation

Note: Certain training organizations within EU countries are able to provide such kind of training, e.g. Ecole Nationale d'Aviation Civile (France), Lufthansa Training (Germany), Instilux (Luxemburg), Institute for Aviation (Sweden), UK-CAA (UK), University of Southampton (UK). The training organization shall be able to provide also adequate airport training practice.

3.4.2.2. Adequate training for RCAA inspectors in aerodrome field provided by a specialised consultant. The workshops will be based on the following issues:

- verification and audits of aerodrome operating procedures
- checking and testing of aerodrome facilities and equipment,
- the overall aerodrome safety system,
- prevention of unauthorised entry to the movement area, etc.

3.4.2.3. The activities concerning the FTO certification for the RAA are:

- ? Assessment of the RAA current situation;
- ? Recommendations for the improvement of the training centre activities, including business plans and didactic equipment;
- ? Train of the trainers.

For purposes concerning the FTO licensing of RAA and, possible, for other organizations the following courses will be organised under the present project:

No	Course Subject
1	Aeroplane and Navigation Procedures Trainers
1.1.	JAR-STD-3A
1.2.	JAR-STD-2A
1.3.	JAR-STD-1A
2	Class Rating Instructor
3	Type Rating Instructor
4	Crew Resource Management
5	Quality Assurance for FTOs/TRTOs
6	JAR – Flight Crew Licensing

The detailed list of training for air transport and the envisaged didactic materials are given under Annex 5.

3.4.3. Inland waterway sector

The Galati Training Centre proposed as its general objectives:

- the improving the quality of training of the sailing personnel in order to achieve a high standard of professional competency in accordance with UE Directives and STCW 95 requirements
- the training and competency assessment of the sailing personnel using the most modern procedures of theoretical and practical training and evaluation

In order to achieve the general objectives, Galati Training Centre applied for financing under the Phare programme for the following specific objectives:

- 1) Training the trainers
- 2) Acquisition of teaching materials and equipment necessary for the training activity

In order to carry out the objective 1) "Training the trainers", the trainers from the centre should attend one of the training programs listed in the Annex 6.1 and for carrying out the objective 2) "Acquisition of teaching materials and equipment necessary for the training activity", it should be acquired the teaching materials and

some small equipment listed in the Annex 6.2 necessary for the programmes organized by the Galati Training Centre.

Below, there are the centralised tables of the training programmes and didactic materials and small equipment proposed by Galati Training Centre for financing under the PHARE Programme:

Table 1 (details are attached in Annex 6.1)

No.	Training course	No. of the participants	Estimated cost/pers. (EURO)	Total (EURO)
1	Train the instructors	12	3,000	36,000
2	Train the assessors	12	3,000	36,000
3	Train auditors	12	2,000	24,000
4	Specialization instructors-MARPOL	12	2,500	30,000
5	Train experts in the field of dangerous goods	12	3,000	36,000
6	Train auditors for applying System of quality, safety and environment	6	2,500	15,000
7	Master courses on training the adults	12	2,500	30,000
TOTAL (around)		210,000 EURO		

Table 2 (details are attached in Annex 6.2)

No.	Training programme	COSTS OF THE TEACHING AIDS (EURO)			
		Video Total Cassettes	Equipment	Manuals	
1	Personal safety and social responsibilities on board ship	12,150	687	360	13,197
2	Elementary medical first aid	4,070	7,200	-	11,270
3	Fire prevention and fire fighting	4,530	26,090	200	30,820
4	Personal survival techniques	2,990	19,380	-	22,370
5	Proficiency in survival craft and rescue boats	3,985	26,700	120	30,805
6	Carriage of dangerous goods	3,080	5,000	845	8,925
7	Prevention of pollution from ships	4,525	14,000	-	18,525
8	Maritime English. Phrasal vocabulary	3,540	10,890	700	15,130
9	Ro-Ro passenger ships and passenger ships other than Ro-Ro	1,540	5,000	450	6,990
10	Oil tanker, liquefied gas tanker and chemical tanker	6,675	34,000	1,000	41,675
TOTAL (around)		47,000	149,000	4,000	200,000

The detailed list of training for inland waterway transport and the envisaged didactic materials are given under Annex 6.1 and 6.2.

4. Institutional Framework

The final beneficiaries of this PHARE project are:

- for road sector: The Training Centres (SETAR Foundation, SETAR Institute and IFPTR Institute) in the road transport and Romanian Road Transport Authority (institution under the MPWTH authority);
- for air sector: Romanian Aviation Academy (public institution under the MPWTH responsibility) and the Romanian Civil Aeronautic Authority (regie autonome under the MPWTH authority);
- for inland waterway sector: Galati Training Center – self financed public institution subordinated to the MPWTH.

The **beneficiaries** will prepare the Tender Dossiers, under the supervision of the General Directorate for Foreign Financial Affairs - Ministry of Public Works, Transport and Housing.

5. Detailed budget

	Phare Support					
	Investment Support	Institution Building	Total Phare (=I+IB)	National Co-financing*	IFI*	TOTAL
TA Contract	-	1,200,000	1,200,000	0	-	1,200,000
Lot 1 (road)		320,000	320,000	0	-	320,000
Lot 2 (air)		470,000	470,000	0	-	470,000
Lot 3 (IWT)		410,000	410,000	0	-	410,000
Total	-	1,200,000	1,200,000	0	-	1,200,000

6. Implementation Arrangements

6.1 Implementing Agency: The Central Finance and Contracting Unit (CFCU)

represents the Implementing Agency in charged with tendering and contracting of the projects.

Contact person: Mrs. Jeana Buzduga
Central Finance and Contracting Unit (CFCU)
36-38 Mendeleev str., 4th floor
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Tel: 0040-1-310.37.72
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6.2 Implementing Authority: Ministry of Public Works, Transport and Housing

General Directorate For Foreign Financial Affairs

Contact persons: Mrs. Liliana Barna - General Director
Mrs. Florentina Teodorovici - Head of Community Programmes
Financing Unit

38 Dinicu Golescu Av, 1st floor, room 17,
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6.3 Beneficiaries:

Romanian Road Authority (ARR)

Contact person: Florin Suciu - General Director
38 Dinicu Golescu av, 2nd floor
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Fax: 0040 - 1- 222.56.63

IFPTR Institute

Contact person: Marin Lepadatu - General Director
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SETAR Institute

Contact person: - Virgiliu Cucliciu, President
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SETAR Foundation

Contact person - Ion Bedrosian - General Director
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Romanian Aviation Academy

Contact person: Mr. Adrian Marinescu - General Director
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Romanian Civil Aviation Authority

Contact person: Ovidiu Traichioiu – Director
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Training Centre for Inland Waterway Transport in Galati

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23 Portului Street
Galati, Romania
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Fax: 0040 - 36 - 471011

6.4 Non-standard aspects: The Practical Guide to PHARE/ISPA/SAPARD implementation will strictly be followed and this project will be implemented by way of procurement of services and equipment in accordance with the PHARE rules for procurement.

6.5 Contracts: 1 TA tender will be launched with 3 lots, and one to three TA contracts shall be granted. Didactic material and small didactic equipment will be included within the TA contract as provisional budget.

7 Implementation schedule

7.4 Start of tendering/call for proposals: 01.02.2003, ToR will be ready in December 2002

7.5 Start of TA activity: 01.07.2003

7.6 Project completion: 01.01.2006 (it includes the guarantee period for equipment purchased)

8 Equal Opportunity

Equal participation in project by women and men will be assured. Women's participation will be measured by the extensive use of monthly time-sheet for the personnel.

9 Conditionality and sequencing

- The beneficiaries undertakes to finance any additional cost which may arise in order to ensure timely completion of the project;
- The beneficiaries commit to finance the running and maintenance costs of the small equipment that will be supplied.

ANNEXES TO PROJECT FICHE

1. Logical framework matrix in standard format
2. Detailed implementation chart
3. Contracting and disbursement schedule by quarter for full duration of programme (including disbursement period)
4. Indicative list of the programmes proposed for the training of the trainers in the road sector
5. Indicative list of the training programmes for the air sector
6. Indicative list of the training programmes, didactic materials and small equipment needed for the inland waterway sector:
 - 6.1 Training programmes for the trainers of the Galati Training Centre
 - 6.2 Indicative lists for didactic materials and small equipment for the Galati Training Centre

Annex 1

LOGFRAME PLANNING MATRIX FOR		Programme name and number	
<i>"Management and professional training for the road, inland waterway and air sectors"</i>		Contracting period expires : 30/11/2004	Disbursement period expires : 30/11/2006
		Total budget: 1.2 MEURO	Phare budget: 1.2 MEURO
Overall objective	Objectively verifiable indicators	Sources of verifications	
- Ability to comply with the acquis communautaire in the field of training in the transport sector	- Progress in the EU integration process	- EC reports	
		- Ministry of Public Works, Transport and Housing reports	
Project purpose	Objectively verifiable indicators	Sources of verification	Assumptions
- Enforcement of the training centres and increase their capacity to raise awareness of the managers in the transport companies about the need of training within the transport sector (road, inland waterway and air transport).	- Number of the diploma or certificates issued by the Training Centers	- Galati Training Center reports	- Adequate implementation of the knowledge obtained during the training courses sustained within the Training Centers
		- Road Training Centers reports	
		Romanian Civil Aviation Authority reports	
		- Romanian Aviation Academy reports	
		- Romanian Auto Authority reports	

Results	Objectively verifiable indicators	Sources of verification	Assumptions
Road sector	Road sector		- Adequate use of the small equipment by trained staff
- Business plans reviewed;	- detailed business plan reviewed	- Hand-over certificates	
- Access to profession to the road carriers;	- number of the persons trained by the trainers	- Reports from CFCU, Ministry of Public Works, Transport and Housing and final beneficiaries	
- Trained trainers to be able to disseminate information;	- Number of the trained trainers in the road field		
- Training materials available for the training centres;	- training materials for each course implemented under the Phare project		
Air sector	Air sector		
- Adequate trained Romanian Civil Aeronautical Authority inspectors in aerodrome field;	- number of the trained aerodrome inspectors		
- Trained trainers in the aviation sector;	- number of the trained trainers in the air field		
- Training materials available for the training centre;	- training materials for each course implemented under the Phare project		- Adequate implementation of the knowledge gained by the trainers
- Romanian Aviation Academy become a recognised Flight Training Organisation and regional training centre;	- implementation of the relevant standards		
Inland waterway sector	Inland waterway sector		- Adequate implementation of the solutions proposed by the consultants engaged

- Business plans reviewed;	- detailed business plan reviewed		
- Trained trainers in the field of inland waterway sector;	- Number of the trained trainers in the inland waterway field		
- Training materials available for the training centre;	- number of didactic materials, video cassettes and manuals made available for the center		
- Small equipment purchased for the practical applications;	- Number of the small equipment delivered, installed and functional, if case		
Activities	Means	Sources of verification	Assumptions
- Assessment of the current situation of the training centres;		- Reports from CFCU, Ministry of Public Works, Transport and Housing and final beneficiaries	- High quality consultant and suppliers
- Updating/purchasing of the training materials and of the teaching aids;	- Service contracts		- On-time preparation of ToR and Technical Specifications
- Training for trainers/lecturers and examiners.	- Supply contracts		
- Purchasing of the small equipment needed			
- development of the maps needed to assure the correct positioning of obstacles and NAVAIDS in the aerodrome areas			
			Preconditions
			On-time ratification of the Financing Memorandum

ANNEX 2

DETAILED TIME IMPLEMENTATION CHART

"Management and professional training for the road, inland waterway and air sectors"

	2002					2003					2004					2005					2006										
Calendar months	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	
			D	D	D	D	C	C	C	C	C	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I		
D = Design/Tender preparation																C = Contracting								I = Implementation							

ANNEX 3

"Management and professional training for the road, inland waterway and air sectors"

CUMULATIVE CONTRACTING AND DISBURSEMENT SCHEDULE

	Cumulative contracting schedule by quarter in MEUR (planned)																	
	2003				2004				2005				2006					
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
Total contracting:			1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2		

	Cumulative disbursement schedule by quarter in MEUR (planned)																	
	2003				2004				2005				2006					
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
Total disbursement:			0.1 5	0.3 0	0.4 5	0.6 0	0.7 5	0.9 0	0.9 5	1.0 0	1.0 5	1.1	1.2	1.2	1.2	1.2		

ANNEX 4: Indicative list of the programmes proposed for the training of the trainers in the road sector

1. Training Managers Program:

- **Course Duration:** 5 days
- **Number of participants:** 20 people
- **Number of programs:** 3
- The training program must include development of business plans, management of training programs, training tools, training equipment, marketing of training programs, financial management for guarantee of loyal competition in the road transport field.

2. ADR Trainers Improvement Program:

- **Course Duration:** 5 days
- **Number of participants:** 20 people
- **Number of programs:** 6
- Through this programme it is aimed to improving the teaching techniques, of the course content and practice exercises models for the students. Each lecturer/trainer must receive training materials in English or French or Romanian language.

3. Improvement Trainers for the Person Designated to Manage Permanently and Effectively the Road Transport Activity Program

- **Course Duration:** 5 days
- **Number of participants:** 20 people
- **Number of programs:** 6
- Through this program it is aimed the improving of the teaching techniques, of the course content and practice exercises models for the students. Each lecturer/trainer must receive training materials in English or French or Romanian language.

4. Road Safety Trainers Improvement Program

- **Course Duration:** 5 days
- **Number of participants:** 20 people
- **Number of programs:** 6
- Through this program it is aimed the improving of the teaching techniques, of the course content and practice exercises models for the students. Each lecturer/trainer must receive training materials in English or French or Romanian language.

5. Provisions Program for the training institutes with a library of transport, management and marketing literature and EC legislation (also the Acquis Communautaire for Road Transport).

- **Number of programs:** 3 (one for each training center)

Estimated budget per programme (20 persons, 5 days)

No.	Expenses	Unit cost	Total (Euro)
1	Hotel accomodations	35 Euro/person/night	3,500
2	Restaurant	25 Euro/person/day	2,500
3	Meeting room	75 Euro/day	375

4	Interpreter	115 Euro/day	575
5	Equipment rent	115 Euro/day	575
6	Transport	35 Euro/person	700
7	Administrative expenses	35 Euro/day	175
8	Administrative personnel	50 Euro/day	250
9	Traning material translation	10 Euro/page	2,000
10	Traning material multiplication	0,15 Euro/page	600
	Total cost per course		11,250 EURO

Estimated total costs for 24 courses: 24 courses x 11,250 EURO/course = 270,000 EURO

Equipment – Video projector, Flipchart, Wall Screen, Video, TV

Traning material – 200 pages

Estimated total costs for equipment and training material = 50,000 EURO

ANNEX 5: Indicative list of the training programmes for the air sector

1) For the implementation of licensing requirements and personnel training in airport safety activities are necessary the following courses:

N o	Course Subject	Training	Persons RCAA/RAA		Duration	Fee (Euro)/ pers.
1	Senior Civil Aviation Management	Authorized Course by IATA	1	1	15 days	7,535
2	Aerodrome Regulation	Authorized Course by IATA	3	1	10 days	4,100
3	Advanced Terminal Design for the Commercial Airport	Authorized Course by IATA	4	-	10 days	6,460
4	Airport Marketing & Air Service Development	Authorized Course by IATA	3	-	5 days	3,220
5	Airport Advanced Business Management	Authorized Course by IATA	1	-	5 days	3,660
6	Airport Management and Ground Handling Operations	Authorized Course by IATA	4	1	10 days	5,120
7	Airport Strategic Management	Authorized Course by IATA	1	1	10 days	6,750
8	Management of Aviation Facilitation	Authorized Course by IATA	2	1	7 days	3,100

Note: Certain training organizations within EU countries are able to provide such kind of training, e.g. Ecole Nationale d'Aviation Civile (France), Lufthansa Training (Germany), Instilux (Luxemburg), Institute for Aviation (Sweden), UK-CAA (UK), University of Southampton (UK). The training organization shall be able to provide also adequate airport training practice.

2) For purposes concerning the FTO licensing of RAA and, possible, also for other organizations there are taken into account following courses:

No	Course Subject	Training	Persons RAA / RCAA		Duration	Fee/pers.
1	Aeroplane and Navigation Procedures Trainers	JAA authorized	2	2	According to the training programs available at the training organization	200 – 570 EURO/day for each participant according to the type of training program and training organization
1.1.	JAR-STD-3A					
1.2.	JAR-STD-2A					
1.3.	JAR-STD-1A					
2	Class Rating Instructor	JAR-FCL	2	1		
3	Type Rating Instructor	JAR-FCL	2	2		
4	Crew Resource Management	JAR-FCL		1		
5	Quality Assurance for FTOs/TRTOs	JAA authorized	1	3		
6	JAR – Flight Crew Licensing	JAR-FCL	3			

The prices for the previous stated courses are only informal and if these prices are negotiated on a common base, perhaps including attendees also from other organizations and countries, the training providers will be able to offer reduced prices, without affecting the training quality.

ANNEX 6: Indicative list of the training programmes, didactic materials and small equipment needed for the inland waterway sector

TABLE 1

No.	Training course	No. of the participants	Estimated cost/pers. (EURO)	Total (EURO)
1	Train the instructors	12	3,000	36,000
2	Train the assessors	12	3,000	36,000
3	Train auditors	12	2,000	24,000
4	Specialization instructors-MARPOL	12	2,500	30,000
5	Train experts in field of dangerous goods	12	3,000	36,000
6	Train auditors for applying System of quality, safety and environment	6	2,500	15,000
7	Master courses on training the adults	12	2,500	30,000
TOTAL (around)		210,000 EURO		

TABLE 2

No.	Training programme	COSTS OF THE TEACHING AIDS (EURO)			
		Video Total Cassettes	Equipment	Manuals	
1	Personal safety and social responsibilities on board ship	12,150	687	360	13,197
2	Elementary medical first aid	4,070	7,200	-	11,270
3	Fire prevention and fire fighting	4,530	26,090	200	30,820
4	Personal survival techniques	2,990	19,380	-	22,370
5	Proficiency in survival craft and rescue boats	3,985	26,700	120	30,805
6	Carriage of dangerous goods	3,080	5,000	845	8,925
7	Prevention of pollution from ships	4,525	14,000	-	18,525
8	Maritime English. Phrasal vocabulary	3,540	10,890	700	15,130
9	Ro- ro passenger ships and passenger ships other than ro-ro	1,540	5,000	450	6,990
10	Oil tanker, liquefied gas tanker and chemical tanker	6,675	34,000	1,000	41,675
TOTAL (around)		47,000	149,000	4,000	200,000

TOTAL I + II = 200,000 EURO + 210,000 EURO = 410,000 EURO

Details in the Annexes 6.1 and 6.2

ANNEX 6.1: Training programmes for the trainers of the Galati Training Center

1) Training courses for train the trainers in accordance with IMO requirements listed in model course 6.09

Number of the participants: 12

Estimated cost: $12 \times 3,000 \text{ EURO/person} = 36,000 \text{ EURO}$

2) Training courses for train the assessors in accordance with IMO requirements stipulated in model course 3.12

Number of the participants: 12

Estimated cost: $12 \times 3,000 \text{ EURO/person} = 36,000 \text{ EURO}$

3) Training courses for train the auditors in order to apply the Safety Management of Ship's Code

Number of the participants: 12

Estimated cost : $12 \times 2,000 \text{ EURO/person} = 24,000 \text{ EURO}$

4) Courses for the instructors' specialization on MARPOL 73/78 as amended

Number of the participants: 12

Estimated cost : $12 \times 2,500 \text{ EURO/person} = 24,000 \text{ EURO}$

5) Experts training courses in the field of carriage of dangerous goods on sea and on inland waterways

Number of the participants: 12

Estimated cost: $12 \times 3,000 \text{ EURO/person} = 36,000 \text{ EURO}$

6) Training courses for train the auditors in order to apply the Systems of quality, safety and environment in accordance with ISO standards

Number of the participants: 6

Estimated cost : $6 \times 2,500 \text{ EURO/person} = 15,000 \text{ EURO}$

7) Master courses on adults' training

Number of the participants: 12

Estimated cost : $12 \times 2,500 \text{ EURO/person} = 30,000 \text{ EURO}$

TOTAL COST FOR 7 COURSES: 207,000 EURO

ANNEX 6.2: Indicative lists for didactic materials and small equipment for the Galati Training Centre

1. *Personal safety and social responsibilities on board ship - Teaching aids*

a) Video cassettes

V1 – Personal safety on board ship (code 553-563) – 10 pieces
Estimated cost: 672 EROU/piece x 10 pieces = **6,720 EURO**

V2 – Personal hygiene (code 293)
Estimated cost **660 EURO**

V3 – Safe mooring practice (code 616)
Estimated cost **740 EURO**

V4 – Heath and welfare advice for seafarers (code 510)
Estimated cost **660 EURO**

V5 – Personal protective equipment (code 597)
Estimated cost **490 EURO**

V6 – Alcohol beware! (code 348)
Estimated cost **660 EURO**

V7 – Drugs – Way off course (code 486)
Estimated cost **740 EURO**

V8 – Entering into enclosed spaces (code 534)
Estimated cost **740 EURO**

V9 – Welding safety (code 495)
Estimated cost **740 EURO**

TOTAL COST VIDEO CASSETTES: 12,150 EURO

b) Equipment

E1 – Helmet – 3 pieces
Estimated cost 35 EURO/piece x 3 pieces = **105 EURO**

E2 – Goggles – 3 pieces
Estimated cost 12 EURO/piece x 3 pieces = **36 EURO**

E3 – Gloves – 3 pieces
Estimated cost 7 EURO/piece x 3 pieces = **21 EURO**

E4 – Safety shoes – 3 pieces
Estimated cost 10 EURO/piece x 3 pieces = **30 EURO**

E5 – Dust masks – 3 pieces
Estimated cost 50 EURO/piece x 3 pieces = **150 EURO**

E6 – Gas masks – 3 pieces
Estimated cost 100 EURO/piece x 3 pieces = **300 EURO**

E7 – Safety clothing – 3 pieces
Estimated cost 15 EURO/piece x 3 pieces = **45 EURO**

TOTAL COSTS FOR EQUIPMENT 687 EURO

c) Bibliographical manuals

B1 - ILO Code of Practice for Accident Prevention on Board Ship at Sea and in Port
Estimated cost – 60 EURO

B2 - Code of Safe Working Practices for Merchant Seamen. London, The Stationery Office Publications Centre, 1998 (ISBN 0115518363)
Estimated cost – 60 EURO

B3 - ICS/OCIMF/IAPH, International Safety Guide for Oil Tankers and Terminals. 4th ed. London, Witherby and Co. Ltd (32/36 Aylesbury Street, London, EC1R 0ET, UK), 1996 (ISBN 1-85609-081-7)
Estimated cost – 60 EURO

B4 - Guidelines on the Application of the International Safety Management Code. 3rd ed. The International Chamber of Shipping. (12 Carthusian Street, London, EC1M 6EB, UK), 1996
Estimated cost – 60 EURO

B5 - Drug and Alcohol Prevention Programmes in the Maritime Industry. ILO, 1996 (ISBN 92-2-110260-2)
Estimated – 60 EURO

B6 - Olav Bø, Accident Prevention
Estimated cost – 60 EURO

TOTAL COSTS FOR MANUALS – 360 EURO

TOTAL COSTS FOR TEACHING AIDS - POINT 1 = 13,197 EURO

These teaching aids are listed in the model course 1.21 made by International Maritime Organization, where it is said that the video cassettes are available from Videotel Marine International Ltd. London

We mention that these teaching aids may be also used for the training programme of the inland waterways sailing personnel such as: 'Personal protection'.

The video cassettes' prices are taken from the Marine Training Catalogue, 1999/2000 Edition.

The equipment's prices are taken from offers of the specialized companies that commercialize these articles.

2. Elementary first aid - Teaching aids

a) Video cassettes

V1 – A matter of life and death (code 564)

Estimated cost – **650 EURO**

V2 – Dealing with shock (code 565)

Estimated cost – **650 EURO**

V3 - Bone and muscle injuries (code 566)

Estimated cost – **650 EURO**

V4 – Dealing with the unexpected (code 567)

Estimated cost – **650 EURO**

V5 – Staying healthy on working trips (code 599)

Estimated cost – **740 EURO**

V6 – Medical first aid in case of fractures, dislocations (code 570)

Estimated cost – **730 EURO**

TOTAL COSTS FOR VIDEO CASSETTES 4,070 EURO

b) Equipment

E1 – Ship's medical chest with contents – 1 piece

Estimated cost – **700 EURO**

E2 – Resuscitation kit – 1 piece

Estimated cost – **500 EURO**

E3 – Dummies for cardiopulmonary resuscitation – 2 pieces

Estimated cost – **1,000 EURO**

E4 – Video equipment (video projector and video recorder) – 1 piece

Estimated cost – **5,000 EURO**

TOTAL COSTS FOR EQUIPMENT 7,200 EURO

TOTAL COSTS FOR TEACHING AIDS – POINT 2: 11,270 EURO

These teaching aids are listed in the model course 1.13 and 1.14 published by International Maritime Organization, where it is said that the video cassettes are available from Videotel Marine International Ltd. London

We mention that these teaching aids may be also used for the training programme of the inland waterways sailing personnel such as: 'Medical first aid' 'Preventing and fire-fighting' 'Personal protection', 'Carriage of dangerous goods on river', 'Carriage of passengers'.

The video cassettes' prices are taken from the Marine Training Catalogue, 1999/2000 Edition.

The equipment's prices are taken from INTERNET offers of the specialized companies that commercialize these articles.

3. Fire prevention and fire fighting - Teaching aids

a) Video cassettes

V1 – Fire prevention – part 1 (code 673)
Estimated cost – **755 EURO**

V2 - Fire prevention – part 2 (code 674)
Estimated cost – **755 EURO**

V3 – Fire party operations (code 509)
Estimated cost – **725 EURO**

V4 – Safe air to breathe (code 431)
Estimated cost – **755 EURO**

TOTAL COSTS FOR VIDEO CASSETTES: 2,990 EURO

b) Equipment

E1 – Water extinguishers (9 litre) – 2 pieces
Estimated cost – 30 EURO / piece x 2 pieces = **60 EURO**

E2 – Foam extinguishers (9 litre) – 2 pieces
Estimated cost – 50 EURO / piece x 2 pieces = **100 EURO**

E3 – Carbon dioxide extinguishers (5 kilogram) – 2 pieces
Estimated cost – 50 EURO / piece x 2 pieces = **100 EURO**

E4 – Dry powder extinguishers (10 kg) – 2 pieces
Estimated cost – 60 EURO / piece x 2 pieces = **120 EURO**

E5 – Halon extinguishers – 2 pieces
Estimated cost – 10 EURO / piece x 2 pieces = **200 EURO**

E6 – Extinguishers for combustible metals – 2 pieces
Estimated cost – 150 EURO / piece x 2 pieces = **300 EURO**

E7 – Extinguishers for galleys and restaurants – 2 pieces
Estimated cost – 200 EURO / piece x 2 pieces = **400 EURO**

E8 – Fireman thermic protection suit – 1 piece
Estimated cost – **1,500 EURO**

E9 – Self-contained breathing apparatus – 1 piece
Estimated cost – **200 EURO**

E10 – Compressed-air apparatus – 2 pieces
Estimated cost – 1200 EURO / piece x 2 pieces = **2,400 EURO**

E11 – Smoke detector – 1 piece
Estimated cost – **5,000 EURO**

E12 – Temperature detector – 1 piece
Estimated cost – **1,000 EURO**

E13 – Flame detector – 1 piece

Estimated cost – **1,000 EURO**

E14 – Fireman suit – 2 pieces

Estimated cost – 1,000 EURO x 2 pieces = **2,000 EURO**

E15 – Video projection equipment (video projector and video recorder) – 1 piece

Estimated cost – **5,000 EURO**

TOTAL COSTS FOR EQUIPMENT: 19,380 EURO

TOTAL COSTS FOR TEACHING AIDS – POINT 3: 22,370 EURO

These teaching aids are listed in the model course 1.20 made by International Maritime Organization, where it is said that the video cassettes are available from Videotel Marine International Ltd. London

We mention that these teaching aids may be also used for the training programme of the inland waterways sailing personnel such as: 'Fire prevention and fire fighting' and 'Personal protection'.

The video cassettes' prices are taken from the Marine Training Catalogue, 1999/2000 Edition.

The equipment's prices are taken from INTERNET offers of the specialized companies that commercialize these articles.

4. Personal survival techniques - Teaching aids

a) Video cassettes

V1 – SOLAS chapter III part 1 – Preparing for abandonment (code 297.1)

Estimated cost – **700 EURO**

V2 - SOLAS chapter III part 2 – Abandonment by lifeboat (code 297.2)

Estimated cost – **700 EURO**

V3 - SOLAS chapter III part 3 – Abandonment by liferaft (code 297.3)

Estimated cost – **700 EURO**

V4 - SOLAS chapter III part 4 – Techniques of survival (code 297.4)

Estimated cost – **700 EURO**

V5 - SOLAS chapter III part 5 – SOLAS amendments (code 463)

Estimated cost – **700 EURO**

V6 – Cold water casualty (code 527)

Estimated cost – **380 EURO**

V7 – Man overboard (code 644)

Estimated cost – **650 EURO**

TOTAL COSTS FOR VIDEO CASSETTES: 4,530 EURO

b) Equipment

E1 – Lifejackets – 36 pieces

- Estimated cost – 60 EURO/piece x 36 pieces = **2,160 EURO**
- E2 – Inflatable lifejackets – 5 pieces
Estimated cost – 150 EURO/piece x 5 pieces = **750 EURO**
- E3 – Lifebuoys – 2 pieces
Estimated cost – 340 EURO/piece x 2 pieces = **680 EURO**
- E4 – Rigid liferaft – 1 piece
Estimated cost – **4,000 EURO**
- E5 – 20 persons inflatable liferaft – 1 piece
Estimated cost – **5,000 EURO**
- E6 – Complet set of lifeboat equipment – 1 set
Estimated cost – **1,000 EURO**
- E7 - Complet set of liferaft equipment – 1 set
Estimated cost – **1,000 EURO**
- E8 – SART operating on 9 GHz frequency – 1 set
Estimated cost – **450 EURO**
- E9 – EPIRB operating on 460 MHz
Estimated cost – **950 EURO**
- E10 – Hidrothermic suits – 6 pieces
Estimated cost – 800 EURO/piece x 6 pieces = **4,800 EURO**
- E11 – Lifebuoys – 6 pieces
Estimated cost – 50 EURO/piece x 6 pieces = **300 EURO**
- E12 - Video projection equipment (video projector and video recorder) – 1 piece
Estimated cost – **5,000 EURO**

TOTAL COSTS FOR EQUIPMENT: 26,090 EURO

c) Bibliographical manuals

- B1 Lee, E.C.B. and Lee, K. Safety and Survival at Sea. London : W.W.Norton, 1980. (ISBN 0393 03242 6)
Estimated cost – 50 EURO**
- B2 Baldrige, D. Shark Attack. London : Macdonald Futura Publications, 1979. (ISBN 0 70088 1483 2)
Estimated cost – 50 EURO**
- B3 Bø, Olav. Basic Safety Course : Sea Safety and Survival. Oslo : Norwegian University Press, 1987. (ISBN 82 00 432122)
Estimated cost – 50 EURO**
- B4 Wright, C.H. Survival at Sea : The Lifeboat and Liferaft. Liverpool : The James Laver Printing Co. Ltd., 1986. (ISBN 085174 5407)**

Estimated cost – 50 EURO

TOTAL COSTS FOR MANUALS – 200 EURO

TOTAL COST FOR TEACHING AIDS – POINT 4: 30,820 EURO

These teaching aids are listed in the model course 1.19 made by International Maritime Organization, where it is said that the video cassettes are available from Videotel Marine International Ltd. London

We mention that these teaching aids may be also used for the training programme of the inland waterways sailing personnel such as: 'Human rescue on sea', 'Naval communications', 'Transport of passengers', 'Craft manoeuvring'.

The video cassettes' prices are taken from the Marine Training Catalogue, 1999/2000 Edition.

The equipment's prices are taken from INTERNET offers of the specialized companies that commercialize these articles.

5. Proficiency in survival craft and rescue boats - Teaching aids

a) Video cassettes

V1 – Personal survival part 1 (code 645)

*Estimated cost – **675 EURO***

V2 - Personal survival part 2 (code 646)

*Estimated cost – **675 EURO***

V3 – Lifeboat on-load release mechanism (code 596)

*Estimated cost – **725 EURO***

V4 – Viking inflatable liferaft (code 404)

*Estimated cost – **445 EURO***

V5 - Viking davit launchable lifeboat (code 404)

*Estimated cost – **610 EURO***

V6 – Viking marine escape slide (code 274)

*Estimated cost – **445 EURO***

V7 – Viking marine evacuation system (code 275)

*Estimated cost – **410 EURO***

TOTAL COSTS FOR VIDEO CASSETTES: 3,985 EURO

b) Equipment

E1 – Lifeboat with engine – 1 piece

*Estimated cost – **5,000 EURO***

E2 – Portable hoist unit suitable for recovery of rescue boats – 1 piece

*Estimated cost – **1,000 EURO***

E3 – Rescue boat with engine – 1 piece

Estimated cost – 1,000 EURO

E4 – Portable hoist unit suitable for recovery of lifeboat – 1 piece

Estimated cost – 1,000 EURO

E5 – Inflatable liferaft – 1 piece

Estimated cost – 3,500 EURO

E6 – Portable two-way radiotelephones approved for use in survival craft – 3 pieces

Estimated cost – 400 EURO/piece x 3 pieces = 1,200 EURO

E7 - Video projection equipment (video projector and video recorder) – 1 piece

Estimated cost – 5,000 EURO

TOTAL COSTS FOR EQUIPMENT: 26,700 EURO

c) Bibliographical manuals

B1 - C.H.Wright, Proficiency in survival craft certificates (Glasgow:Brown, Son and Ferguson, 1988)

Estimated cost – 60 EURO

B2 - D.J.House, Marine survival and rescue systems (London: Witherby & Co., 1977)

Estimated cost – 60 EURO

TOTAL COST FOR MANUALS: 120 EURO

TOTAL COSTS FOR TEACHING AIDS – POINT 5: 30,805 EURO

These teaching aids are listed in the model course 1.23 made by International Maritime Organization, where it is said that the video cassettes are available from Videotel Marine International Ltd. London

We mention that these teaching aids may be also used for the training programme of the inland waterways sailing personnel such as: 'Human rescue on sea', 'Naval communications', 'Transport of passengers', 'Craft manoeuvring'.

The video cassettes' prices are taken from the Marine Training Catalogue, 1999/2000 Edition.

The equipment's prices are taken from INTERNET offers of the specialized companies that commercialize these articles.

6. Carriage of dangerous goods - Teaching aids

a) Video cassettes

V1- Dangerous goods at sea, part 1 (code 125)

Estimated cost – 770 EURO

V2 – Handling and storage of dangerous goods in port areas (code 126)

Estimated cost – 770 EURO

V3 – Portable tanks and tank containers, part 2 (code 126)

Estimated cost – 770 EURO

V4 – Safe packing and securing of cargo in freight containers and vehicles (code 124)

Estimated cost – **770 EURO**

1.1. TOTAL COSTS FOR VIDEO CASSETTES: 3,080 EURO

b) Equipment

E1 - Video projection equipment (video projector and video recorder) – 1 piece

Estimated cost – 5,000 EURO

c) Bibliographical manuals

B1 - United Nations Recommendations of the Transport of Dangerous Goods ('Orange Book'), 10th revised edition 1997 – United Nations, Sales Section, New York or Geneva

Estimated cost – **65 EURO**

B2 - Manual of Tests and Criteria, parts I to IV – United Nations, Sales Section, New York or Geneva

Estimated cost – **65 EURO**

B3 - Technical Instructions for the Safe Transport of Dangerous Goods by Air and Supplement, 1997-1998 edition – International Civil Aviation Organization (ICAO), 999 University Street, Montreal, Quebec, Canada H3C 5H7

Estimated cost – **65 EURO**

B4 - UNEP Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal

Estimated cost – **65 EURO**

B5 - European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR), 1997 edition, United Nations, Sales Section, New York or Geneva

Estimated cost – **65 EURO**

B6 - Convention concerning International Carriage by Rail (COTIF), appendix B: Uniform Rules concerning the Contract for International Carriage of Goods by Rail (CIM)

Estimated cost – **65 EURO**

B7 - Annex 1 to CIM Regulations concerning the International Carriage of Dangerous Goods by Rail (RID), 1997 edition – HMSO Publications Centre, PO Box 276, London SW8 5DT, United Kingdom

Estimated cost – **65 EURO**

B8 - International Air Transport Association (IATA), Dangerous Goods Regulations, 38th edition, 1998 – International Air Transport Association, 2000 Peel Street, Montreal, Quebec, Canada H3A 2R4

Estimated cost – **65 EURO**

B9 - Sax, N. Irving and Richard, J. Lewis Sr., Dangerous Properties of Industrial Materials,

Van Nostrand Reinhold, 115 Fifth Avenue, New York, NY 10003, USA
Estimated cost – **65 EURO**

B10 - Hawley's Condensed Chemical Dictionary,

Van Nostrand Reinhold, 115 Fifth Avenue, New York, NY 10003, USA
Estimated cost – **65 EURO**

B11 - E. Mayer, Chemistry of Hazardous Materials,
Prentice-Hall, 66 Wood Lane End, Hemel Hempstead,, Herts. HP2 4RG, United Kingdom
Estimated cost – **65 EURO**

B12 - F.C.Hess, Chemistry Made Simple,
Heinemann Ltd., 10 Upper Grosvenor Street, London W1X 9PA, United Kingdom
Estimated cost – **65 EURO**

B13 - Regulations for the Safe Transport of Radioactive Material – Requirements ST-1 1997, Wagramerstrasse 5, PO Box 100, 1400 Vienna, Austria
Estimated cost – **65 EURO**

TOTAL COSTS FOR MANUALS: 845 EURO

TOTAL COSTS FOR TEACHING AIDS – POINT 6: 8,925 EURO

These teaching aids are listed in the model course 1.10 made by International Maritime Organization, where it is said that the video cassettes are available from Videotel Marine International Ltd. London

We mention that these teaching aids may be also used for the training programme of the inland waterways sailing personnel such as: 'Carriage and handle of dangerous goods on river', 'Cargo and packs damage', 'Transport of passengers', 'Pollution prevention'

The video cassettes' prices are taken from the Marine Training Catalogue, 1999/2000 Edition.

The equipment's prices are taken from INTERNET offers of the specialized companies that commercialize these articles.

7. Prevention of pollution from ships - Teaching aids

a) Video cassettes

V1 – Oily water separators (code 124)
Estimated cost – **770 EURO**

V2 – Safe oil transfer procedures (code 588)
Estimated cost – **770 EURO**

V3 – Waste and garbage management (code 627)
Estimated cost – **775 EURO**

V4 – Prevention of pollution at sea (code 432)
Estimated cost – **660 EURO**

V5 – Prevention & reaction to marine oil spills (code 591)
Estimated cost – **775 EURO**

V6 - Prevention & reaction to marine oil spills – the seafarer's role (code 592)
Estimated cost – **775 EURO**

TOTAL COSTS FOR VIDEO CASSETTES: 4,525 EURO

b) Equipment

E1 – Meter for testing the pollution of sea – 2 pieces
Estimated cost – 4,500 EURO/piece x 2 = **9,000 EURO**

E2 – Retro projector and projection apparatus
Estimated cost – **5,000 EURO**

TOTAL COSTS FOR EQUIPMENT: 14,000 EURO

TOTAL COSTS FOR TEACHING AIDS – POINT 7: 18,525 EURO

These teaching aids are listed in the model course 1.11 made by International Maritime Organization, where it is said that the video cassettes are available from Videotel Marine International Ltd. London

We mention that these teaching aids may be also used for the training programme of the inland waterways sailing personnel such as: 'Prevention and fighting against pollution on inland waters', 'Carriage and handling of dangerous goods on river' 'Personal protection', 'Transport of passengers'

The video cassettes' prices are taken from the Marine Training Catalogue, 1999/2000 Edition.

The equipment's prices are taken from INTERNET offers of the specialized companies that commercialize these articles.

8. Maritime English. Phrasal vocabulary - Teaching aids

a) Video cassettes

V1 – Shipboard familiarization (code 593)
Estimated cost **740 EURO**

V2 – Understanding English on board ship, part 1 (code 525)
Estimated cost **740 EURO**

V3 - Understanding English on board ship, part 2 (code 526)
Estimated cost **740 EURO**

V4 – Anchors and cables (code 111)
Estimated cost **660 EURO**

V5 – Bridge resource management series part 4 – Accident prevention (code 637)
Estimated cost **660 EURO**

TOTAL COSTS FOR VIDEO CASSETTES : 3,540 EURO

b) Equipment

E1 – Color TV –set – 1 piece

Estimated cost - **3,570 EURO**

E2 – Video recording – 1 piece

Estimated cost - **2,860 EURO**

E3 – Equipment for titrating the video cassettes – 1 piece

Estimated cost - **1,600 EURO**

E4 – Combine (tape recorder & CD) – 1 piece

Estimated cost - **2,860 EURO**

TOTAL COSTS FOR EQUIPMENT : 10,890 EURO

c) Bibliographical materials

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- B₁ –** Hewings, M. Pronunciation Tasks cassettes. Cambridge, Cambridge University Press, 1993 (ISBN 0 521 38453 2)
Scrivener, J. Learning Teaching. Oxford, Macmillan Heinemann, 1994 (ISBN 0 435240897) Seligson, P. Helping Students To Speak. London, Richmond Publishing, 1997 (ISBN 84 294 4926 4)
Soars, J., Soars, L. Headway Elementary Student's Book. Oxford, Oxford University Press, 1993 (ISBN 0 19 4339920)
Soars, J., Soars, L. Headway Elementary Teacher's Book. Oxford, Oxford University Press, 1993 (ISBN 0 19 4339947)
Soars, J., Soars, L. Headway Elementary Workbook. Oxford, Oxford University Press, 1993 (ISBN 0 19 4339939)
Estimated cost - 100 EURO
- B₂ –** Soars, J., Soars, L. Headway Elementary Class Cassettes. Oxford, Oxford University Press, 1993 (ISBN 0 19 4339955)
Soars, J., Soars, L. Headway Pre-Intermediate Student's Book. Oxford, Oxford University Press, 1991 (ISBN 0 19 4339874)
Soars, J., Soars, L. Headway Pre-Intermediate Teacher's Book. Oxford, Oxford University Press, 1991 (ISBN 0 19 4339890)
Soars, J., Soars, L. Headway Pre-Intermediate Workbook. Oxford, Oxford University Press, 1991 (ISBN 0 19 4339882)
Estimated cost – 100 EURO
- B₃ –** Soars, J., Soars, L. Headway Pre-Intermediate Class Cassettes. Oxford, Oxford University Press, 1991 (ISBN 0 19 4339904)
Soars, J., Soars, L. New Headway Intermediate Student's Book. Oxford, Oxford University Press, 1996 (ISBN 0 19 4702235)
Soars, J., Soars, L. New Headway Intermediate Teacher's Book. Oxford, Oxford University Press, 1996 (ISBN 0 19 4702243)
Soars, J., Soars, L. New Headway Intermediate Workbook. Oxford, Oxford University Press, 1996 (ISBN 0 19 4702251)
Estimated cost – 100 EURO

- B₄ –** Soars, J., Soars, L. New Headway Intermediate Class Cassettes. Oxford, Oxford University Press, 1996 (ISBN 0 19 4702278)
 Swan M., Walter, C. The New Cambridge English Course 1 Teacher's Book. Cambridge, Cambridge University Press, 1990 (ISBN 0 521 376653)
 Swan M., Walter, C. The New Cambridge English Course 1 Practice Book. Cambridge, Cambridge University Press, 1990 (ISBN 0 521 376610)
 Estimated cost – 100 EURO
- B₅ –** Swan M., Walter, C. The New Cambridge English Course Class Cassettes Set 1. Cambridge, Cambridge University Press, 1990 (ISBN 0 521 375029)
 Swan M., Walter, C. The New Cambridge English Course 2 Teacher's Book. Cambridge, Cambridge University Press, 1990 (ISBN 0 521 376661)
 Swan M., Walter, C. The New Cambridge English Course 2 Practice Book. Cambridge, Cambridge University Press, 1990 (ISBN 0 521 376629)
 Estimated cost – 100 EURO
- B₆ –** Swan M., Walter, C. The New Cambridge English Course Class Cassettes Set 2. Cambridge, Cambridge University Press, 1990 (ISBN 0 521 37670X)
 Swan M., Walter, C. The New Cambridge English Course 3 Teacher's Book. Cambridge, Cambridge University Press, 1992 (ISBN 0 521 37667X)
 Swan M., Walter, C. The New Cambridge English Course 3 Practice Book. Cambridge, Cambridge University Press, 1992 (ISBN 0 521 376637)
 Estimated cost – 100 EURO
- B₇ –** Swan M., Walter, C. The New Cambridge English Course Class Cassettes Set 3. Cambridge, Cambridge University Press, 1990 (ISBN 0 521 375045)
 Swan M. Practical English Usage. 2nd ed. Oxford, Oxford University Press, 1995 (ISBN 0 19 431197 X)
 Underhill, N. Testing Spoken Language. Cambridge University Press, 1987 (ISBN 0 521 312760)
 Urr, P. A Course In Language Teaching. Cambridge, Cambridge University Press, 1996 (ISBN 0 521 449944)
 Urr, P. Teaching Listening Comprehension. Cambridge, Cambridge University Press, 1984 (ISBN 0 521 28781 2)
 Weir, C. Communicative Language Testing. Hemel Hempstead, Prentice Hall/Macmillan, 1990 (ISBN 0 131 552848)
 Estimated cost – 100 EURO

TOTAL COSTS FOR MANUALS: 700 EURO

TOTAL COSTS FOR TEACHING AIDS – POINT 8: 151,130 EURO

These teaching aids are listed in the model course 3.17 made by International Maritime Organization, where it is said that the video cassettes are available from Videotel Marine International Ltd. London

We mention that these teaching aids may be also used for the training programme of the inland waterways sailing personnel such as: 'Radio telephonist operator', 'Naval communications', 'Standard vocabulary for river sailing'. The video cassettes' prices are taken from the Marine Training Catalogue, 1999/2000 Edition.

The equipment's prices are taken from INTERNET offers of the specialized companies that commercialize these articles.

9. Ro- ro passenger ships and passenger ships other than ro-ro - Teaching aids

a) Video cassettes

V1 – Passenger mustering and crowd control (code 603)

Estimated cost – **770 EURO**

V2 – Crisis management, part 1 (code 507)

Estimated cost – **770 EURO**

TOTAL COSTS FOR VIDEO CASSETTES: 1,540 EURO

b) Equipment

E1 – Video projection equipment (video recording and video projector)

Estimated cost – **5,000 EURO**

TOTAL COSTS FOR EQUIPMENT : 5,000 EURO

c) Bibliographical materials

B₁ –	Flin Rhona. Siting in the Hot Seat. Leaders and Teams for Critical Incident Management. 1996. John Wiley & Sons. (ISBN 0-471-95796-8) Estimated cost – 50 EURO
B₂ –	Easingwold Papers No. 2. Crises and the Media. The Emergency Planning College. 1994. (ISBN 1-874-321-01-9) Estimated cost – 50 EURO
B₃ –	Easingwold Papers No. 4 Lessons Learnt form Crowd-related Disasters. The Emergency Planning College. 1992. (ISBN 1-874-321-04-3). B1 Flin Rhona. Siting in the Hot Seat. Leaders and Teams for Critical Incident Management. 1996. John Wiley & Sons (ISBN 0-471-95796-8) Estimated cost – 50 EURO
B₄ –	Easingwold Papers No. 5. Conference : Problems Associated with Large Scale Evacuations. The Emergency Planning College. 1994. (ISBN 1-874-321-06-X) Estimated cost – 50 EURO
B₅ –	Easingwold Papers No. 6 Disaster Preparedness, Some Myths and Misconceptions. The Emergency Planning College. 1992. (ISBN 1-874-321-02-7)

	Estimated cost – 50 EURO
B₆ –	Easingwold Papers No. 7. Crises in a Complex Society. The Emergency Planning College. 1994. (ISBN 1-874-321-08-6) Estimated cost – 50 EURO
B₇ –	Easingwold Papers No. 8. A Digest of Some Well Known Disasters. 1994. the Emergency Planning College. (ISBN 1-874-321-07-8) Estimated cost – 50 EURO
B₈ –	Leach, John. Survival Psychology. 1994. MacMillan Press Ltd. (ISBN 0-333-51855-1) Estimated cost – 50 EURO
B₉ –	Ro-Ro Stowage and Securing of Vehicles – Code of Practice. 1997 (ISBN 011-550-995-X) Estimated cost – 50 EURO

TOTAL COSTS FOR MANUALS: 450 EURO

TOTAL COSTS FOR TEACHING AIDS – POINT 9: 6,990 EURO

These teaching aids are listed in the model courses 1.28 and 1.29 made by International Maritime Organization, where it is said that the video cassettes are available from Videotel Marine International Ltd. London

We mention that these teaching aids may be also used for the training programme of the inland waterways sailing personnel such as: 'Transport of passengers', 'Ship vitality', 'Human life saving on sea', 'Preventing and fire fighting'. The video cassettes' prices are taken from the Marine Training Catalogue, 1999/2000 Edition.

The equipment's prices are taken from INTERNET offers of the specialized companies that commercialize these articles.

10. Oil tanker, liquefied gas tanker and chemical tanker - Teaching aids

a) Video cassettes

V1 – An introduction to liquefied gas carriers (code 103)
Estimated cost - **700 EURO**

V2 – Fire fighting in carriage of liquefied gas (code 254)
Estimated cost - **800 EURO**

V3 – Chemistry on liquefied gas (code 641)
Estimated cost - **800 EURO**

V4 - Physics on liquefied gas (code 642)
Estimated cost - **700 EURO**

V5 – Maintaining operations of the inert gas system (code 116)

Estimated cost - **700 EURO**

V6 – Crude oil washing (code 11)
Estimated cost - **700 EURO**

V7 – Over and back pressure in tanks (code 533)
Estimated cost - **600 EURO**

V8 – Personal safety on tankers (561)
Estimated cost - **675 EURO**

V9 – Chemical tanker and operations, part 1 and 2 (code 329.1 and 329.2)
Estimated cost - **1,000 EURO**

TOTAL COSTS FOR VIDEO CASSETTES: 6,675 EURO

b) Equipment

E1 – Portable oxygen meter – 1 piece
Estimated cost - **250 EURO**

E2 – Portable combustible-gas detector – 2 pieces
Estimated cost – 4,500 EURO/piece x 2 pieces = **9,000 EURO**

E3 – Inflammable gas detector – 2 pieces
Estimated cost – 4,500 EURO/piece x 2 pieces = **9,000 EURO**

E4 – Personal oxygen monitor – 1 piece
Estimated cost – **3,000 EURO**

E5 – Toxic gas detector – 1 piece
Estimated cost – **2,500 EURO**

E6 – Meter of permanent control of oxygen content – 1 piece
Estimated cost – **300 EURO**

E7 - Retro projector and projection apparatus
Estimated cost – **5,000 EURO**

TOTAL COSTS FOR EQUIPMENT: 6,400 EURO

c) Bibliographical manuals

B₁ – ICS/OCIMF/IAPH, International Safety Guide for Oil Tankers and Terminals, 4th ed. [London, Witherby and Co. Ltd. (32/36 Aylesbury Street, London, EC1R 0ET, U.K), 1996] (ISBN 1-85609-081-7)
Estimated cost – 50 EURO

B₂ – C.Baptist (Captain), Tanker Handbook for Deck Officers. 7th ed. [Glasgow, Brown, Son & Ferguson Ltd. (4-10 Darnley Street, Glasgow, G41 2SD, U.K), 1991] (ISBN 0-85174-587-3)
Estimated cost – 50 EURO

B₃ – International Chamber of Shipping, Tanker Safety Guide (Chemicals), 2nd

- ed. (London, Witherby and Co. Ltd., 1991) (ISBN 0-948691-50-6)
Estimated cost – 50 EURO
- B₄ – M.Grey (editor), Chemical/Parcel Tankers, 3rd ed. (London, Fairplay Publications Ltd., 1984) (ISBN 0-905045-67-X)
Estimated cost – 50 EURO**
- B₅ – B.Bengtsson, Sea Transport of Liquid Chemicals in Bulk, 3rd ed. (Öckerö, B.Bengtsson and A.B. Inmar, 1982) (ISBN 91-970090-0-8)
Estimated cost – 50 EURO**
- B₆ – ICS/OCIMF/IAPH/INTERTANKO/CEFIC/SIGTTO, Ship/Shore Safety Check List Guidelines (London, International Chamber of Shipping, 1998)
Estimated cost – 50 EURO**
- B₇ – International Chamber of Shipping, Tanker Safety Guide (Liquefied Gas), 3rd ed. (London, Witherby and Co. Ltd., 1996) (ISBN 0-906270-01-4)
Estimated cost – 50 EURO**
- B₈ – SIGTTO, Liquefied Gas Handling Principles on Ships and in Terminals, 2nd ed. (London, Witherby and Co. Ltd., 1996) (ISBN 0-900886-93-5)
Estimated cost – 50 EURO**
- B₉ – Gas Measurements on Combination Carriers and Crude Oil Tankers, (NSOS, Grenseveien 99, N-0601, Oslo 6, Norway)
Estimated cost – 50 EURO**
- B₁₀ – International Chamber of Shipping/Oil Companies International Marine Forum, Ship to Ship Transfer Guide (Petroleum), 3rd ed. (London, Witherby & Co. Ltd., 1997) (ISBN 1-85609-097-3)
Estimated cost – 50 EURO**
- B₁₁ – International Chamber of Shipping/Oil Companies International Marine Forum, Clean Seas Guide for Oil Tankers, 4th ed. (London, Witherby & Co. Ltd., 1997) (ISBN 1-85609-058-2)
Estimated cost – 50 EURO**
- B₁₂ – U.S. Coast Guard, CHRIS, Manual II, Hazardous Chemical Data, (Washington, D.C., Government Printing Office, 1988)
Estimated cost – 50 EURO**
- B₁₃ – N.I. Sax, and R.J. Lewis, Sr., Hawley's Condensed Chemical Dictionary, 13th ed. (New York, Van Nostrand Reinhold, 1977) (ISBN 0-442-01131-8)
Estimated cost – 50 EURO**
- B₁₄ – Tank Cleaning Guide, 6th ed. (Rotterdam, B.V. Chemical Laboratory "Dr. A. Verwey", 1998)
Estimated cost – 50 EURO**
- B₁₅ – Bureau VERITAS, Gas and Chemical Ship Safety Handbook, 2nd ed. (London, Lloyd of London Press Ltd., 1997) (ISBN 1-85044-089-1)
Estimated cost – 50 EURO**

- B₁₆ – Dräger-Tube Handbook. 11th ed. (Dräger Sicherheitstechnik GmbH, Revalstrasse 1, D-23560 Lübeck, Germany, 1998) (ISBN 3-926762-06-3)
Estimated cost – 50 EURO**
- B₁₇ – R. Ffooks (editor), Gas Carriers, 1st ed. (London, Fairplay Publications Ltd., 1984) (ISBN 0-905045-52-1)
Estimated cost – 50 EURO**
- B₁₈ – T.W.V.Woolcott, Liquefied Petroleum Gas Tanker Practice, 2nd ed. (Glasgow, Brown, Son and Ferguson Ltd., 1987) (ISBN 0-85174-295-5)
Estimated cost – 50 EURO**
- B₁₉ – R.G.Wooler, Marine Transportation of LNG and Related Products, (Cambridge, MD, Cornell Maritime Press Inc., 1975)
(ISBN 0-87033-193-0)
Estimated cost – 50 EURO**
- B₂₀ – INTERTANKO, Measures to Prevent Accidental Pollution, 1990**

TOTAL COSTS FOR MANUALS: 1,000 EURO

TOTAL COSTS FOR TEACHING AIDS – POINT 10: 14,075 EURO

These teaching aids are listed in the model course 1.01, 1.02, 1.04 and 1.06 made by International Maritime Organization, where it is said that the video cassettes are available from Videotel Marine International Ltd. London.

We mention that these teaching aids may be also used for the training programme of the inland waterways sailing personnel such as: 'Carriage and handle of dangerous goods on river', 'Pollution prevention on inland waters'

The video cassettes' prices are taken from the Marine Training Catalogue, 1999/2000 Edition.

The equipment's prices are taken from INTERNET offers of the specialized companies that commercialize these articles.