



Cooperation-Network for logistics and nautical education focusing on  
Inland Waterway Transport in the Danube corridor  
supported by innovative solutions

# Supporting EU and National Policies

## Draft National Action Plan for Education and Training Issues in the Field of Inland Waterway Transport SLOVAKIA

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## 1. List of abbreviations

EDIS	publisher of the University of Žilina
EU	European Union
IWT	inland water transport
F PEDAS	acronym of the Faculty of Operation and Economics of Transport and Communications at the University of Žilina in the Slovak language (Fakulta prevádzky a ekonomiky dopravy a spojov)
NAIADES	European Action Programme for Inland Water Transport
NAP	National action plan
RIS	River Information Services
SR	Slovak Republic
SPaP	acronym of the Slovak shipping company Slovak Shipping and Ports in the Slovak language (Slovenská plavba a prístavy)
KVD	acronym of the Department of Water Transport in the Slovak language (Katedra vodnej dopravy)

## 2. Analysis of relevant policies in the Slovak Republic

The general principles of the Slovak transport policy in the field of inland water transport (IWT) are established on the General Programme of the Implementation of NAIADES in the Slovak Republic Generálny program implementácie NAIADES v ) which was approved by the Government of the Slovak Republic in September 2009, see the link: <http://www.rokovania.gov.sk/Rokovanie.aspx/BodRokovaniaDetail?idMaterial=10163>

In accordance with the action programme NAIADES some areas were chosen due to the improvements of conditions in IWT, i.e. a part of transport flows which is transported by road transport could be moved towards to more ecological mode of transport - water transport. In the area of IWT there is the lack in infrastructure and the application of RIS. It is also necessary to increase tolerance of vessels with the environment.

The development of water transport in the SR cannot be done without the support programmes and the state aid. The programme of education in water transport is part of the General Programme. In this area there has been a big lack of the qualified staff (mainly ship crew members) in the last a few years not only in Slovakia, but also in Europe.

It is also necessary to:

- improve navigation parameters on:
  - ✓ on the Danube between Sap and Štúrovo, the state border with Austria and Bratislava
  - ✓ the Váh between Komárno and Hlohovec

- create a new state organisation called Riaditeľstvo vodných ciest Slovenskej republiky (Headquarters of Waterways of the Slovak Republic) gaining funds of the EU for the development and modernisation of water transport.

### 3. SWOT analysis of the Slovak education and training situation in the field of inland waterway transport

Since the 1990s the Slovak Republic has had a lack of the qualified staff who could work in the area of IWT and logistics. The average age of the staff in the biggest shipping company called Slovak Shipping and Ports is more than 50 years old; one problem is that professions related to IWT and logistics are not interesting for the young generation.

In the SR there are only two universities which prepare students for the field of IWT and logistics (see Figure 1). Nowadays, there are no secondary schools or training centres providing nautical education. Two secondary schools which were based in Bratislava were closed in the 1990s due to the low interest of students.

Figure 1: List of schools in the SR

school / training centre			area of the education
University	University of Žilina	Department of Water Transport	IWT and logistics
		Department of Road and Urban Transport	
	Slovak University of Technology (Bratislava)	Department of Automobiles, Ships and Combustion Engines	shipbuilding (mainly leisure crafts)
		Department of Hydro-techniques	construction of dams and waterways
Secondary schools	no		
Training centre	no		

Figure 2: SWOT analysis of the Slovak education and training situation

Strengths	Weaknesses
<ol style="list-style-type: none"> <li>1. Tradition, history of IWT in the SR</li> <li>2. Job professions (e.g. captains, boatmen) are very perspective and demanded in the SR</li> <li>3. Good relationship between universities and shipping companies, public authorities</li> </ol>	<ol style="list-style-type: none"> <li>1. No promotion of IWT in the SR</li> <li>2. No secondary schools in the area of IWT</li> <li>3. IWT and Logistics are mentioned only in general content at secondary schools</li> <li>4. Lack of students who want to study and work in IWT</li> <li>5. Lack of well educated nautical staff</li> <li>6. No training centre which could educate workers / students in IWT</li> <li>7. Present learning materials in IWT are not update, have boring form for students, missing materials in electronic form)</li> <li>8. Lack of lectors from practice (only from universities)</li> <li>9. Bad infrastructure – navigation only on the Danube</li> </ol>
Opportunities	Threats
<ol style="list-style-type: none"> <li>1. Good opportunities to find a job (mainly for young generation)</li> <li>2. Creation of a new training / promotion centre in IWT</li> <li>3. Creation of a new learning materials</li> </ol>	<ol style="list-style-type: none"> <li>1. Qualified nautical staff is over-aged (50 and more)</li> <li>2. Absence of well educated nautical staff in a near future</li> <li>3. Slovak certificates are not harmonized with other European certificates (mainly on the Rhine)</li> </ol>

## Strengths

### 1. Tradition, history of IWT in the Slovak Republic

The first shipping company (now called Slovak Shipping and Ports “SPaP”) which has transported cargo on the Danube in Slovakia (former Czechoslovakia) was established in Bratislava in 1923. Since its establishment it has been renamed several times and has passed through various transformation processes due to political and economic changes in Slovakia (former Czechoslovakia) during the last 60 years. Nowadays it still has got a dominant position in the transport of cargo on the Danube among Slovak shipping companies.

### 2. IWT job professions (e.g. captains, boatmen) are very perspective and demanded in the Slovak Republic

The average of the staff that works for Slovak Shipping and Ports is more than 50 years old. Former workers who used to work for SPaP in the area of navigation work for shipping companies in Western Europe (mainly in Germany and the Netherlands) due to better salaries. Thus there is a growing demand for professions related to inland water transport since the 1990.

### 3. Good relationship between universities and shipping companies, public authorities

Universities like the University of Žilina and the Slovak University of Technology in Bratislava cooperate with shipping companies (mainly with SPaP) and the public authorities (Slovak Navigation Administration and the Ministry of Transport, Post and Telecommunications of the Slovak Republic, section: Water Transport) in the different areas of IWT and logistics.

## **Weaknesses**

### **1. No promotion of IWT in the Slovak Republic**

Since the establishment of the Slovak Republic on 1 January 1993 inland water transport has missed the interest of political institutions / parties. Water transport has had the least money from the state budget for 18 years in the comparison with other mode of transport (road, rail or air transport). The last dams like the Gabčíkovo Dam or the Žilina dam were built in the 1990s. In the last years investments have gone into infrastructure for other modes of transport like:

- the construction of motorways (mainly the motorway D 1: Bratislava – Žilina – Košice – the Ukraine ),
- the modernization of the railway between Trenčín and Dubnica nad Váhom,
- the modernization of the international airport in Bratislava.

### **2. No secondary schools in the area of IWT**

Nowadays, there are no secondary schools in the SR which could prepare students to become captains or boatmen. In 1990s two secondary schools were closed in Bratislava due to the low interest of students in IWT.

### **3. IWT and Logistics are mentioned only in general content at secondary schools**

The education system misses the books / teaching materials in the fields of IWT, there are only a few and they need to be up-dated. IWT is only mentioned in general subjects like: Transport, Logistics or Geography. Less than 10 % of the curriculum of these subjects is about water transport.

### **4. Lack of students who want to study and work in IWT**

Since the 1990s students prefer humanistic to technical schools. Students of secondary schools have a bigger interest to study law, psychology or economy than civil or mechanical engineering.

Since the 1990s the number of universities and colleges has grown in the Slovak Republic, on the other hand the number of children who have been born since 1990 has dropped. Pupils of primary schools prefer secondary schools called “gymnázium” or business academies to vocational schools. A lot of vocational schools like the nautical schools in Bratislava have been closed due to the low interest or changed their study programmes to attract students.

### **5. Lack of well educated nautical staff**

There is a lack of well educated nautical staff due to the factors which were mentioned in the previous points (see points: 2 and 4).

**6. No training centre which could educate workers / students in IWT**

There is no training centre in Slovakia which could educate workers / students in IWT, there is also little chance to establish it now due to the economic crises.

**7. Present learning materials in IWT are not updated, have boring form for students, missing materials in electronic form**

See the point: 3.

**8. Lack of lectors from practice**

There is a big lack of lectors from practice. The teachers who lecture at Slovak universities have mainly theoretical background. Our education system misses the lectors from practice. Selective lectures with lectors from practice are organized only once or twice per semester.

**9. Bad infrastructure**

The navigation in the SR is carried out only on the Danube. Although there are some plans for the canalisation of the longest Slovak river Váh, the last dam (the Selice dam) was built on the lower Váh in the middle of the 1990s. The infrastructural situation makes the inland waterway transport unprofitable and undertakings do not have enough resources to invest in well qualified staff.

## **Opportunities**

**1. Good opportunities to find a job (mainly for young generation)**

A young generation has got a big opportunity to find a job in IWT such as boatmen (later as skippers) or workers in inland ports.

**2. Creation of a new training / promotion centre in IWT**

In the SR there is a chance to establish a new training / promotion centre in the area of IWT.

**3. Creation of new learning materials**

There is a possibility to up-date / create of new learning materials (books, textbooks, CDs) which can be used in the education of students of secondary schools, colleges or universities or people who work in the field of IWT and logistics. The Slovak version of INES Danube is a starting point.

## **Threats**

**1. Qualified nautical staff is over-aged (50 and more)**

As it was mentioned in previous points the average age of the staff who works in the area of IWT is more than 50 years due to the low interest of young people to work in this area. In a near future there will be a big threat of the lack of qualified nautical staff.

**2. Absence of well educated nautical staff in a near future**

See point: 1.

### 3. Slovak certificates are not harmonized with other European certificates (mainly on the Rhine)

Slovak certificates for skipper which are issued in the SR are not valid on the Rhine River.

## 4. Measures of the Slovak National Action Plan

### 4.1 Measures addressing nautical personnel

Create training possibilities for nautical and port staff	
Status quo	Until 1995 the biggest Slovak shipping company Slovak Shipping and Ports had its own secondary school which prepared students for different job positions in the ports or on the ships. Every year about 20 students graduated from this school. In the middle of the 1990s it was closed due to the lack of interest to study IWT. Nowadays, new staff usually comes from the family where somebody has already worked in the area of IWT (family tradition). They do not have appropriate education because there are not any training centres or education institutions (secondary schools) except two universities.
Proposed Measure	There are two possibilities how to eliminate this undesirable status quo: <ul style="list-style-type: none"> <li>the education of the staff of shipping companies by Department of Water Transport (KVD), University of Žilina. KVD has got the license for the education of workers in the field of IWT and logistics from the Ministry of Education of the Slovak Republic.</li> <li>to create a new training centre (probably in Bratislava) in cooperation with shipping companies, universities and state authorities (State Shipping Administration, Ministry of Transport, Post and Telecommunications of the Slovak Republic), this centre would be used for the education and training of new employees.</li> </ul>
Expected impact	Education of enough qualified nautical staff for the Slovak shipping (navigation) companies, mainly for SPaP.
Coordination and stakeholders	C: KVD S: shipping (navigation) companies, state public authorities (Ministry of Transport, Post and Telecommunications of the Slovak Republic, State Navigation Administration), universities (KVD)
Priority	high
Financing	KVD
Implementation status 2010	<i>Although KVD has got the licence for the education of workers in IWT and logistics from the Ministry of Education, no courses have been organised so far.</i> <i>KVD also cooperates with SPaP in the fields of:</i> <ul style="list-style-type: none"> <li><i>the elaboration of diploma and bachelor works for SPaP (the theses of these works are from various areas of IWT and logistics such as transshipment of cargo in the ports of Bratislava and</i></li> </ul>



	<p><i>Komárno, commercial transport of cargo, reconstruction of inland vessels )</i></p> <ul style="list-style-type: none"> <li><i>field trips to the Slovak ports for students</i></li> </ul>
<b>Provide qualified teaching staff</b>	
Status quo	Teachers working at universities have mainly theoretical background. The education system misses lectures from practices. There is a disharmony in the requirements of education between universities and companies which work in IWT and logistics.
Proposed Measure	To obtain captains for teaching. Stimulation actions: <ul style="list-style-type: none"> <li>the preparation of teaching materials for captains (textbooks, ...)</li> <li>training lessons for teachers what to teach in IWT</li> <li>the organisation of the courses</li> </ul>
Expected impact	It is necessary to connect the education at universities (the structure and curriculum of the subjects) with the requirements of companies which work in IWT and logistics. The quality of the education will not be increased until this connection is carried out. It is also necessary to increase the number of teachers (for instance captains) who have already worked in IWT so that they could hand in their experiences to young workers.
Coordination and stakeholders	C: KVD S: Ministry of Education of the Slovak Republic, inland navigation companies (SPaP) , universities (KVD)
Priority	medium
Financing	Nowadays, there are not any funds for this measure in the SR.
Implementation status 2010	<i>This measure has not been started yet.</i>

<b>Start promotion and recruitment actions for nautical jobs</b>	
Status quo	As it was mentioned in the SWOT analysis students who graduated from secondary schools / universities in the SR are not interested in the jobs which are related to IWT. They have little information about these jobs (captains, boatmen) due to little promotion from the side of public authorities and shipping / navigation companies.
Proposed Measure	To inform young people about different job opportunities in shipping companies with the help of information brochures, workshops and job fairs. One further option is to establish a new information centre for the promotion of IWT (see action "Create an information or training centre in Bratislava").
Expected impact	Promotion and recruitment activities will increase the interest of young people to employ in shipping / navigation companies in the different job positions

Coordination and stakeholders	C: KVD S: inland navigation companies, Ministry of Labour, Social Affairs and Family of the Slovak Republic, KVD
Priority	medium
Financing	Nowadays, there are not any funds for this measure in the SR.
Implementation status 2010	<i>This measure has not been started yet.</i>

#### 4.2 Measures addressing IWT logistics personnel

##### Create up-to-date teaching materials

Status quo	In the SR there is the lack of learning materials for training and education in IWT and logistics (mainly about RIS). The books, textbooks or monographs which have been published at universities do not have up to date information or data.
Proposed Measure	The books, textbooks and monographs which can be found in libraries should be updated or reprinted. Multimedia teaching material (films, games or e-learning materials) about IWT and logistics should be made in the cooperation with universities, state authorities and navigation companies.
Expected impact	To print new learning materials (books, textbooks, monographs) with up to date information about IWT and logistics
Coordination and stakeholders	C: KVD S: Ministry of Education of the Slovak Republic, KVD, EDIS – the publisher of the University of Žilina
Priority	high
Financing	KVD, F PEDAS
Implementation status 2010	KVD has published a few books for students who study at the University of Žilina. This year two books have been published in the cooperation with the teachers of the Department of Road and Urban Transport: JAGELČÁK, J. – DÁVID, A. – ROŽEK, P.: Námorné kontajnery (in the English language: Sea Containers) SOSEDOVÁ, J. - : Európske dopravné koridory a Slovensko (in the English language: European Transport Corridors and Slovakia) <i>All publications like monographs, textbooks or articles since 1991 are at disposal in the library of the University of Žilina, link: <a href="http://ukzu.uniza.sk/">http://ukzu.uniza.sk/</a>.</i>

##### Foster cooperation between universities and IWT sector

Status quo	The education in IWT and logistics has only the theoretical content with a lot of information without practical background. It misses the real connection between universities and companies which work in IWT. There is a big lack of teachers / lectures from practice.
Proposed Measure	Cooperation of KVD / universities with shipping / navigation companies, public authorities, elaboration of diploma works.
Expected impact	To increase the quality of education
Coordination and stakeholders	C: KVD S: KVD, IWT experts
Priority	high
Financing	KVD
Implementation status 2010	<i>KVD cooperates with Slovak University of Technology in Bratislava, state authorities (Ministry of Transport, Post and Telecommunications of the Slovak Republic, State Navigation Administration) and navigation companies (mainly SPaP).</i>

### Develop IWT e-learning tools for education and training

Status quo	Information about IWT is only in the monographs, textbooks, books or journals, there is a big lack of e-learning tools for education and training.
Proposed Measure	Creation of new e-learning materials (games, ... )
Expected impact	To increase if the interest in IWT
Coordination and stakeholders	C: KVD, TUKE S: KVD, TUKE
Priority	low
Financing	It has not been chosen.
Implementation status 2010	<i>Within the NELI project a Slovak version of the eLearning platform on IWT and logistics <a href="http://www.ines-danube.info">www.ines-danube.info</a> will be elaborated and launched.</i>

### Create an information or training centre in Bratislava

Status quo	The SR misses an information or training centre for the support of IWT and logistics. The length of the Danube in the SR is only 172 km. In Bratislava there is the biggest Slovak port which lies on the left bank of the Danube River. In its surrounding a new promenade was built there. The Danube is an important part of the capital city.
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Proposed Measure	To create a new information and training centre
Expected impact	To increase and promote of the interest in IWT among people.
Coordination and stakeholders	C: KVD, TUKE S: Slovak Shipping Administration, The Ministry of Transport, Post and Telecommunications of the SR, KVD
Priority	low
Financing	<i>It has not been chosen.</i>
Implementation status 2010	<i>Just only a plan.</i>

## 5. Identification of national or regional funding possibilities for Education and Training Measures in Slovakia

### 5.1 Existing National Funding Programmes

In Slovakia, there are only a few national funding programmes in order to support education (see Fig. 3). There are no programmes that would cover the education in the field of IWT and logistics.

Figure 3: Programme grant of the bank TATRA banka

<b>Programme grant of the bank TATRA Bank Group</b> <b>“Podpora kvality vzdelávania”</b> <b>“The Support of Quality of Education”</b>	
Actions able to be supported	The aim of this grant is: <ul style="list-style-type: none"> <li>to improve the quality of the teaching process at universities, which are oriented to management,</li> <li>to enrich specific curriculum, subject or topic so that the teaching process could be extended about knowledge of domestic and foreign environmental science.</li> <li>to help in the application of new methods, forms and procedures so that the teaching process could be more actual and could reflect the needs of practice in a better way</li> </ul>
Eligible beneficiaries	Universities, colleges
Funding rate	Maximal value: 5.000 EURO for each project
Further information	x x x x
Link	<a href="http://www.nadaciatatrabanky.sk/grantovy-program-podpora-kvality-vzdelavania-na-vysokych-skolach">http://www.nadaciatatrabanky.sk/grantovy-program-podpora-kvality-vzdelavania-na-vysokych-skolach</a>

Labour offices, social affairs and family in the Slovak Republic organise the retraining courses for unemployed people in the different job positions, but no courses for IWT and logistics.

### 5.2 Existing National Funding Institutions

#### Nadácia Tatra banky “Foundation of Tatra Bank”

The foundation which supports new teaching processes at universities / colleges in the SR.

Address Nadácia Tatra banky, P. O. Box 168, 810 00 Bratislava

Link [www.nadaciatatrabanky.sk/files/upload/tbn\\_list GR kriteria programu 0610 n.pdf](http://www.nadaciatatrabanky.sk/files/upload/tbn_list_GR_kriteria_programu_0610_n.pdf)  
[www.nadaciatatrabanky.sk/grantovy-program-podpora-kvality-vzdelavania-na-vysokych-skolach](http://www.nadaciatatrabanky.sk/grantovy-program-podpora-kvality-vzdelavania-na-vysokych-skolach)

#### Slovak Academic Information Agency “SAIA”

This agency offers scholarships or grants for teachers and students of universities / colleges in the EU countries / the countries which are not the members of the EU.

Address **SAIA, n. o.**  
Námestie slobody 23  
812 20 Bratislava 1  
Slovakia

Link [www.saia.sk/eng/article.aspx?c=76&id=3935](http://www.saia.sk/eng/article.aspx?c=76&id=3935)

#### Labour office, social affairs and family of the Slovak Republic

These offices:

- register unemployed people in the SR,
- help to find a job,
- organise retraining courses.

Address Each town in the SR has got the labour office. You can find the list of labour offices in this web site: [www.upsvar.sk/](http://www.upsvar.sk/)

Link [www.upsvar.sk/](http://www.upsvar.sk/)

#### Slovak Chamber of Commerce and Industry

The Slovak Chamber of Commerce and Industry offers funding consultations about European or national programmes for enterprisers.

Address Slovak Chamber of Commerce and Industry has got 8 subsidiaries in these towns:  
Bratislava, Trnava, Trenčín, Nitra,, Žilina, Banská Bystrica, Prešov and

	Košice, the link: <a href="http://web.sopk.sk/view.php?cisloclanku=1969123101&amp;lmenu=100">http://web.sopk.sk/view.php?cisloclanku=1969123101&amp;lmenu=100</a>
Link	<a href="http://web.sopk.sk/">http://web.sopk.sk/</a> <a href="http://web.sopk.sk/storage/cinnost_SOPK_en.pdf">http://web.sopk.sk/storage/cinnost_SOPK_en.pdf</a>

## 6. Conclusions

The General Programme of the Implementation of NAIADES in the Slovak Republic (also called Slovak NAP) has been valid since September 2009. It was prepared by the Ministry of Transport, Post and Telecommunications of the Slovak Republic, section: Water Transport in the cooperation with the team which was coordinated by Transport Research Institute. In the preparation process it could be commented by organisations which work in IWT and logistics. It patterned on the NAIADES, Austrian NAP and was filled by the aspects of IWT in the SR.

The problems in the area of IWT in the SR are similar to the problems of the Danube countries and should be solved not only on the regional but also on international levels.

The list of common problems:

- the lack of qualified nautical staff,
- the low interest of young people to work in IWT,
- the low interest of young people to study IWT at secondary schools / universities,
- the lack of secondary schools which could prepare students for the sector of IWT,
- the lack of good teaching materials,
- the lack of teachers from practise,
- disharmony between certificates in Europe.

The list of recommendation for improving of the situation:

- bigger promotion of IWT,
- creation of a new information / training centre,
- recruitment of new staff / teachers,
- creation of new teaching and learning materials,
- exchange programmes for students who study IWT.

## 7. Validation of the Slovak National Action Plan

As it was mentioned in the previous point (6. conclusions) the Slovak NAP was prepared by the Ministry of Transport, Post and Telecommunications of the SR in the cooperation with the team which was coordinated by Transport Research Institute. It was approved by the Government of the Slovak Republic in September 2009.

The list of institutions which participated in the NELI E&T NAP and the persons who were interviewed via the Internet (mail) or telephone:

- Slovak Shipping and Ports (Ing. Z. Skrašek),
- The Ministry of Transport, Post and Telecommunications, section: water transport (Ing. M. Vaníček),
- Slovak Lloyd (Ing. J. Klepoch, CSc.),
- Labour office in Žilina.