Working Party on Inland Water Transport

**Working Party on the Standardization of Technical
and Safety Requirements in Inland Navigation**

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Safety and Security in European Inland Navigation

Transmitted by the Maritime Academy of Harlingen

This informal paper provides an overview of the current situation with security and safety issues in Europe. It was prepared by experts from the Maritime Academy of Harlingen.

This paper is intended to facilitate discussions at the inland navigation security workshop at the forty-eighth session of the Working Party on the Standardization of Technical and Safety Requirements in Inland Navigation on 17 February 2016 and is reproduced in the form and language as received by the secretariat.

1. Preface

The following paper was produced as a respond to a request by the UNECE Working Party on Inland Water Transport on the following six questions to be discussed at the inland navigation security workshop:

- How governments define safety and how security ; the importance of safety and security issues for them;

- Are there national or regional/international mandatory security requirements (in addition to existing safety requirements), who is responsible for them and who monitors them;

- Requirements of mandatory training on safety issues (content of educational programmes);

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- Existing safety management systems for shipowners, operators, their certification, if any;

- What safety elements can be used also for security purposes (example: control of an access to ships, protection of crew, passengers, freight, etc. which can serve both safety and security concerns).

The answers that are following representing the point of view of the Maritieme Academie Harlingen as a member of the European association of Inland waterway educational institutions EDINNA (Education in Inland Navigation).

The statements reflect the view on the situation in those parts of the European Waterway system that belong to the western European interconnected waterway system, which is a system of channels and rivers that reaches from the North Sea to the Black Sea and from the Netherlands to Poland and the Czech Republic.

2. General situation in IWT

The Western European Interconnected Waterway System, on which the focus on this paper should lay on creates a truly European transport market, since barges from several European states are navigating these waters.

The national transport markets were protected by the national states for a large portion until 1998, which means that ships that are registered under the flag of that particular country can only operate transports within national borders the important exception of this rule was the navigation on the river Rhine, which was open for international traffic since the closure of the "Convention of Mannheim" in 1868. In 1998 when the so-called Cabotage Agreement was implemented, transport on the whole waterway system was allowed for every ship that was able to handle the transport, no matter to which Member State of the European Union it belonged.

But at the same time the national rules and regulations were not harmonised and some member States of the European Union are taking more measures in the field of the inland waterway transport than others. Therefore the nationality under which a barge is registered can have a severe impact on the economic situation of its owner and his or her employees.

The training and certification of IWT crews has also not been harmonized until 1996, when the EC Directive 96/50/EC aiming on the harmonization of boatmasters certifications was adopted. This directive left out all other crewmembers and is currently under revision.

The framework described beforehand is accompanied by a number of circumstances which make the European IWT sector somewhat unique. It is for instance not organized according to comparable patterns throughout the entire continent:

- There are considerable differences between eastern and western European IWT (i.e. ownership structure, educational regimes). Thus a mutual recognition of professional certificates throughout the western and central Europe is widely realized at this time.

- Furthermore there is no overseeing organization like the IMO or binding safety regimes like SOLAS or port security regimes like the ISPS in western European IWT.

- There are no common standards and solemnly national control on the implementation of any IWT related regulation by the different European IWT countries.

- There is still no common language on the western and central European Waterways.

3. Safety issues

3.1 How governments define safety and the importance of safety issues for them

Safety in Inland navigation consist out of safety in navigation, determined by i.e. fairway conditions and the technical conditions of the respective vessels and the waterway infrastructure and the personal safety of the individual crewmembers determined by personal safety equipment and individual behaviour.

There are some known safety related issues that the sector is aware of (less a lack of navigational safety but more personal safety – safety culture). This safety culture is, at least to our understanding not that developed and the cause for a considerable number of incidents in the European IWT.

3.2 Requirements of mandatory training on safety issues (content of educational programmes)

Those requirements are already covered by the existing competence tables (STCIN)[1]. Right now, the only mandatory safety regime in IWT is the ADN and these courses are only necessary if one is working on vessels that carry dangerous or hazardous goods.

There is in general no mandatory regular refreshment training for nothing (except ADN) within the European IWT.

The introduction of a common standard for education and training in the European IWT went along with a harsh and ongoing discussion with the sector and the authorities whether these standards are really necessary.

3.3 Existing safety management systems for shipowners, operators, their certification, if any

To our understanding, there are a number of IWT specific official safety management regimes in effect. One example might be the certification regime in place within the CCNR states, which requires a periodical (5 year) inspection of all vessels with a focus on work and navigational safety. Moreover there are additional Internal regimes, implemented by shipping companies and/or terminals that meet the safety demands for such operators. Furthermore the operators of those vessels which are also involved in short sea shipping apply SOLAS and other IMO safety regulations when necessary.

3.4 Revision of the Directive 96/50/EC (Excursion – relevance to safety issues in IWT)

3.4.1 Aim of the revision

In 2012 the European Commissions DG MOVE stared an attempt to revise the Directive 96/50/EC aiming on a modernization of the legislation and an inclusion of those professional ranks under those of a boatmaster by the implementation of a mutually recognised Regime for IWT crews on the European interconnected waterways. This regime should streamline the legal framework in professional Qualifications in order to ensure workers mobility and a high level of safety in navigation.

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[1] Note of the secretariat: STCIN tables are reproduced in ECE/TRANS/SC.3/2014/16.

3.4.2   The work of EDINNA within the process of revising

As an outcome of the first PLATINA (Platform for the implementation of NAJADES) the member institutes of EDINNA came up with an extended framework of Competence Tables for all European IWT crews. These tables defined the professional qualifications and competences in inland navigation on both, boatmaster and boatman level. This effort included beside defined standards for competencies and qualifications for all IWT professional the required professional skills, the practical experience and a method of demonstration of those skills.

The outcome (PLATINA deliverable 3.13, better known as PLATINA Competence Tables or Standards in Training and Certification in Inland Navigation - STCIN) is widely accepted as the basis for future education and training and serves as a basis for the work on the revision.

This work on was conducted under the supervision of the European Commissions DG MOVE in association with the Central Commission for the navigation on the River Rhine (CCNR) with support of a "common expert group (CEG) " and finalised mid 2014.

First attempt of the EC Impact Assessment for a revised 96/50/EC failed in late 2014 since the assessors were pleased with an Impact on workers mobility, but not convinced about the impact on navigation.

3.4.3   Investigation on IWT safety issues

As a result of this failure, the Directorate-General for Mobility and Transport of the European Commission (DG MOVE) invites members of the former CEG to provide profound data related to safety issues in IWT in order to support a second impact assessment. EDINNA answered this call and conducted such investigation.

The main challenge was that there were no reliable statistical data on accidents and incidents in European IWT available. It turned out, that not every national state gathers such information or makes it accessible to the public. Those data available were furthermore not gathered and processed in a uniform manner, so a comparison was merely impossible. As a result of this, unsatisfying, situation a quantitative research became necessary.

The investigation conducted by the Maritieme Academie in Harlingen in the name of EDINNA is solemnly based on public sources like newspapers, professional news reports and IWT related internet content. The distinctive focus was set on central Europe (Austria, Belgium, Germany, The Netherlands, and Switzerland). The findings and outcomes could not claim to be absolutely complete. It represents more of an extensive proof sample, but a verifiable overview was available for the first time. Some of those outcomes can be found in the graphs below, which directly derive from the report that was handed to DG MOVE by EDINNA.

Major IWT Incidents 2014 (Excerpt)
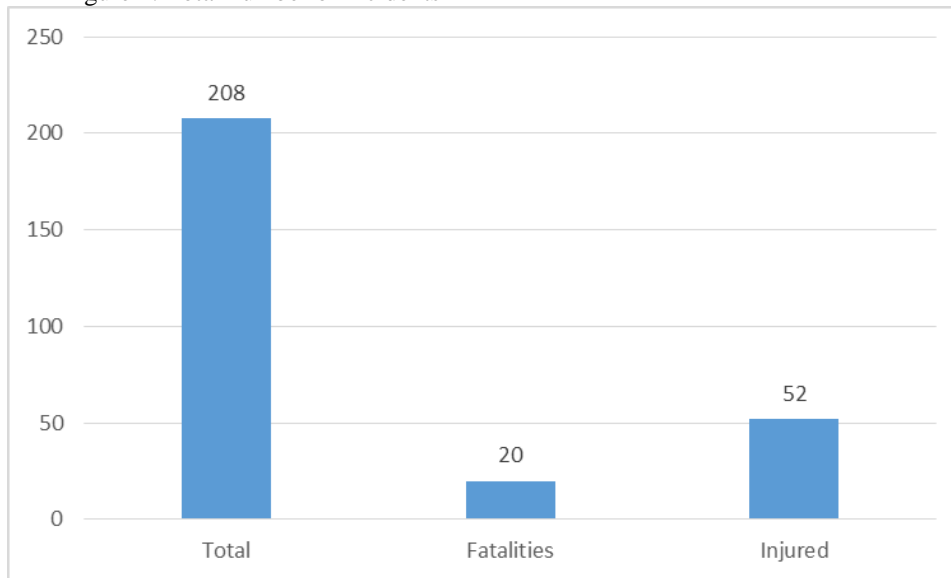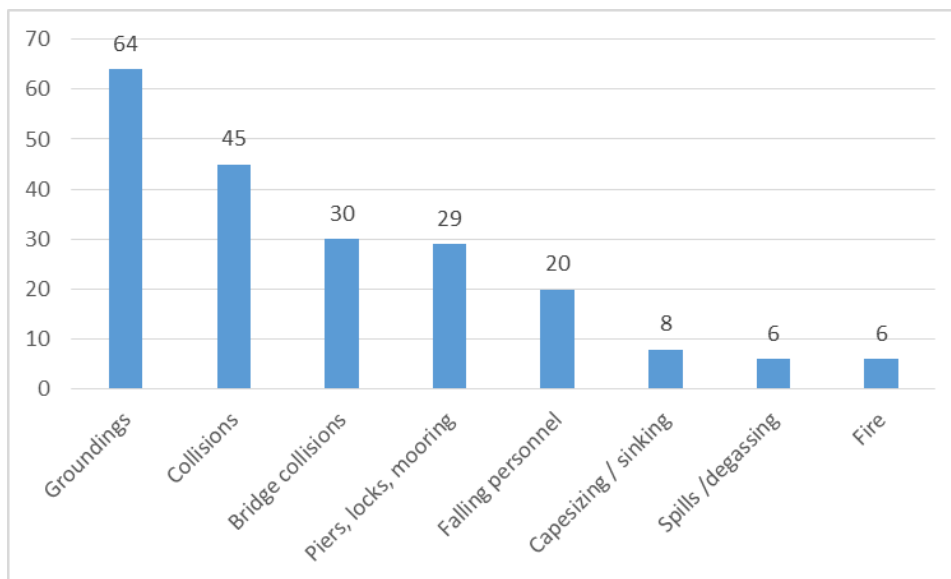
Figure 1. Total number of incidents[2]

Figure 2. Nature of the Incidents[3]

3.4.4   Major findings

- The vast majority of incidents in IWT draws only little attention to the public.

- The reported "spectacular" incidents like major collisions are usually not those resulting in injuries or loss of life.

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[2] Maritieme Academie Harlingen 2015
[3] Maritieme Academie Harlingen 2015

- No fully developed safety culture (as the "safety awareness" in the Maritime Industry)

- Ca. 80 % of all incidents are caused by human failure and misconduct (i.e. drowning due to missing safety vests/ stability whilst loading)

- The lack of a common language is a major issue

4. Security issues

4.1 *How governments define security and the importance of security issues for them*

The whole Security-complex hasn't been on the widespread agenda of the sector whatsoever. And there is no need for it for a large portion of the IWT world since a large portion of the transported bulk or breakbulk goods are of relatively low value per ton and not worth stealing or very bulky (i.e. project cargo). There are some subsectors for which security has more relevance when it comes to shipboard security and cargo/terminal protection.

These sectors would be:

- The transport of dangerous goods;

- The transport of goods that are relatively valuable and/or easy to resell (Consumer goods in Container transport/Gasoline/Diesel etc.);

- Passenger transport.

The potential terrorism threat has not yet been determined. It is most likely not as high as for air and sea transport since the transports conducted by IWT are not transcontinental, rather slow and bound to a comparably small and easily to observe number of waterways and vessels. Trafficking, mostly by sea-container on the other side is a known phenomenon. The IWT crews are usually unaware of this, since they do not know about the contents of the boxes on board.

4.2 *Are there national or regional/international mandatory security requirements (in addition to existing safety requirements), who is responsible for them and who monitors*

To our understanding, there are currently no IWT specific official security management regimes in effect. Internal regimes however, implemented by shipping companies and/or terminals, that meet the security demands for such operators are certainly existing. Furthermore a number of inland Ports (i.e. the port of Duisburg) and the operators of those vessels which are also involved in short sea shipping apply SOLAS and other IMO safety regulations when necessary. Thus some companies in more sensitive branches of the sector like tank terminals and river cruise lines have internal security policies.

Before getting into an official discussion on this subject with the stakeholders it would be necessary to perform an in depth assessment for the different branches sector on potential security risks and how to face them (cost) effectively.

In our opinion a security-discussion on IWT including proposed mandatory measures would not be embraced by all (most) of the sector since the economic situation in IWT is rather challenging in the moment and every additional mandatory measure would even lower the earnings of that company. Furthermore, a large number of the European IWT companies are micro enterprises consisting out of the shipowner and usually one to three crew members, where the financial and capabilities are even lower.

4.3   *Requirements of mandatory training on security issues (content of educational programmes)*

The first precondition for a mandatory training would be the definition and implementation of a binding security regime for the European IWT by the numerous authorities and stakeholders where it is necessary. Once an agreement on such measures is completed, a training as certification regime could be implemented and translated into training and certification standards such as those in effect within the IMO regime. This training and certification regime could (if needed) also be covered by a number of additional yet still to develop STCIN competence tables. The European IWT educational and training institutes would be certainly willing and able to support this process and the implementation of the additional learning material into their curricula.

4.4   *What safety elements can be used also for security purposes (example: control of an access to ships, protection of crew, passengers, freight, etc. which can serve both safety and security concerns)*

This subject needs further investigation and additional involvement of the responsible authorities and stakeholders.

5.   Synthesis and recommendation

In general, IWT still remains the by far safest mode of inland land-transport in comparison to road and rail transport. Improvement in terms of safety and security is nonetheless not only desirable, it is necessary.

The focus of such improvements should be rather safety than security since we identified a number of shortcoming in this respect during our work. Our main concern is a potentially underdeveloped safety culture throughout the sector. The development of an enforced and developed safety culture such as it is in place in the maritime world under the IMO regime is therefore needed. An integral part of an enhanced safety culture in European IWT must be one common language spoken on the waterways. Not necessarily as the sole language spoken on by the crews, authorities and other IWT related personal, but as an additional language which can be used and relied upon. This measure could help to prevent numerous incidents since miscommunication also is one of the major causes of incidents on the European Waterways. This language is already developed by members of EDINNA in cooperation with the CCNR and is called RIVERSPEAK. It resembles the IMO SEASPEAK and is a simplified form of the English language. This form was chosen due to the reason that it eases communication in those parts of the waterways, where IWT and seagoing traffic share the fairway and since English is the language that pupils usually learn as a primary second language in school, it would not require the acquisition of a third potentially more complex language.

Security is nonetheless also an issue in IWT. It is not on the forefront of the agenda right now and for entirety of the IWT world, but a number of subsectors of the branch have elevated security needs. An elaborated regime for the entire sector is, from our point of view, not the solution that should be aimed for. It would be wise to implement tailor made mandatory security regimes where they are needed (i.e. dangerous goods, valuable- and marketable goods, passenger transport). Through such measure a high standard of security would be secured where it is needed and the burden for a rather troubled sector wouldn't be too extensive.