



## Economic and Social Council

Distr.: General  
5 April 2011

Original: English

---

### Economic Commission for Europe

#### Inland Transport Committee

#### Working Party on Inland Water Transport

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

#### Thirty-ninth session

Geneva, 15–17 June 2011

Item 8 (a) of the provisional agenda

**Establishment of common principles and technical  
requirements for Pan-European river information services (RIS)**

### **Resolution No. 57, “Guidelines and Recommendations for River Information Services”**

#### **Addendum**

#### **Note by the secretariat**

### **I. Introduction**

1. This document contains the tables and figures referred to in the secretariat’s note on the comparison between Resolution No. 57 and the revised Guidelines of the World Association for Waterborne Transport Infrastructure (PIANC) (ECE/TRANS/SC.3/WP.3/2011/14).

## II. Comparison between Resolution No. 57 and the revised PIANC Guidelines and Recommendations for River Information Services

Table 1  
Authority stakeholder roles

<i>Stakeholders</i>	<i>Definition/tasks/roles</i>	<i>Related RIS services (most relevant)</i>
Technical Certification Authority	Competent authority for the issuing of the Community Inland navigation certificates.	Information for law enforcement
Law enforcement agency for Cargo Inspection	Performs cargo inspection (customs, veterinary, phytosanitary) and detects and fines / summons violations	Information for law enforcement
Law enforcement agency for Immigration Control	Performs immigration control and detects and fines / summons violations.	Information for law enforcement
Law enforcement agency for Traffic Rules	Detects and fines / summons violations of traffic rules	Information for law enforcement
Accident and Incident investigation Body	Independent body or entity responsible for investigations on the causes and possible consequences of accidents and incidents within inland navigation with the purpose of elaborating recommendations for the prevention of similar accidents and incidents in the future. Next to the elaboration of investigation reports the creation of anonymous accident and incident statistics might be the task of this body or entity	Statistics and Calamity Abatement Support
Agency in charge of collecting Statistical Data	Collects, processes and distributes statistical data	Statistics
Competent Authority for Traffic Management	Controls the access to the control area, monitors the movements of specific vessels and their cargo (target groups) in this control area and supports Rescue and Emergency Service Providers with detailed information in case of emergencies and calamities	Traffic Management and Calamity Abatement Support
Port Authority	Official Authority responsible for traffic safety and traffic management in the port	Traffic Management and Calamity Abatement Support
Environmental authority	Law Enforcement Agency for Pollution of the Environment: Observes pollution to the environment and detects and fines / summons violations	Information for law enforcement

Table 2  
**Manager stakeholder roles**

<i>Stakeholders</i>	<i>Definition</i>	<i>Related RIS services (most relevant)</i>
Fleet Manager	Is the person planning and observing the actual (navigational) status of a number of vessels moving or working under one command or ownership	Strategic Traffic Information and Information for transport logistics
Ship owner	is the (legal) person officially registered as such in the certificate of registry where the particulars of the ship are contained.	Strategic Traffic Information and Information for transport logistics
Cargo owner	Is the legal owner of the goods as mentioned in the transport document. The party indicated as such has the right of control and is the only party entitled to give the carrier instructions in relation to the contract of carriage.	Information for transport logistics
Waterway manager	Supplies the fairway and therefore monitors the condition of the waterway infrastructure, collects dues for the use of the waterway infrastructure (for transport), plans and executes construction works and assists with calamity abatement	Fairway information services
Water manager	Supplies a certain water level and therefore monitors the water quality and quality and balances the water level where possible	Fairway information services

Table 3  
**Services provider stakeholder roles**

<i>Stakeholders</i>	<i>Definition</i>	<i>related RIS services (most relevant)</i>
RIS Provider	Being the organisation or organisational unit assigned or contracted to operate the RIS-System and to provide RIS-Services	Fairway Information Services, tactical and strategic Traffic Information Services
Rescue and Emergency service Provider	Responsible for the search and rescue and emergency services (deals with a calamity and takes care of the people, animals, cargo and vessel involved)	Calamity Abatement Support

Table 4  
**RIS Users stakeholder roles**

<i>Stakeholders</i>	<i>Definition</i>	<i>related RIS services (most relevant)</i>
Rescue and Emergency Service Provider	Responsible for the search and rescue and emergency services (deals with a calamity and takes care of the people, animals, cargo and vessel involved)	Calamity Abatement Support
Law enforcement agency for Cargo Inspection	Performs cargo inspection (customs, veterinary, phytosanitary) and detects and fines / summons violations	Information for law enforcement
Law enforcement agency for Immigration Control	Performs immigration control and detects and fines / summons violations.	Information for law enforcement
Law enforcement agency for Traffic Rules	Detects and fines / summons violations of traffic rules	Information for law enforcement
Accident and Incident investigation Body	Independent body or entity responsible for investigations on the causes and possible consequences of accidents and incidents within inland navigation with the purpose of elaborating recommendations for the prevention of similar accidents and incidents in the future.	Calamity Abatement Support and Statistics
Organisation in charge of collecting Statistical Data	Collects, processes and distributes statistical data	Statistics
Fleet Manager	is the person planning and observing the actual (navigational) status of a number of vessels, moving or working under one command or ownership	Strategic traffic information and Information for transport logistics
Competent Authority for Traffic Management	Controls the access to the control area, monitors the movements of specific vessels and their cargo (target groups) in this control area and supports Rescue and Emergency Service Providers with detailed information in case of emergencies and calamities	Traffic Management and Calamity Abatement Support
Lock Operator	Monitors and controls the smooth and safe progress of traffic around a and through a lock and is responsible for the locking process in itself	Traffic Management
Bridge Operator	monitors and controls the fluent and safe progress of traffic around a moveable bridge and who is responsible for the operation of a movable bridge	Traffic Management
Terminal Operator	is a party running a business of which the functions are loading, stowing and discharging of the cargo of a ship.	Strategic traffic information and Information for transport logistics

<i>Stakeholders</i>	<i>Definition</i>	<i>related RIS services (most relevant)</i>
Port Operator	Commercial user responsible for the commercial business within the port. Supplies the port and therefore monitors the condition of the port infrastructure, collects dues for the use of the port infrastructure (for transhipments and transport), plans and executes construction works and assists with calamity abatement	Strategic traffic information and Information for transport logistics
Ship master	(synonym: Captain, Skipper, Boat master) is the person responsible for the overall safety of the vessel, cargo, passengers and crew and thereby for the voyage plan of the vessel and the condition of the vessel, the cargo, passengers and the quality and quantity of the crew	Fairway information Services and tactical and strategic Traffic Information
Ship owner	is the (legal) person officially registered as such in the certificate of registry where the particulars of the ship are contained.	Strategic traffic information and Information for transport logistics
Cargo owner	Is the legal owner of the goods as mentioned in the transport document. The party indicated as such has the right of control and is the only party entitled to give the carrier instructions in relation to the contract of carriage.	Strategic traffic information and Information for transport logistics
Consignee	is the party such as mentioned in the transport document by which goods, cargo or containers are to be received.	Strategic traffic information and Information for transport logistics
Consignor	The merchant (person) by whom, in whose name or on whose behalf a contract of carriage of goods has been concluded with a carrier or any party by whom, in whose name or on whose behalf the goods are actually delivered to the carrier in relation to the contract of carriage.	Strategic traffic information and Information for transport logistics
Berth operator	Monitors and controls the fluent and safe progress of traffic around a berth and who is responsible for the use of a berth.	Strategic traffic information and Information for transport logistics
Fire brigade	Rescue and Emergency Service Providers: Responsible for the search & rescue and emergency services (deals with a calamity and takes care of the people, animals, cargo and vessels involved) Emergency Service / Salvage service: Assist search & rescue and emergency services	Calamity Abatement Support

Stakeholders	Definition	related RIS services (most relevant)
Forwarder	(synonym: Freight broker) is the party arranging the carriage of goods including connecting services and/or associated formalities on behalf of shipper and consignee.	Strategic traffic information and Information for transport logistics
Shipping agent	The shipping agent is a person or organisation authorised to act for or on behalf of another person or organisation, such as the forwarding agent, the custom agent and the carrier agent.	Strategic traffic information and Information for transport logistics

Figure 1  
RIS Key technology and reference data

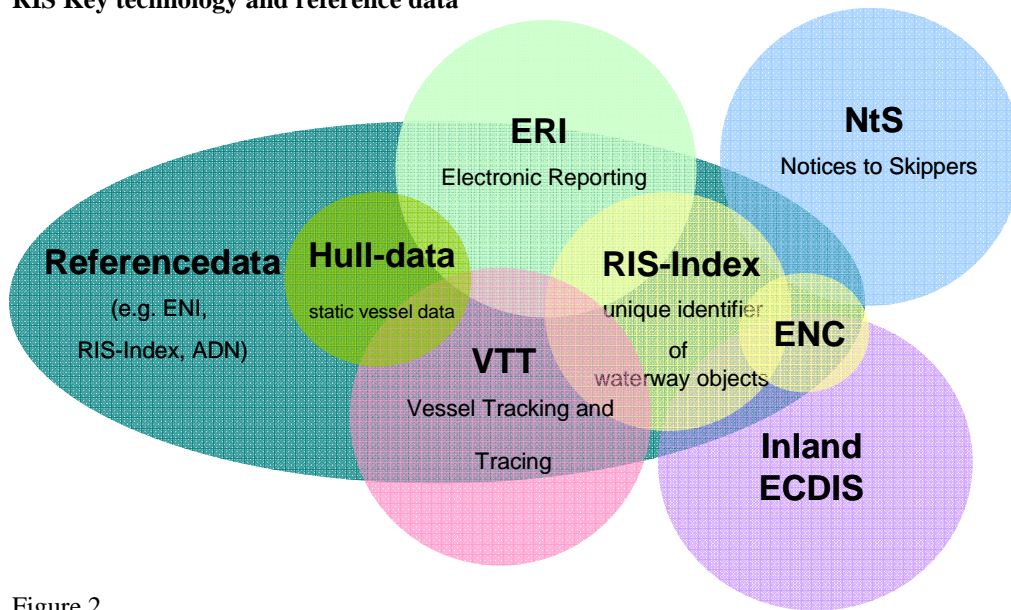


Figure 2  
Relation RIS Key Technologies and RIS Services

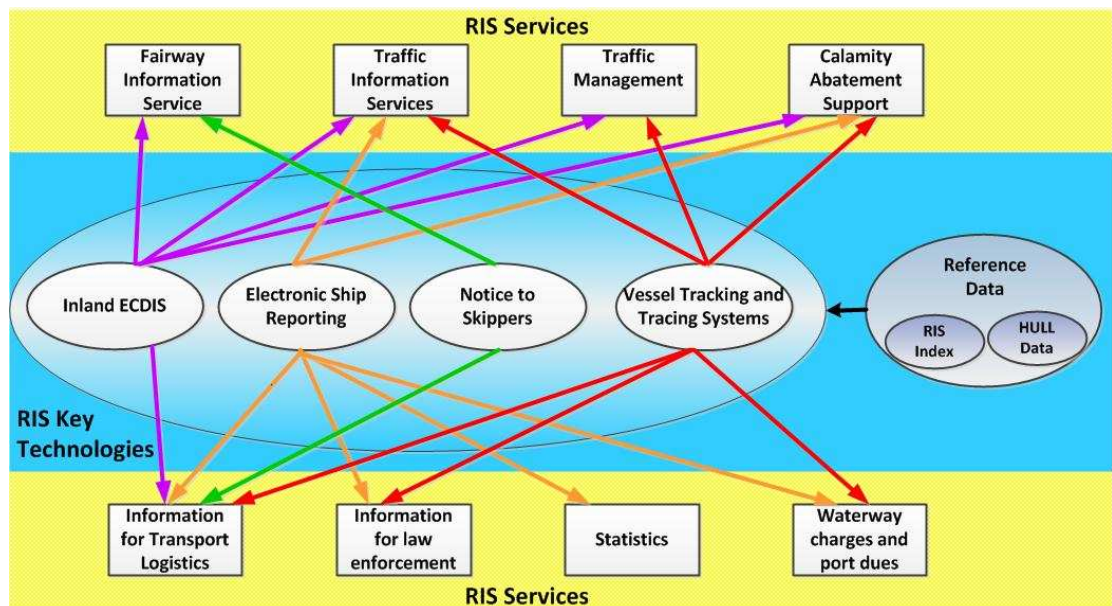


Table 5  
RIS information categories and RIS services

Information category		Information detail	Basic Services			Services					Ref. Data		
1st level	2nd level		Fairway Information Services	Traffic Information (STI & TTI)	Traffic Management	Calamity Abatement Support	Information for Transport Logistics	Information for Law Enforcement	Statistics (*)	Waterway charges and harbour dues	RIS-index	Hull Data	Other
Infrastructure related	Waterway related information	Provide basic routing data	x	x	x		x		x	x	x		
		Provide navigation-based information on fairway and/or navigable water area (incl. harbours)	x	x	x		x	x				x	
		Provide meteorological information	x	x	x		x	x				x	x
		Provide water level related information	x	x	x		x	x				x	x
		Provide information on obstructions and limitations	x	x	x		x	x				x	x
		Provide information on navigation rules and regulations	x	x	x			x			x		x
	Land related information	Provide information on land region	x	x	x		x					x	
		Provide information on harbors	x	x	x		x	x			x	x	
		Provide information on terminals	x	x	x		x	x				x	
		Provide information on locks	x	x	x		x	x				x	
		Provide information on bridges	x	x	x		x	x				x	
Vessel related	Dynamic vessel data	Provide actual position information of vessels		x	x		x	x	x	x		x	x
		Provide actual vessel dynamics (i.e. RoT, velocity, CoG, SoG, ...)		x	x			x					
		Provide historic position information of vessels							x	x		x	
		Provide historic vessel dynamics							x				
		Provide event based triggers for vessel position			x			x		x		x	
	Hull related information	Provide data for the identification of vessels (min. hull data set)			x		x	x	x	x	x	x	x
		Provide craft certificates							x			x	x

Information category		Information detail	Basic Services			Services				Ref. Data				
1st level	2nd level		Fairway Information Services	Traffic Information (STI & TTI)	Traffic Management	Calamity Abatement Support	Information for Transport Logistics	Information for Law Enforcement	Statistics (*)	Waterway charges and harbour dues	RIS-index	Hull Data	Other	
Voyage related	Location related information	Provide origin of voyage		x	x		x		x	x	x			
		Provide intermediate discharge locations					x	x	x	x	x			
		Provide passage points		x	x		x	x	x	x	x			
		Provide destination of voyage		x			x		x	x				
		Provide estimated date/ time of arrivals		x	x		x	x				x		
		Provide requested date/time of arrivals		x	x		x					x		
		Provide date/time of actual arrivals		x	x		x		x			x		
		Provide estimated date/ time of departures		x	x		x	x				x		
		Provide date/time of actual departures		x	x		x		x			x		
		Provide date/time of requested departures												
	Vessel/convoy related information	Provide overall convoy data			x	x		x					x	x
								x	x	x	x			
	Cargo related information	Provide origin of cargo						x	x	x		x		x
		Provide destination of cargo						x	x	x		x		x
		Provide cargo details		x	x			x	x	x	x	x		x
		Provide loading unit related information						x	x		x			x
	Persons on board related information	Provide number of persons (crew, passengers, ...) on board						x						
		Provide details on persons on board						x		x				



Figure 3  
**RIS services**



Figure 4  
**Open Standards – Service Oriented Architecture stack**



The most important open standards that can be recommended for this model are:

- HTTP, Hyper Text Transfer Protocol (HTTP) - W3C: [www.w3.org/Protocols/](http://www.w3.org/Protocols/)
- File Transfer Protocol (FTP) - W3C: [www.w3.org/Protocols/rfc959/](http://www.w3.org/Protocols/rfc959/)
- HyperText Markup Language (HTML) – W3C: [www.w3.org/TR/REC-html32](http://www.w3.org/TR/REC-html32)
- Cascading Style Sheets (CSS) – W3C: [www.w3.org/TR/REC-CSS1](http://www.w3.org/TR/REC-CSS1)
- eXtensible Markup Language (XML) - W3C: [www.w3.org/XML/](http://www.w3.org/XML/)
- XML Schema Definition Language (XSD) – W3C: [www.w3.org/XML/Schema](http://www.w3.org/XML/Schema).
- Extensible Stylesheet Language Transformations (XSLT) W3C: [www.w3.org/TR/xslt](http://www.w3.org/TR/xslt)
- XML Query (Xquery) - W3C: [www.w3.org/TR/xquery/](http://www.w3.org/TR/xquery/)
- XML Path taal of XML Path Language (XPath) - W3C: [www.w3.org/TR/xpath](http://www.w3.org/TR/xpath)
- Simple Object Access Protocol (SOAP) - W3C: [www.w3.org/TR/soap/](http://www.w3.org/TR/soap/)
- Web Service Description Language (WSDL) - W3C: [www.w3.org/TR/wsdl](http://www.w3.org/TR/wsdl)
- Web Ontology Language (OWL) – W3C: [www.w3.org/TR/owl-features](http://www.w3.org/TR/owl-features).
- Universal Description, Discovery and Integration (UDDI) - oasis-open.org: [www.uddi.org/pubs/uddi\\_v3.htm](http://www.uddi.org/pubs/uddi_v3.htm)
- Web Services Inspection Language (WSIL) - IBM: [www.ibm.com/developerworks/library/specification/ws-wsilspec/](http://www.ibm.com/developerworks/library/specification/ws-wsilspec/).
- Web Services Reliable Messaging - oasis-open.org: [www.oasis-open.org/committees/tc\\_home.php?wg\\_abbrev=wsm](http://www.oasis-open.org/committees/tc_home.php?wg_abbrev=wsm)
- Web Services Transaction Management - oasis-open.org: [www.oasis-open.org/committees/tc\\_home.php?wg\\_abbrev=ws-tx](http://www.oasis-open.org/committees/tc_home.php?wg_abbrev=ws-tx)
- XML Encryption Syntax and Processing - W3C: [www.w3.org/TR/xmlenc-core/](http://www.w3.org/TR/xmlenc-core/)
- Security Services (SAML) - oasis-open.org: [www.oasis-open.org/committees/tc\\_home.php?wg\\_abbrev=security](http://www.oasis-open.org/committees/tc_home.php?wg_abbrev=security)
- XML Signature Syntax and Processing - W3C: [www.w3.org/TR/xmldsig-core/](http://www.w3.org/TR/xmldsig-core/)
- WS-Policy - W3C: [www.w3.org/Submission/WS-Policy/](http://www.w3.org/Submission/WS-Policy/)
- WS-PolicyAssertions - oasis: <http://docs.oasis-open.org/ws-rx/wsrmp/200702/wsrmp-1.1-spec-os-01.html>
- WS-SecurityPolicy - oasis: <http://docs.oasis-open.org/ws-sx/ws-securitypolicy/200702>
- WS-PolicyAttachment -W3C: <http://www.w3.org/Submission/WS-PolicyAttachment/>
- Web Services Business Process Execution Language (BPEL4WS) - oasis-open.org: [www.oasis-open.org/committees/tc\\_home.php?wg\\_abbrev=wsbpel](http://www.oasis-open.org/committees/tc_home.php?wg_abbrev=wsbpel)

Table 6  
RIS Information categories (2 levels)

Information category		Information detail		Basic Services			Services				Ref. Data				
1st level	2nd level	1st level	2nd level	Fairway Information Services	Traffic Information (STI & TTI)	Traffic Management	Calamity Abatement Support	Information for Transport Logistics	Information for Law Enforcement	Statistics (1)	Waterway charges and harbour dues	RIS-index	Hull Data	Other	
Infrastructure related	Waterway related information	Provide basic routing data		x	x	x		x		x	x	x			
		Provide navigation-based information on fairway and/or navigable water area (incl. harbors)		x	x	x		x	x				x		
			Provide information on bank of waterway, boundaries of the fairway, etc.												
			Provide information on depth profile of the fairway												
			Provide information on non-navigable or unsurveyed water area												
			Provide information on anchorage areas, mooring facilities and berths												
			Provide information on permanently moored vessel or facility in the waterway												
			Provide meteorological information			x	x	x		x	x			x	x
				Provide continuous weather information											
				Provide weather warnings											
				Provide actual ice situation											
				Provide predicted ice situation											
				Provide water level related information		x	x	x		x	x			x	x
				Provide actual water levels											
				Provide predicted water levels											
				Provide actual discharge information											
				Provide predicted discharge information											
		Provide least sounded actual depths information													

Information category		Information detail		Basic Services			Services				Ref. Data			
1st level	2nd level	1st level	2nd level	Fairway Information Services	Traffic Information (STI & TTI)	Traffic Management	Calamity Abatement Support	Information for Transport Logistics	Information for Law Enforcement	Statistics (1)	Waterway charges and harbour dues	RIS-index	Hull Data	Other
			Provide least sounded predicted depths information											
			Provide barrage status											
			Provide regime status											
			Provide information on obstructions and limitations	x	x	x		x	x			x		x
			Provide information on long-time obstructions in the fairway											
			Provide information on temporary obstructions in the fairway											
			Provide information on navigation rules and regulations	x	x	x		x			x			x
			Provide information on (official) aids-to-navigation											
			Provide information on traffic signs											
			Provide information on traffic rules and regulation											
			Provide information on anchorage areas, mooring facilities and berths											
			Provide information on waterway charges, harbour dues and infrastructure charges											
			Provide actual status of light signals											
	Land related information		Provide information on land region	x	x	x		x				x		
	Land related information		Provide information on harbors	x	x	x		x	x		x	x		
	Land related information		Provide information on harbor area											
	Land related information		Provide information on category of harbor facility											
	Land related information		Provide information on port schedule											
	Land related information		Provide information on terminals	x	x	x		x	x			x		
	Land related information		Provide information on category of terminal											
	Land related information		Provide information on cranes and boat ramps											
	Land related information		Provide information on terminal schedule											
			Provide information on	x	x	x		x	x			x		

Information category		Information detail		Basic Services			Services					Ref. Data			
1st level	2nd level	1st level	2nd level	Fairway Information Services	Traffic Information (STI & TTI)	Traffic Management	Calamity Abatement Support	Information for Transport Logistics	Information for Law Enforcement	Statistics (1)	Waterway charges and harbour dues	RIS-index	Hull Data	Other	
		locks	Provide information on construction and facility Provide information on lock schedule Provide operational status of locks												
		Provide information on bridges	Provide information on construction Provide information on movable bridge schedule Provide operational status of movable bridges Provide information on vertical clearance	x	x	x	x	x				x			
Vessel related	Dynamic vessel data	Provide actual position information of vessels		x	x		x	x	x	x			x	x	
		Provide actual vessel dynamics (i.e. RoT, velocity, CoG, SoG, ...)		x	x				x						
		Provide historic position information of vessels								x	x			x	
		Provide historic vessel dynamics								x					
		Provide event based triggers for vessel position				x			x		x			x	
	Hull related information	Provide notifications of arrivals at defined (passage) points of the waterway													
		Provide notifications of arrivals or departures at defined locations on the waterway													
		Provide data for the identification of vessels (min. hull data set)				x			x	x	x			x	x
		Provide craft certificates								x				x	x
		Provide community certificate													
		Provide ADN tank certificate													
		Provide ADN dry certificate													
		Provide measurement certificate													

Information category		Information detail		Basic Services			Services				Ref. Data				
1st level	2nd level	1st level	2nd level	Fairway Information Services	Traffic Information (STI & TTI)	Traffic Management	Calamity Abatement Support	Information for Transport Logistics	Information for Law Enforcement	Statistics (1)	Waterway charges and harbour dues	RIS-index	Hull Data	Other	
			Provide other certificate												
Voyage related	Location related information	Provide origin of voyage			x	x		x	x	x		x			
		Provide intermediate discharge locations						x	x	x	x		x		
		Provide passage points			x	x		x	x	x	x		x		
		Provide destination of voyage			x			x		x	x		x		
		Provide estimated date/ time of arrivals			x	x		x	x				x		
		Provide requested date/time of arrivals			x	x		x					x		
		Provide date/time of actual arrivals			x	x		x		x			x		
		Provide estimated date/ time of departures			x	x		x	x				x		
		Provide date/time of actual departures			x	x		x		x			x		
		Provide date/time of requested departures			x	x				x			x		
	Vessel/convoy related information	Provide overall convoy data			x	x		x	x	x	x	x		x	x
		Provide convoy type													
		Provide information on the hulls of a convoy													
		Provide information on the characteristics of a convoy													
	Cargo related information	Provide origin of cargo (2)							x	x	x		x		x
		Provide destination of cargo (2)								x	x	x		x	
		Provide cargo details			x	x		x	x	x	x	x		x	
		Provide details of cargo sender													
		Provide details of cargo receiver													
		Provide details of non-dangerous cargo													
Provide details of dangerous cargo															
Provide port of loading															

Information category		Information detail		Basic Services			Services				Ref. Data			
1st level	2nd level	1st level	2nd level	Fairway Information Services	Traffic Information (STI & TTI)	Traffic Management	Calamity Abatement Support	Information for Transport Logistics	Information for Law Enforcement	Statistics (1)	Waterway charges and harbour dues	RIS-index	Hull Data	Other
			Provide estimated date/time of departure at loading place											
			Provide port of discharge											
			Provide estimated date/time of arrival at discharge place											
		Provide loading unit related information					X	X		X	X			X
			Provide number of containers on board											
			Provide information on type of containers on board											
	Persons on board related information	Provide number of persons (crew, passengers, ...) on board					X							
		Provide details on persons on board					X		X		X			