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#### **ECONOMIC COMMISSION FOR EUROPE**

INLAND TRANSPORT COMMITTEE

Working Party on Inland Water Transport (Forty-third session, 25-27 October 1999, agenda item 4)

EXAMINATION OF THE CURRENT SITUATION AND TRENDS IN INLAND WATER TRANSPORT IN MEMBER STATES

#### Presented by the Government of Ukraine

Note: At the forty-second session, the Working Party taking into consideration TRANS/SC.3/143, paragraph 60, the representative of Ukraine introduced an outline plan for a handbook on "European Inland Water Transport" submitted by his delegation, and invited Governments and River Commissions to comment on it. The delegation of Ukraine offered to elaborate further on its proposal by complementing the outline with detailed explanations on each of the proposed items (TRANS/SC.3/146, para. 12).

The secretariat reproduces below the text of the expanded proposal by Ukraine on the same subject.

#### OUTLINE PLAN FOR A HANDBOOK

#### "EUROPEAN INLAND WATER TRANSPORT"

#### 1. Aim of the project

- 1. The aim of this project is to create a representative and comprehensive handbook on European inland water transport, accessible to a wide range of specialists in river and related modes of transport, foreign trade workers, cargo owners, etc., and suitable for educational purposes training inland water transport personnel.
- 2. At present there are various sources of information on European inland navigation, but most of them are of a local nature and differ considerably in layout and the completeness of the information they provide.
- 3. The most representative source in this field is the yearbook "Westeuropäischer Schiffahrts- und Hafenkalender" (WESKA) (Handbook of Western European Inland Navigation and Ports), which is in its 66th edition. However, this handbook for the most part contains information only about navigable waterways in the Federal Republic of Germany, Belgium and the Netherlands. It covers only the German section of the Danube and there is no information about the rivers of other regions.
- 4. The information on the navigable rivers of Europe, including eastern European rivers (Volga, Don, Dnieper, Vistula, etc.), found in various national publications is not always sufficiently complete and is, besides, not readily available to readers in other countries.
- 5. The Working Party on Inland Water Transport of the Economic Commission for Europe's Inland Transport Committee has in recent years published: (i) a "White Paper" on trends and development in inland water transport and its infrastructure (1996); and (ii) a "Blue Book", a list of the main characteristics and features of the category "E" inland waterway network (1998).
- 6. These United Nations publications have made a substantial contribution to the systematization and consolidation of information about inland navigation in Europe, and above all its infrastructure. However, neither the White Paper nor the Blue Book was intended to offer a detailed analysis and interpretation of all the technical, operational, economic, legal, commercial and other aspects of inland water transport. Those questions, it is suggested, might be covered in a handbook entitled "European inland water transport", which would also briefly report the findings from the White Paper and the Blue Book.
- 7. Although not a substitute for those documents and national sources giving detailed practical information about the sphere of activity concerned (compendia of regulations, recommendations, technical specifications, tariffs etc. for particular countries or river basins), the proposed handbook should offer a reasonably full and representative picture of inland water transport throughout Europe and, where necessary, refer the reader to the more detailed sources which it would list.

#### 2. Layout, content and size of the handbook

- 8. The handbook will be divided into 11 thematic chapters. The chapters will be subdivided into paragraphs, bullets and sub-bullets, largely on a geographical basis. Further general information for practical purposes will appear in a number of annexes at the end of the volume. The full table of contents is appended.
- 9. Some changes may be made to the proposed organization of contents as work on the handbook proceeds, but only where required in the interests of sufficient coverage and logical ordering.
- 10. To facilitate the work of the authors, a detailed description of the contents of each section, recommendations on the forms of the tables and suggestions for the graphic layouts (cartographical diagrams and drawings) are provided. The proposed length of the handbook is 140-150 pages in A5 format.

#### 3. Organization of work

- 11. Full but concise in the presentation of the material, the handbook should be the product of a collective effort by experts from all or most of the countries represented on the Working Party on Inland Water Transport (SC.3). The unified layout and grouping of information about inland water transport in different countries into specific topics will permit specialist authors from individual countries to work on the material in parallel and independently.
- 12. Ukraine will shortly be able to prepare standard questionnaires and tabular forms for obtaining the necessary information from European countries. This information, in full or in part, will be used mainly in the following sections of the handbook: §§ 2, 7, 9, 11, 13, 15 (para. 15.4), 16 (para. 16.2), 17, 18 (para. 18.3), 19-33, 35, and annexes II and V.
- 13. The remaining sections of the handbook, combining information from various existing sources, including the White Paper and the Blue Book, will be prepared by specialists to be appointed by the Working Party.
- 14. It is suggested that the editing of all of the materials obtained and the preparation of the first base edition should be entrusted to a small group of experts (3-5 persons).
- 15. The preparation of the manuscript is expected to take approximately two years once the Working Party has agreed on the contents of the handbook and all the organizational issues.
- 16. At the decision of the Working Party, and dependent on financial constraints, the handbook could be issued in hard copy and/or electronic format.

#### 4. Financing of the project

- 17. Two main options are considered possible for the financing of the project at the manuscript preparation stage:
- $\underline{\text{Option 1}}$ : the necessary funding is allocated by the United Nations Economic Commission for Europe, or by the European Union by incorporating the handbook into one of the international projects financed by the European Union.
- Option 2: the member States of the Economic Commission for Europe each bear the expense of preparing the materials concerning their national inland water transport. The States would soon receive full compensation for their expenses in the form of a ready-made handbook on inland water transport throughout Europe. The Economic Commission for Europe would allocate funds only for a small group of experts to prepare materials of a general nature, link together material from individual countries, and edit the manuscript.
- 18. Funds for the publication of the handbook in hard copy and/or electronic format after work on the manuscript was completed would probably have to be assigned in advance from the Economic Commission budget. It would seem expedient also to explore the possibility of joint funding of the project by the Economic Commission for Europe and the European Community, given the likely interest of each European country in obtaining the "European inland water transport" handbook.

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(Illustrations - maps, diagrams, graphs etc., mostly black and white, with some in colour, to be included in the text of the handbook)

Content of the divisions (paragraphs, bullets, sub-bullets) of the handbook

#### <u>Preface</u>

19. Aim and purpose of the publication. Nature and extent of the information provided. The role of Working Group SC.3 in preparing the publication.

#### List of main abbreviations

20. List of the main abbreviations used, both those in general use (e.g. UN/ECE - United Nations Economic Commission for Europe) and those used in the handbook in view of its subject matter (e.g. VNI - inland waterways).

#### §1. River system on the map of the continent

21. Overview of the river network density and the flow direction of Europe's rivers. Basic features of the main (arterial) rivers of the continent given in table 1.

Map of the inland waterways of Europe (A3 format: folded insert)

Table 1. The main arterial rivers of Europe

River	Countries traversed (from source)	Length (km)	Basin area (km²)	Main navigable tributaries	
Data for	the 23 main rivers lis	sted under 7	.1 of the table	of contents	

#### §2. <u>Development of inland navigation: brief historical review</u>

22. The following brief details for each of the main rivers described: the historical name of the river and its meaning; the main stages of development of navigable conditions, including the creation of reservoirs (with dates and main features: length, width and area), navigable linking canals (where necessary with a reference to 7.3); legislative control of shipping in the past (for international rivers); maximum cargo volumes attained (with dates).

#### §3. Water transport in the European inland transport system

23. Total length of the various European inland transport systems (railways, roads, inland waterways), including the length of the network of international importance (category E). Respective cargo volumes. Inland water transport's share of European transport as a whole according to official United Nations figures. (Possibly in tabular form with brief notes.)

#### §4. <u>Inland water transport: pros and cons</u>

24. The advantage of contemporary inland water transport (economical, ecologically sound, etc.), the drawbacks (slow, with limited geographical range, etc.) and prognosis, using features open to analysis.

#### §5. Concept of the single network of European inland waterways

25. Purposes of creating the single network and international European organizations involved in the issue. Main tenets of the Concept of the single network of European inland waterways. The major projects and progress made in implementing them (reference to §8).

#### §6. The European system of classification of inland waterways

26. The purposes of the single system of classification of European inland waterways according to resolution No. 30. The difference between the new system and the classification system previously in force.

#### Table 2. Classification of European inland waterways

Form of table as resolution No. 30

- 27. Notes to the table in the form of a brief explanation of resolution No. 30.
- 28. Classification of inland waterways by navigational zones as in the basic provisions of resolution No. 34.

### §7. <u>Present status of inland waterways of international importance</u>

- 7.1. Main rivers and tributaries
- 29. The following information to be provided for each arterial river listed in 7.1.1.-7.1.6.:
- 30. Place of origin of the river; overall length and length within separate countries (for left and right banks). Accepted system of calculating distances (starting point 0 km). Navigable part of the river, subdivision into navigational sections, their main features (form as table 3, or text if number of sections is few).

Table 3. Main features of navigable part of River ...
(or the rivers of the ... basin)

Navigational section	Length		annel sions, m	Quantity		le lock sions, m	Minimum height	Class of waterway	Navigable zone
		Width	Depth		Width	Depth			

31. Main category E navigable tributaries of arterial rivers, length of navigable section, depth values of channel, class of navigable waterway.

Plans of main rivers or river groups with category E navigable tributaries and lakes (7.2), with designation of class of sections and navigable zones.

- 7.2. Lakes
- 32. The following information to be provided for each lake:

Dimensions: maximum length and width (km), area of lake  $(km^2)$ . Navigable section across lake: limits, length of section, depth values, class of waterway, navigable zone.

- 7.3. Canals
- 33. The following information to be provided for each main canal: construction dates (or year of entry into service), linked basins. Brief account of route, height changes. Main technical characteristics: length, width across water surface, depth, number and main dimensions (length, width) of locks. Projected type and cargo capacity/dimensions of vessels/assemblies passing through canal. Projected yearly traffic capacity of canal. Maximum cargo volume attained (date), including transit traffic, between canal ports and linked basins.

For other canals not mentioned in the table of contents, briefer information may be given.

Information about artificial sea canals (Kiel and Corinth) is necessary because of their inclusion in the system of AGN coastal routes (8.1).

Plan of individual canals or canal groupings within a region

- §8. <u>Future development of inland waterways of international importance</u>
- 8.1. European Agreement on Main Inland Waterways of International Importance (AGN)
- 36. Date and place of conclusion of AGN. Its main provisions as a coordinated plan for the development and construction of a network of category E inland waterways. The agreement's accepted classification systems (reference to §6) and grading of parts of waterway networks. Inland AGN ports. Parties to the agreement.
  - 8.2. Plans to improve conditions of navigation on rivers and existing canals
- 37. Main sections of rivers and existing canals requiring modernization under the single network concept and on the basis of individual countries'

proposals (what the Blue Book describes as "bottlenecks"): borders and length of section, country/countries, nature of work, anticipated results and timescale, and other relevant information (construction costs and sources of funds, etc.).

#### 8.3. Canals under construction or proposed

38. The following information about the canals listed in the table of contents and taken into account by the single network concept and the Blue Book ("missing links"): the canal's route, height changes along the route, projected length, width of water surface, depth, number and main dimensions (length, width) of locks, projected type and cargo capacity/dimensions of vessels/assemblies passing through canal. Projected traffic capacity of canal and expected time scale for construction or opening to traffic; other relevant information (construction costs and sources of funds, etc.).

Plans of individual canals

### §9. <u>Main waterways of regional importance and their</u> future development

39. Brief information on the main waterways of regional importance (by country): name of river/canal, length, class, connections with category E waterways, future development.

#### §10. Coastal sea routes connecting with inland waterways

40. Description of coastal sea routes as a link between inland waterways: direction of routes, distance between mouths of arterial rivers. (Note: coastal routes could be designated by dotted lines on the general plan of inland waterways of Europe - see §1.).

#### §11. <u>Distribution of inland waterways by country</u>

- 41. Main content of this section to be a summary table of the lengths of the inland waterways of Europe by country with division of category E waterways into classes.
- 42. Brief notes to the table: the breakdown of the total inland waterway network (km) by country and by class of waterway.

Table 4. Breakdown of the European inland waterway network by class in km (year)

Country	Waterways of regional importance	Waterways of international importance	Total
	(classes I-III)	Total including by class  IV Va VII	
Austria			
• • •			
Ukraine			
Total			

#### §12. Regime of international waterways

43. The following information to be given on the international waterways listed in 12.1 of the table of contents (rivers) and 12.2 (canals): international agreement/convention defining the waterway's status, date and place it was concluded, States parties (original and subsequent), coverage and main provisions of the agreement. The international organization monitoring observance of the agreement/convention.

#### §13. Regime of national waterways

44. Title and date of the instruments defining the legal regime of national inland waterways named specifically in 13.2 or generally by country (13.1 and 13.2). Conditions of access for foreign vessels to national inland waterways of individual countries and opportunities for foreign-flag transport through ports of the country in question. Other legal information of interest to foreign ship owners and clients, and references to relevant legal instruments.

## §14. <u>Pan-European international conventions, regulations</u> <u>and recommendations</u>

45. The following information to be provided for each of the instruments listed (14.1-14.10): date and place of signing/conclusion, coverage and basic provisions, date of entry into force, States parties.

#### §15. International, regional (basin) and national standards

46. The following information to be provided for each of the instruments specifically listed in 15.1-15.4 or added to the list during preparation: date and place passed/signed, coverage and basic provisions. For the Bratislava Agreements (15.2.2) the above information and the parties to be listed separately for each agreement.

#### §16. Special supervision and controls on inland waterways

#### 16.1. International waterways

- 47. Main provisions of current regulations on special supervision (customs, health, veterinary, phytosanitary on international waterways, with references to the relevant instruments. Supervisory agencies and their remit.
- 48. The same details for the rivers inspectorate. Border formalities for vessels on international waterways.
  - 16.2. National waterways.
- 49. Brief information on national waterways (by country) analogous to that in 16.1.

# §17. <u>Location, technical characteristics and cargo turnover</u> <u>of main inland ports</u>

50. Description of the ports (primarily category E) of each of the countries listed in the table of contents, as set out in table 5.

Table 5. Main features of the ports of the ... basin/river

Port	Country	Location			Loading f	rontage, m	Max. depth of berths, m
		river/ canal	coast	borders km	total	including no. of berths	
1	2	3	4	5	6	7	8

Main loadi equipment: quantity/o (tonnes)	_	Storag (thousand		Capacity of storehouses (thousands of m³)		Yearly cargo turnover for 2000
Gantry cranes	Floating cranes	Covered	Open	Grain Petroleum products		
9	10	11	12	13	14	15

51. Additional notes on each port's main specialization, a brief description of any free customs zones within the port ("porto franco"), special features of the port infrastructure (passenger terminal, lack of rail links, etc.), ship repair yards, types of repairs carried out.

# §18. Standards relating to cargo operations and responsibility for vessel handling times

52. The principles governing cargo operations in ports on individual rivers (basins) depending on type of work (loading, unloading), type of cargo or

quantity on board, etc., and interval of values given for intensity of cargo operations. Standards relating to simultaneous vessel handling, responsibility for fleet handling times in port.

#### §19. Laying up of vessels for winter

53. Availability of winter harbours and temporary winter berths for laying up, as table 6. Charges for laying up (by country).

Table 6. Capacity of winter harbours

Country	River	Number of	Capacity, no. of vessels			
		winter harbours	Total	Of which tankers		

#### §20. Fleet composition and distribution by country

54. Information about fleet composition by country to be given in table 7. Brief notes on the main types of motorized and non-motorized vessels by basin with indications of their cargo capacity/output and basic measurements. (It would also be possible to provide the information by type of vessel in a separate table: this will be decided during preparation of the manuscript.)

Table 7. European countries' inland fleets on 1.1.2001

Country	Cargo vessels				Tugs and	pushers	Passeng	er vessels
	Moto	orized	Non-motorized					
	Number of units	Cargo capacity (thousand s of tonnes)	Number of units	Cargo capacity (thousan ds of tonnes)	Number of units	Output (kW)	Number of units	Passenger capacity (thousands )

#### §21. Organization of fleet operations

55. The main principles of fleet operations organization by basin: transportation by motorized vessels and pushed and towed convoys. The standard (agreed) speed of cargo transportation (reference to the relevant provisions of §15). Maximum permissible dimensions of convoys.

Basic convoy formations and dimensions (on the Rhine, Danube and other main rivers).

#### §22. <u>Volume and structure of goods flows</u>

56. Basic information on volume of goods flows in 2000 to be provided in summary table 8 for each European arterial river.

Table 8. Volume of goods flows (thousands of tonnes)

River/basin	Total	Consisting of:			
		Cabotage	Import, export	Transit	

57. Under each bullet (22.1-22.8), a brief description to be given of goods flows on individual rivers with identification of the basic types of cargo in cabotage and international shipping. The maximum goods flow achieved historically (year). For international river basins (Rhine, Danube), table 9 to give information on international goods flows between the countries of the basin and brief notes to indicate the volumes transported by national vessels of the countries of the basin in that year.

Table 9. Cargo transported between the countries of the ... basin in 2000

	• • •	• • •	• • •	Other countries	Total
 Other count	ries				
Total					

#### §23. "River-sea" transport

58. In view of the particular importance of this type of transport, information on "river-sea" goods flow for 2000 is set out separately in table 10.

Table 10. "River-sea" goods flow (thousands of tonnes)

River	Total	Direction:		
		"River-sea"	"Sea-river"	
Rhine Danube				
• • •				

- 59. Brief notes: the proportion of international cargo shipments in this type of transport (by river), the basic types of cargo transported and the marine basin (or country) destination of cargo.
- 60. Volumes of direct "river-sea" transfers by vessels of the combined type in 2000, by river.

#### §24. Distribution of transport operations by flag

61. Information on volume of transport operations under the national flags of European countries to be provided in summary table 11. Additional information on transport operations by national vessels on international rivers (Rhine, Danube) to be given in table 12, which, in addition to European vessels, lists vessels under the flags of the most active non-European carrier nations.

Table 11. Volume of internal waterway cargo operations conducted by national vessels of European countries in 2000 (thousands of tonnes)

Country	Total	Type of operation:		
		Cabotage	International	

Table 12. Volume of cargo operations on the River ... in 2000 by vessels of individual countries (thousands of tonnes)

Country	Total	Type of operation:		
		Cabotage	International	

#### §25. Rhine basin

62. Current unitary and contractual cabotage and international cargo transport tariffs, for the basin as a whole and individual countries. The role of the State in controlling cargo tariffs. Vessel dues and charges for all inland waterways (including canals) and ports: main types and principles of calculation. The tariff system for loading and unloading operations in ports. Listing of the main official tariff guides/announcements.

#### §26. <u>Danube basin</u>

63. Information as in §25.

#### §27. Other river basins

64. Information as in §25.

#### §28. <u>Inland waterways</u>

65. Statistical indicators of changes in the total length of internal waterway by country over the period 1980-2000 to be provided in table 13. The length to be divided into rivers/lakes and canals for the final year of the period. The brief notes to contain an analysis of reasons for reduction or increase in the length of waterway in use in individual countries.

Country	1980	1990		2000		
			Total	Consisting of:		
				Rivers/lakes	Canals	
Albania Ukraine						
Total						

Bar chart depicting the respective lengths of inland waterways in 1980, 1990 and 2000, indicating the main countries, or pie chart for the year 2000 showing the share/sectors of the main countries

#### §29. Fleets

- 66. Statistical indicators of changes in the fleets of individual countries (including vessels for combined river-sea navigation) over the period 1980-2000 to be provided in table 14. The capacity of motorized cargo vessels and tugs/pushers to be indicated for the final year of the period.
- 67. The brief notes to contain an analysis of reasons for changes in the indices in table 14 and an evaluation of the role of the State in controlling the volume of tonnage in use.

Table 14. Changes in fleet composition by country

Country	1980				1990		
	Number of vessels	Overall capacity (thousand kW)	Overall capacity (thousands of tonnes)	Number of vessels	Overall capacity (thousand kW)	Overall capacity (thousands of tonnes)	
1	2	3	4	5	6	7	
Albania Ukraine							
Total							

	2000											
Number of vessels	Overall capacity (thousand kW)	Consisting of:  Motorized Tugs/ cargo pushers vessels		Overall freight capacity (thousands of tonnes)	Consist	ing of:						
					Motorized cargo vessels	Tugs/ pushers						
8	9	10	11	12	13	14						

Bar charts of overall fleet capacity and cargo capacity in 1980, 1990 and 2000, indicating the main countries, or pie charts for the year 2000 showing the share/sectors of the main countries.

#### §30. <u>Cargo operations</u>

66. Statistical indicators of changes in cargo operations by vessels of individual countries over the period 1980-2000 to be provided in table 15. The quantity of cargo transported by motorized and non-motorized vessels to be indicated for the final year of the period.

Table 15. Changes in internal waterway cargo operations by national vessels (thousands of tonnes)

Country	1980	1990	2000		
			Total	Consisting of:	
				Motorized	Non-motorized
Albania					
 Ukraine					
Total					

Bar chart of cargo operation volumes for 1980, 1990 and 2000, indicating the main countries, or pie chart for the year 2000 showing the shares/sectors of the main countries.

#### §31. Cargo turnover of ports

69. Statistical indicators of changes in overall cargo turnover of inland ports over the period 1980-2000 to be provided in table 16. The quantity of cabotage and international cargo to be indicated for the final year of the period.

Table 16. Changes in the cargo turnover of inland ports by country (thousands of tonnes)

Country	1980	1990	2000		
			Total	Consist	ing of:
				Cabotage	International
Albania					
 Ukraine					
Total					

Bar chart of cargo turnover of ports for 1980, 1990 and 2000, indicating the main countries, or pie chart for the year 2000 showing the shares/sectors of the main countries.

### §32. <u>Transport authorities concerned with inland water</u> transport in European countries

70. The following information to be provided for each country: title of transport authorities and divisions/departments which regulate, control or in any way influence inland water transport operations; degree of regulation, control or influence, reference to the address list in the annex.

#### §33. Main national and joint shipping enterprises

71. Information by country, basin by basin (33.1-33.3) on the main shipping enterprises to be provided in table 17.

Table 17. Main shipping enterprises

Country	Shipping enterprise	Location (city)	Fleet composition					f transport ns in 2000
			Number of vessels	Overall capacity (thousand kW)	Overall cargo capacity (thousands of tonnes)	Overall passenger capacity (thousands)	thousands of tonnes	thousand passengers
1	2	3	4	5	6	7	8	9

72. Additional brief commentary enterprise by enterprise: specialized transport (in terms of cargo, geographical coverage, including "river-sea" transport), specialized ships for particular purposes, such as lighters and ferries, membership of international shipowners' associations, and other relevant information.

#### §34. <u>Intergovernmental associations</u>

73. The following information to be provided for each of the organizations listed in 34.1-34.7: year founded, location, States members, purposes of founding, area of activity in inland water transport and main results, organizational structure, and official languages.

#### §35. Main non-governmental organizations

74. Information as in §34.

#### <u>Annexes</u>

#### I. <u>Countries of Europe (general information)</u>

State flag	State	Area (thousand km²)	Population (thousand)	Capital (population, thousand)	National currency		urrency
					Name	Symbol	Sub-units

#### II. <u>National (countrywide) public holidays</u>

Dates and names of public holidays.

III. Longitudinal profile of the Rhine-Main-Danube waterway

Plan of the longitudinal profile of the waterway

IV. <u>Organizations authorized to issue certificates of inspection for vessels on international rivers</u>

Names of organizations, addresses, telephone and fax numbers.

#### V. <u>Tables of distance between ports of main basins</u>

Distances between Rhine, Danube, Elbe, Wisla, Oder, Rhône, Dnieper and Volga ports.

#### VI. <u>Addresses</u>

Addresses of national transport authorities and other organizations and enterprises (by agreement with the countries concerned).

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