



# **Economic and Social Council**

Distr.: General  
20 June 2022  
English  
Original: English, French and  
Russian

---

## **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**

###### **Sixty-first session**

Geneva, 29 June–1 July 2022

Item 9 of the provisional agenda

###### **Glossary of terms and definitions related to inland water transport**

## **Terms Related to Hydrography, Meteorology, Cartography and Inland Waterways Statistics**

### **Note by the secretariat**

#### **Mandate**

1. This document is submitted in line with the Proposed Programme Budget for 2022, part V, Regional cooperation for development, section 20, Economic Development in Europe, Programme 17, Economic Development in Europe (A/76/6 (Sect. 20), paragraph 20.76).
2. Following the decision taken at its sixtieth session, the Working Party on the Standardization of Technical and Safety Requirements in Inland Navigation (SC.3/WP.3) may wish to finalize the general terminology and terms related to hydrography, meteorology, cartography and inland waterways statistics, based on the drafts contained in annexes I and II to the present document. SC.3/WP.3 may wish to transmit the finalized draft to the Working Party on Inland Water Transport.

## Annex I

## Glossary of Terms and Definitions Related to Inland Water Transport, Part IX “Hydrography, Meteorology and Cartography”

No.	Term	Definition	Source
1	Bar (sandbar)	Bank of sediment, such as sand or gravel, deposited on a stream bed or at its mouth, which obstructs flow or navigation.	(1)
2	Bathymetry	A study of underwater depth of water bodies, topography of a water body.	(2)
3	Bend radius	Radius of curvature of the fairway.	(2)
4	Bifurcation (fork)	Division of a stream into two branches. Note (does not apply to the English text).	(1)
5	Breakup	Stage of the breakup season, or sharp break of the ice cover, followed by a massive departure of the ice, mostly in inland waters.	(3)
6	Brash ice	Accumulation of floating ice made up of fragments not more than 2 metres across.	(1)
7	Bypass channel (bypass canal, lateral canal)	Channel built to divert flows from a point upstream of a region to a point downstream.	(1)
8	Cross-over	River section where the fairway passes from one bank to another.	(4)
9	Cross-section, profile	A plane, generally perpendicular to the centreline of the river or the fairway.	(2)
10	Vertical datum (ordnance datum)	A horizontal surface to which elevations and/or depths (soundings and tide heights) are referred. <b>National ordnance vertical datums based on the mean sea level are used for determining the absolute value of the water level on inland waterways.</b>	(1), modified
11	Deepwater section	A river section with great depths.	(2)
12	Delta	Geographical and geomorphological feature resulting from an alluvial deposit at a river mouth.	(1)
13	Echo sounder (fathometer)	Instrument using the reflection of an acoustic signal from the bottom of a water body to determine the depth.	(1)
14	Estuary	Broad portion of a stream near its outlet to a sea, lake or sabkha.	(1)
15	Flood	1. Rise, usually brief, in the water level of a stream or water body to a peak from which the water level recedes at a slower rate. 2. Relatively high flow as measured by stage height or discharge.	(1)
16	Flooding (inundation)	1. Overflowing by water of the normal confines of a watercourse or other body of water. 2. Accumulation of drainage water over areas which are not normally submerged.	(1)
17	Flood plain (bottom land)	Land alongside a stream which is flooded when the streamflow exceeds the water-carrying capacity of the channel.	(1)

<i>No.</i>	<i>Term</i>	<i>Definition</i>	<i>Source</i>
18	Flood control (flood alleviation, flood protection)	Detention and/or diversion of water during flood events for the purpose of reducing discharge or downstream inundation.	(1)
19	Fog	Suspension of very small, usually microscopic water droplets in the air, generally reducing the horizontal visibility at the Earth's surface to less than 1 km.	(1)
20	Ford	Shallow place where a watercourse may be crossed by vehicles or by wading.	(1)
21	Free-flowing river	Sections of natural rivers which are not impounded due to barrages such as hydropower plants or lock facilities and where water levels can be subject to considerable fluctuations.	(5)
22	Freeze-up	[Formation of ice cover on a water surface due to seasonal cooling.]	(1)
		[Process whereby the ice run in flowing water is replaced by stable ice cover.]	(6)
23	Gauging station	Equipment for measuring the water level of surface water bodies.	(2)
24	Gauge zero	Elevation of the gauging station with respect to the mean sea level.	(2)
25	Ice concentration	The ratio describing the amount of the <b>water</b> surface covered by ice. It can be expressed:  (a) In tenths as a fraction of the whole area being considered;  (b) Using a scale of 0 to 10, based on a visual assessment: 0 means that no floating ice is present; 10 means close ice without water gaps.	(7) and (8)
26	Ice laying (ice duration, ice period)	Period of time from freeze-up to ice break-up.	(1)
27	Knot	Unit of speed equal to one nautical mile per hour (1.852 km/h).	(1)
28	Long-range forecast (long-term forecast, long-range prediction)	Forecast whose period of validity is generally beyond ten days.	(3)
29	Mean high water (MHW)	Mean of multi-year maximum water levels; the average water level is measured at a water gauge over a specific period of time.	(2)
30	Mean low water (MLW)	Mean of multi-year minimum water levels.	(2)
31	Meander (full meander)	One curved portion of a sinuous or winding watercourse, consisting of two consecutive loops, one turning clockwise and the other anticlockwise.	(1)
32	Meandering channel	Channel which has two or more successive meanders.	(1)
33	Medium-range forecast	Forecast for a period extending generally from 3 to 10 days from the day of issue.	(3)

<i>No.</i>	<i>Term</i>	<i>Definition</i>	<i>Source</i>
34	Meteorological information	Meteorological report, analysis, forecast and any other statement relating to existing or expected meteorological conditions.	(3)
35	Meteorological report	Statement of observed meteorological conditions related to a specific time and location.	(3)
36	Meteorological visibility (meteorological visibility at night)	Greatest distance at which a black object of suitable dimensions can be seen and recognized against the horizon sky during daylight or could be seen and recognized during the night if the general illumination were raised to the normal daylight level.	(3)
37	Midstream (channel line)	A part of the river flow with the maximal flow rate and depth (usually in the middle of the river).	(8)
38	Nowcast	A description of current weather and a short-period (0–2 hours) forecast.	(3)
39	Ox-bow	Abandoned part of a former meander, left when the stream cuts a new, shorter channel.	(1)
40	Pool (pothole, scour hole)	Localized depression in a channel bed or flood plain caused by the water flow.	(1)
41	Precipitation	1. Liquid or solid products of the condensation or sublimation of water vapour falling from clouds or deposited from air on to the ground. 2. Amount of precipitation on a unit of horizontal surface per unit time.	(1)
42	Rain	Precipitation of liquid water particles, either in the form of drops of more than 0.5 mm in diameter, or of smaller widely scattered drops.	(3)
43	Rapids	Reach of a stream where the flow is very rapid and turbulent, and where the surface is usually broken by obstructions, but has no actual waterfall or cascade.	(1)
44	River basin	[Area having a common outlet for its surface runoff.] [The land area that is drained by a river and its tributaries.]	(3) (2)
45	River bed (riverbed)	Bed formed by the flow of the river, along which run-off is carried without flooding the flood plain.	(2)
46	River mouth	Site of discharge of a river into a larger water body such as a sea or-a lake.	(1)
47	River pool	Small and relatively deep body of quiet water in a watercourse.	(1)
48	Sill (bottom sill)	1. Low structure built under water in order to adjust the depth of a watercourse. 2. Invert of a gate or weir opening. 3. Low structure built across the inlet of a diversion channel or at an outlet, to reduce or prevent flow until the water stage reaches the crest of the structure.	(1)

<i>No.</i>	<i>Term</i>	<i>Definition</i>	<i>Source</i>
49	Shoal (shallow)	1. Submerged bar of sediment, resulting from natural deposition on a channel bed. 2. Part of an area covered by shallow surface water.	(1)
50	Short-range forecast	A forecast whose period of validity is less than about three days.	(3)
51	Shuga	Accumulation of spongy white ice lumps, a few centimetres across, formed from grease ice or slush, and sometimes from anchor ice rising to the surface.	(1)
52	Snowmelt flood	Significant flood rise in a river caused by the melting of snowpack accumulated during the winter.	(1)
53	Sounding	Measuring the depth of water with a line, rod or by other means.	(1)
54	Spit (sandspit)	Low and narrow deposition bar connected to the bank at one end and protruding into the sea (river, lake) at the other.	(8)
55	Stream flow measuring station	Hydrological station for monitoring water levels and flows.	(8)
56	Towpath	Bank that the fairway runs along.	(8)
57	Tributary (affluent)	Watercourse that flows into a larger watercourse or into a lake.	(1)
58	Very-short-range forecast	A forecast having a period of validity of up to 12 hours.	(3)
59	Weather forecast (meteorological forecast, forecast)	Statement of expected meteorological conditions for a specific period and for a specific area or portion of air space.	(3)
60	Weather warning	Meteorological message issued to provide appropriate warnings of hazardous weather conditions ( <b>storm warning, wind warning, thunderstorm warning, flood warning etc.</b> ).	(3)
61	Wind direction	Direction from which the wind blows.	(3)
62	Wind wave	Waves raised by the wind blowing in the immediate neighbourhood of an observation site at the time of observation.	(3)

## References

- (1) WMO, UNESCO, International Glossary of Hydrology (WMO No. 385), 2012.
- (2) Danube STREAM project consortium, Basic Danube Glossary, 2019.
- (3) WMO, International Meteorological Vocabulary (WMO No. 182), second edition, 1992.
- (4) European Code for Inland Waterways (CEVNI), annex to resolution No. 24, sixth revision (ECE/TRANS/SC.3/115/Rev.6).
- (5) via donau, Good Practice Manual on Inland Waterway Maintenance, 2016.
- (6) Danube Commission, Glossary of the Danube navigation, 2015.
- (7) WMO, Sea-Ice Nomenclature (WMO No. 259), 1970–2014.
- (8) National standards of UNECE member States.

## Annex II

## Glossary of Terms and Definitions Related to Inland Water Transport, Part X “Inland Waterways Statistics”

<i>No.</i>	<i>Term</i>	<i>Definition</i>	<i>Source</i>
1	Capacity of an IWT passenger vessel (passenger carrying capacity)	Maximum authorized number of passengers that a vessel may carry.	(1)
2	Carrying capacity of an IWT freight vessel	Maximum authorized weight of goods, expressed in tonnes, which a vessel may carry.	(1)
3	Cross-trade inland waterway transport	Inland waterway transport conducted by an enterprise of one country between a place of loading/embarkation in a second country and a place of unloading/disembarkation in a third country.	(1)
4	Entry of an IWT vessel	Any laden or unladen IWT vessel which entered the country by inland waterway.	(1)
5	Exit of an IWT vessel	Any laden or unladen IWT vessel which left the country by inland waterway.	(1)
6	Foreign inland waterways vessel	IWT vessel which is registered at a given date in a country other than the declaring country.	(1)
7	Inland movement	Any movement of goods and/or passengers to and from inland ports connected by water routes which may be made navigable by one or more lock structures.	(1)
8	Inland water transport capital stock	An estimated monetary value reflecting the current stock of physical IWT infrastructure assets.	(1)
9	Inland waterway ferry service	A ferry service is a regular short service between two ports or mooring/landing places, with or without intermediate calls. These operate either: <ul style="list-style-type: none"> <li>(i) according to a published timetable; or</li> <li>(ii) with crossings so regular or frequent that they constitute a recognisably systematic series.</li> </ul>	(1)
10	Inland waterway fleet	Number of IWT vessels registered at a given date in a country and authorised to use inland waterways.  Changes in the fleet refer to changes, in total or within a vessel type, in the inland waterway fleet of the reporting country, resulting from new construction, modification in type or capacity, purchases or sales abroad, scrapping, casualties, or transfers to or from the [maritime] register <b>of vessels</b> .	(1)
11	Inland waterways container vessel	Vessel fitted throughout with fixed or portable cell guides mainly for the carriage of containers.	(1)
12	Inland waterways freight vessel	Vessel with a carrying capacity of not less than 20 tonnes designed for the carriage of freight by navigable inland waterways.	(1)
13	Inland waterway journey	Any movement of an IWT vessel from a specified point of origin to a specified point of destination.	(1)

No.	Term	Definition	Source
14	Inland waterway traffic	Any movement of an IWT vessel on a given [IWT] <b>inland waterways</b> network.	(1)
15	Inland waterway traffic on national territory	Any movement of an IWT vessel within a national territory irrespective of the country in which the vessel is registered.	(1)
16	Inland waterway transit transport	Inland waterway transport through a country between two places (a place of loading/embarkation and a place of unloading/disembarkation) both located in another country or in other countries provided that the total journey within the country is by inland waterways and that there is no loading/embarkation and unloading/ disembarkation operation in the transit country.	(1)
17	Inland waterways port enterprise	An enterprise carrying out in one or more places the provision of inland waterway port services and the main activity of which according to value added is the provision of inland waterway port services. Pleasure port enterprises are excluded.	(1)
18	Inland waterways transport enterprise	Enterprise carrying out in one or more places activities for the production of IWT services using IWT vessels and whose main activities according to the value added is inland waterway transport and services allied to inland waterway transport.	(1)
19	International inland waterway transport	Inland waterway transport between two places (a place of loading/embarkation and a place of unloading/ disembarkation) located in two different countries. It may involve transit through one or more additional countries. For the latter countries this transport has to be reported as transit.	(1)
20	Investment expenditure on IWT infrastructure	Capital expenditure on new inland waterways infrastructure or extension of existing inland waterways, including reconstruction, renewal (major substitution work on the existing infrastructure which does not change its overall performance) and upgrades (major modification work improving the original performance or capacity of the infrastructure) renewal and upgrades or major repairs (repairs improving the original performance or capacity of the infrastructure).	(1)
21	Investment expenditure on IWT vessels	Capital expenditure to purchase IWT vessels or to upgrade existing ones.	(1)
22	Maintenance expenditure on IWT infrastructure	Non-capital expenditure to maintain the original condition and capacity of the existing IWT infrastructure.	(1)
23	Maintenance expenditure on IWT vessels	Non-capital expenditure to maintain IWT vessels in working order without improving either their performance or their capacity.	(1)
24	Modal split of transport	Describes the relative share of each mode of transport, for example by road, rail or sea. It is based on passenger-kilometres (pkm) for passenger transport and tonne-kilometres (tkm) for freight or goods transport. The modal split is usually defined for a specific geographic area and/or time period.	(2)



<i>No.</i>	<i>Term</i>	<i>Definition</i>	<i>Source</i>
25	National inland waterway transport	Any movement of goods and/or passengers using an Inland Waterways Transport (IWT) vessel between two places (a place of loading/embarkation and a place of unloading/disembarkation) within a national territory irrespective of the country in which the IWT vessel is registered. It may involve transit through a second country, although for this country this transport has to be reported as transit.	(1)
26	National inland waterways vessel	Inland waterway transport (IWT) vessel which is registered at a given date in the declaring country. Where registration of IWT vessels does not apply in a specific country, a national IWT vessel is a vessel owned by a company tax resident in that country.	(1)
27	NST 2007, Standard goods classification for transport statistics	Statistical nomenclature for the goods transported by four modes of transport: road, rail, inland waterways and sea (maritime), custodian – ECE.	(3)
28	NUTS, Nomenclature of territorial units for statistics	Geographical nomenclature established by Eurostat to provide a single uniform breakdown of territorial units for the production of regional statistics for the European Union.	(4)
29	Passenger port	A port with facilities to embark and disembark passengers. Such ports may also provide services such as water and electricity supply, clearance of waste etc.	(1)
30	Passenger-kilometre (pkm) by inland waterways	Unit of measurement representing the transport of one passenger by inland waterways over one kilometre.	(1)
31	Power (kW)	Mechanical force developed by the motive power installation in a vessel. This power should be measured in effective kilowatts (power transmitted to the propeller).	(1)
32	Public inland waterways enterprise	IWT enterprise which is principally owned (more than 50 per cent of the capital) by the State or public authorities and their enterprises.	(1)
33	Public inland waterways port enterprise	A port enterprise which is principally owned (more than 50 per cent of the capital) by the State or public authorities and their enterprises.	(1)
34	Seat-kilometre offered	Unit of measurement representing the movement over one kilometre of one seat available in an IWT passenger vessel when performing the services for which it is primarily intended over one kilometre.	(1)
35	TEU-kilometre (TEU-km) by inland waterways	Unit for measuring the goods transport by containers equivalent to one TEU transported over a distance of one kilometre. For the purpose of reporting the TEU-km performance only the distance travelled on navigable inland waterways performed in the declaring country has to be taken into account.	(1)
36	Tonne-kilometre (tkm) by inland waterways	Unit of measurement of goods transport which represents the transport of one tonne by inland waterways over one kilometre.	(1)
37	Tonne-kilometre (tkm) offered	Unit of measurement representing the movement of one tonne of capacity available in an IWT freight vessel when performing the services for which it is primarily intended over one kilometre.	(1)

No.	Term	Definition	Source
38	Transit of an IWT vessel	Any loaded or empty IWT vessel, which enters and leaves the country at different points by whatever means of transport, provided the total journey within the country is by inland waterways and that there is no loading or unloading in the country.	(1)
39	Transport passenger stop	A place for passenger transport vessels to moor to embark and/or disembark passengers using the transport network.	(1)
40	Unladen inland waterway traffic	Any movement of an IWT freight vessel for which the gross-gross weight of goods carried, including that of equipment such as containers, swap bodies and pallets, is nil; as well as any movement of an IWT passenger vessel without passengers.	(1)
41	Urban inland waterway transport	Transport carried out on inland waterways located within the boundaries of an urban area.	(1)
42	Urban inland waterway transport service	A scheduled inland waterways public transport service for commuter and other local traffic within an urban area, operating throughout the year.	(1)
43	Urban inland waterway transport vessel	An inland waterways transport vessel operating an urban inland waterway transport service.	(1)
44	Vessel-kilometre (Vessel-km)	Unit of measurement representing the movement of an IWT vessel over one kilometre.	(1)
45	Water bus	An inland waterways ferry designed to transport passengers only on a public scheduled service.	(1)
46	Water taxi	An inland waterways passenger vessel with limited passenger capacity operating on demand public passenger transport within and around an urban or similar area. The passenger carrying capacity of a water taxi will rarely exceed 20 persons.	(1)
47	Year of construction of vessel	Year of original construction of the hull.	(1)

## References

- (1) UNECE, Eurostat, ITF, Glossary for Transport Statistics, fifth edition, 2019.
- (2) Eurostat, Online statistical glossary Eurostat Statistics Explained.
- (3) Eurostat, Reference Manual on Inland Waterways Transport Statistics, Version 9.2, October 2019.
- (4) OECD, Glossary of statistical terms (online).