

Meso-American - Caribbean Sea Hydrographic Commission (MACHC)

Report of the Inland ENC Harmonization Group  
(IEHG14)

DIRECTORATE OF HYDROGRAPHY AND  
NAVIGATION/BR

AGENDA ITEM

# Principal activities and achievements

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- The Inland ENC Harmonization Group (IEHG) was formed in 2003 by North America and Europe to facilitate the development of international standards for Inland ENC data. The IEHG meets once per year. However, most of the work is accomplished via e-mail correspondence.
- The goal of the IEHG is to agree upon specifications for Inland ENCs that are suitable for all known inland ENC data requirements for safe and efficient navigation for European, North and South American and Russian Federation inland waterways. However, it is intended that this standard meet the basic needs for Inland ENC applications, worldwide.

# Principal activities and achievements

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- Annual meeting of IEHG was hosted by DHN/BR in Niteroi, Brazil, from 10-12 October 2017. Representatives from Europe, North & South America and Asia were in attendance.
- Key Topics included:
  - Updates on Inland ENC activities in the various regions;
  - Review and acceptance of change requests; and
  - IEHG alignment with IHO S-100, S-99, S-101 and the GI Registry.

# Principal activities and achievements

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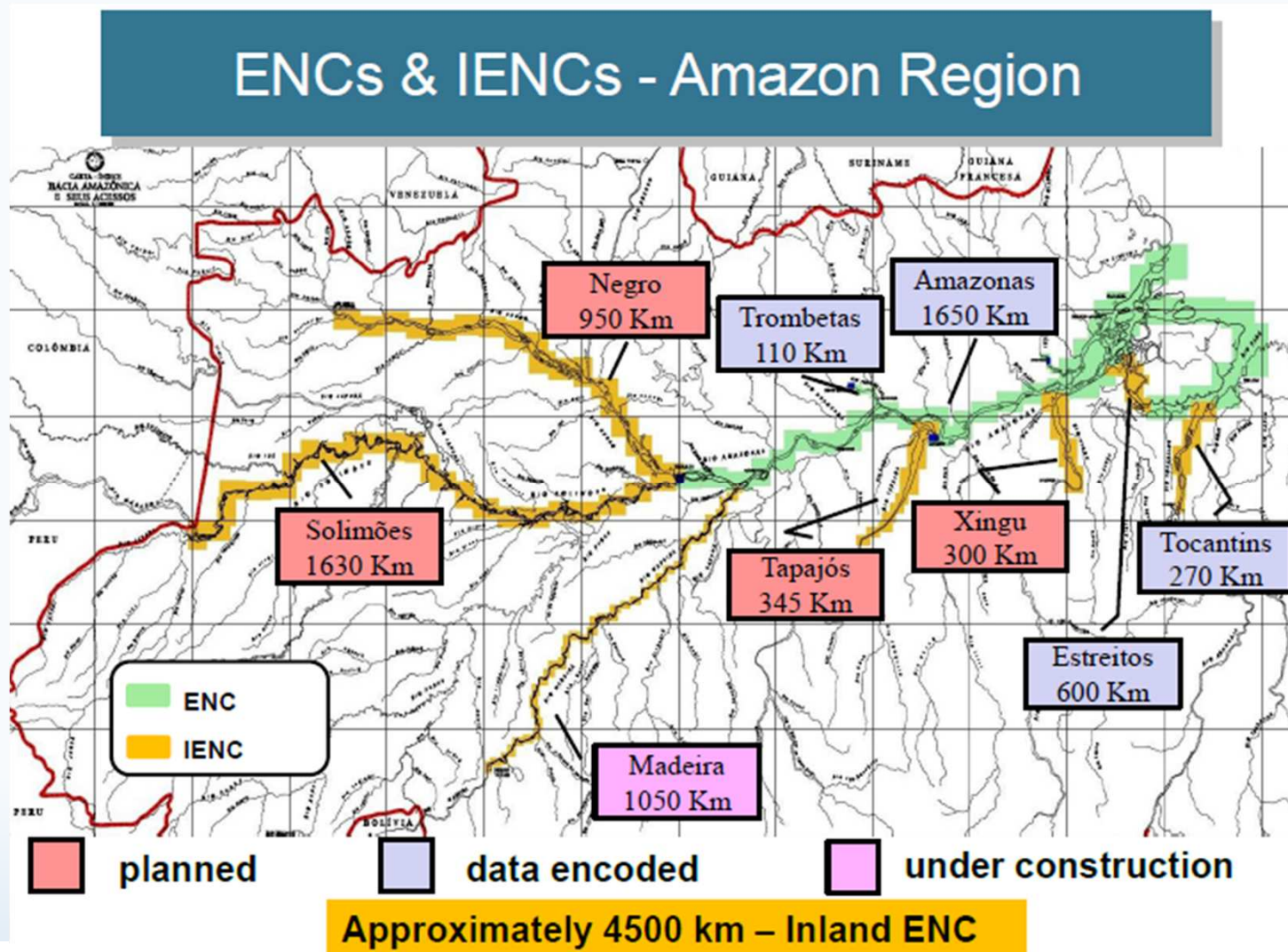
- **Change Requests**: IEHG has established a process for submitting proposals for amendments (i.e., Change Requests) to Inland ENC standards. This includes the Feature Catalogue, Product Specification, Encoding Guide, and Validation Checks. Every participant in IEHG is entitled to submit proposals. Proposal submission and review is described in Annex A of the IEHG Terms of Reference.
- At IEHG14, 83 Change Requests were reviewed. Changes which do not affect the Feature Catalogue will go into effect in January 2018. Changes which affect the Feature Catalogue will go into effect with the release of the next edition of the IENC Product Specification.

# Principal activities and achievements

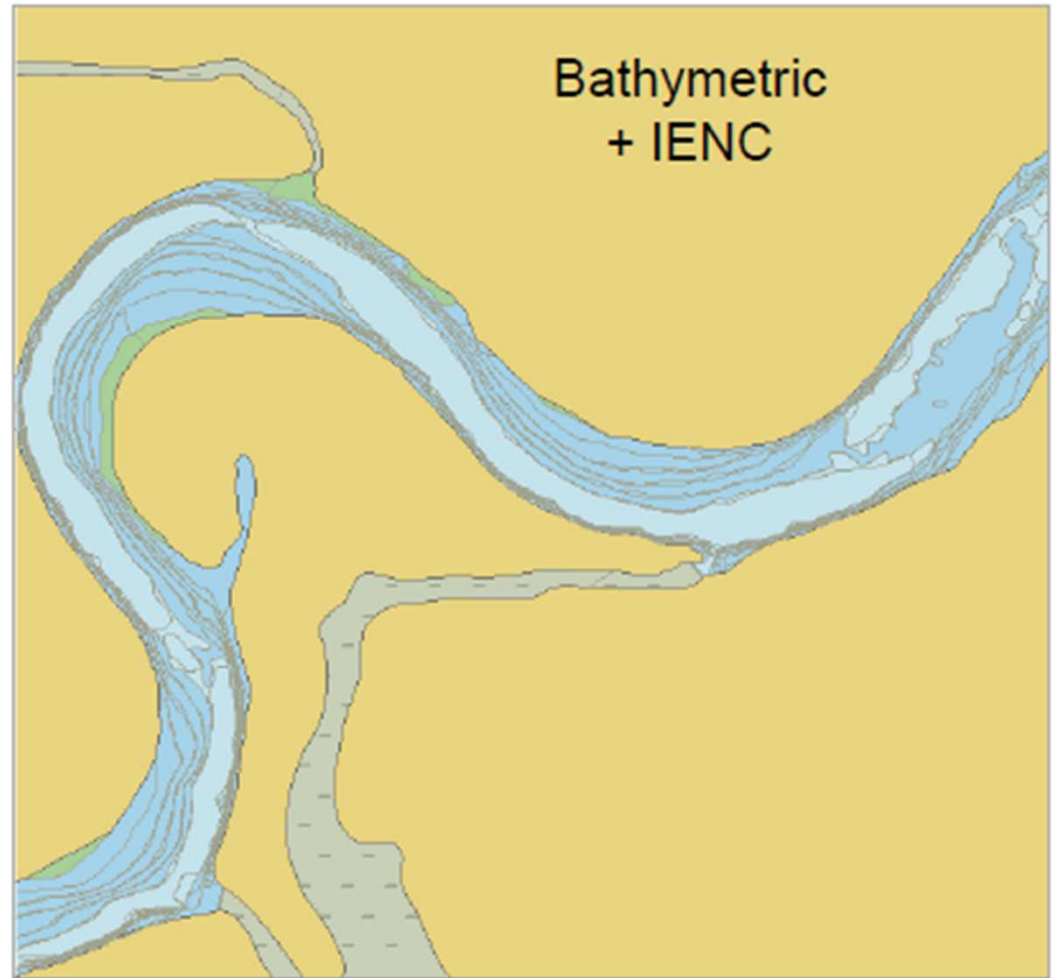
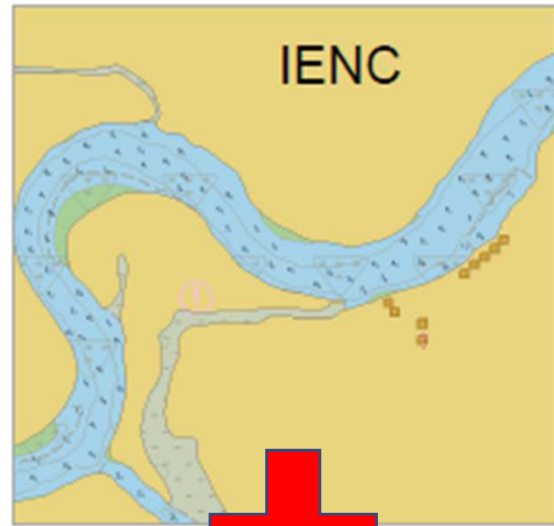
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- Since the last IEHG meeting in 2015, the IEHG has continued working to align S-401 with the draft IHO S-101 (new ENC Product Specification) - Interoperability;
- The IEHG has begun to align the product specification for Bathymetric Inland ENCs (b-IENC) with S-100 (Universal Data Model) – Parallel to the development of b-ENC (S-100/ENCWG), registering the number S-402 for Bathymetric Inland ENCs.
- All Inland ENC publications and functions are hosted at a consolidated Inland ENC site (<http://ienc.openecdis.org>)

# Coverage – Amazon Basin (Brazil)



# b-IENC – Paraguay River (Brazil)



# Future work programme

- **Effective Dates of IENC standards:**

FEATURE CATALOGUE & PRODUCT SPEC	DATE EFFECTIVE	ENCODING GUIDE	DATE EFFECTIVE	VALIDATION CHECKS	DATE EFFECTIVE
2.0		1.0	Oct 2005		
	---	1.1	Oct 2006		
	---	1.2	Dec 2006		
2.1		1.3	Feb 2008		
	---	1.3.1	May 2008	2.1	June 2010
2.2	Feb 2010	2.2.0	Feb 2010		
2.3	Jun 2011	2.3.5	Mar 2013	2.3	Jun 2011
		2.3.6	Jan 2014	2.3 corr. 1	Dec 2013
2.4	Apr 2015	2.4.0	Apr 2015	2.4	Mar 2016
IEHG-S-401 (to be aligned with S-101)	TBD				



# Future work programme

## 2018 FIFA WORLD CUP RUSSIA 'n' WATERWAYS

### Routes from the Five Seas

14 June - 15 July 2018

- The 2018 FIFA World Cup will be the 21st FIFA World Cup, a quadrennial international football tournament contested by the men's national teams of the member associations of FIFA. It is scheduled to take place in Russia from 14 June to 15 July 2018, after the country was awarded the hosting rights on 2 December 2010. This will be the first World Cup held in Europe since 2006, all but one of the stadium venues are in European Russia, west of the Ural Mountains to keep travel time manageable.

- The tournament will involve 32 national teams, which include 21 teams determined through qualifying competitions and the automatically qualified host team. A total of 64 matches will be played in 12 venues located in 11 cities, the final will take place on 15 July in Moscow at the Luzhniko Stadium.

- The general visa policy of Russia will not apply to the World Cup participants and fans, who will be able to visit Russia without a visa right before and during the competition regardless of their citizenship (<http://www.fifa.com/worldcup>).

**IDWWS SECTION: Rybinsk - Moscow (433 km)**  
**WATERWAYS:** Volga River, Rybinskoye, Uglichskoye, Ivan'kovskoye Reservoirs, Moscow Canal, Izhitskoye, Pestovskoye, Klyazmskoye Reservoirs, Moskva River  
**MOSCOW Luzhniko Arena Stadium (81,000), Spartak Arena Stadium (45,000)**  
 Historic towns: Rybinsk, Uglich, Kimry, Dubna, Demt'rov  
 Small rivers: Meshchobda, Dubna, Yutich, Ner', Kimeks, Shosha, Molozha, Sufka

14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

**SECTION: Moscow - Nizhny Novgorod (906 km)\***  
**WATERWAYS:** Moskva River, Oka River (the part of Moscow -Circumnavigation)  
**N. NOVGOROD Arena Stadium (45,000)**  
 Historic towns: Kolomo, Ryazan', Kasimov, Murom  
 Small rivers: Klyazma, Moksha, Opat', Pronya  
 \*The part of IDWWS

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**Kazan' - Samara (425 km)**  
**Volga river, Ruybyshevskoye Reservoir (6,450 sq. km)**  
**SAMARA Arena Stadium (45,000)**  
 The different river yacht regattas take place in this area  
 Towns: Ulyanovsk, formor Simbolski, Ilyayev, Samara  
 Rivers: Kama, Cherevshon, Oka, Samara, Chyppovka

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**Volgograd - Samara (812 km)**  
**Volga river, Volgogradskoye (3,117 sq. km), Saratovskoye (1,831 sq. km) Reservoirs**  
 Towns: Saratov, Syzran', Bakalovo, Engels', Kamyshin  
 Small rivers: Chagay, Malyngizh, Bolshoy Izhiz

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**(Black Sea & Sea of Azov) Rostov-on-Don - Volgograd (575 km)**  
**Don River, Tsimlyanskoye Reservoir (2,700 sq. km), Volga-Don Canal**  
**ROSTOV-on-Don Arena Stadium (45,000)**  
 Towns: Azov, Timonyevsk', Zaganrog  
 Small rivers: Severnskiy Donets', Marych, Tuzlov

14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

**(Caspian Sea) Astrakhan' - Volgograd (491 km)**  
**Volga River, Volga-Caspian Maritime Ship Canal**  
**VOLGOGRAD Pobeda Arena Stadium (45,000)**  
 Delta of Volga River (500 channels), 20,000 sq. km  
 Towns: Astrakhan', Akhtubinsk', Komysyvat

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**(Baltic Sea) Kaliningrad (former Königsberg)**  
**KALININGRAD Baltic Arena Stadium (35,000)**  
 Pregolya, Dvina, Nemun, Sheshupe Lows, Angropa Rivers, old canals, Curonian Bay (Curonian Spit National Park), Kaliningrad Bay

14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

**Legend:**  
● - cities of FIFA 2018  
 - IDWWS section  
 - length of IDWWS section  
● - entrance to IDWWS  
● - Custom control

**Approximate traveling time in days**

	MOU	NOV	GOJ	KAZ	ROV	AST
MOU	1200	1200	1200	1200	1200	1200
NOV	1200	1200	1200	1200	1200	1200
GOJ	1200	1200	1200	1200	1200	1200
KAZ	1200	1200	1200	1200	1200	1200
ROV	1200	1200	1200	1200	1200	1200
AST	1200	1200	1200	1200	1200	1200

**Table of distances**

	KAZ	NOV	GOJ	ROV	AST
KAZ	425	425	425	425	425
NOV	425	425	425	425	425
GOJ	425	425	425	425	425
ROV	425	425	425	425	425
AST	425	425	425	425	425

**Restriction of dimensions**

	MOU	NOV	GOJ	KAZ	ROV	AST
MOU	1200	1200	1200	1200	1200	1200
NOV	1200	1200	1200	1200	1200	1200
GOJ	1200	1200	1200	1200	1200	1200
KAZ	1200	1200	1200	1200	1200	1200
ROV	1200	1200	1200	1200	1200	1200
AST	1200	1200	1200	1200	1200	1200

**Custom control point**

	MOU	NOV	GOJ	KAZ	ROV	AST
MOU	1200	1200	1200	1200	1200	1200
NOV	1200	1200	1200	1200	1200	1200
GOJ	1200	1200	1200	1200	1200	1200
KAZ	1200	1200	1200	1200	1200	1200
ROV	1200	1200	1200	1200	1200	1200
AST	1200	1200	1200	1200	1200	1200

**Moscow (MOU), founded 7147**  
 population: 12,137,238  
 AVG 17,2°C June, 20,4°C July  
 Moscow is a megacultural, economic, scientific center in Russia and Eastern Europe, as well as the largest city entirely in the European continent. Moscow is often called the "Pearl of the Sea". Moscow is situated on the Moskva River in the Central Russian Upland, making it the world's most populated inland city.

**Sankt-Petersburg (SPB), 1703**  
 population: 5,191,690  
 AVG 15,7°C June, 18,0°C July  
 City is described as the most Westernized city of Russia, as well as its cultural capital. The city is situated on the western bank of the Gulf of Finland. The city is famous for its architecture, including the Peter and Paul Cathedral, Palace Square, Peterhof, Catherine, Dostoevsky, and the Hermitage. It is one of the world's most visited cities.

**Volgograd (VOG), 1589**  
 population: 1,017,437  
 AVG 21,0°C June, 23,0°C July  
 It is a 60-kilometer (37 mi) long, north to south and is situated on the western bank of the Volga River. The Volgograd Museum is a 600,000 sq. m. It is one of the world's largest museums. It is a 60-kilometer (37 mi) long, north to south and is situated on the western bank of the Volga River. The Volgograd Museum is a 600,000 sq. m. It is one of the world's largest museums.

**Kazan' (KAZ), 1005**  
 population: 1,205,651  
 AVG 18,1°C June, 20,2°C July  
 The Kazan Kremlin is a World Heritage Site. The multi-walled city is known by UNESCO and famous for Muslims and Christians living side-by-side in peace. In 2009 it was chosen as the "Open Capital of Russia" and it is a reference to such.

**Kaliningrad (KGO), 1255**  
 population: 968,944  
 AVG 18,7°C June, 22,2°C July  
 Town is at the mouth of the navigable Pregolya River, which empties into the Vistula Lagoon on the Baltic Sea. Sea vessels can access Gelga Bay, Bay of Danzig and the Baltic Sea by way of the Vistula Lagoon and the Strait of Baltiysk.

**Nizhny Novgorod (NOV), 1221**  
 population: 1,367,760  
 AVG 17,2°C June, 19,4°C July  
 The world's first medal awarded by engineer Alexander Popov and the world's first hydroelectric power by engineer Vladimir Shukhov were demonstrated at the 1896-1897 exhibition in Nizhny Novgorod in 1896.

**Rostov-on-Don (ROV), 1749**  
 population: 1,114,806  
 AVG 21,0°C June, 23,4°C July  
 From ancient times, the area around the mouth of the Don River has had cultural and commercial importance. It was the site of Danzig, an ancient Greek colony, Fort Tana, under the Georgian and Russian rule of the Ottoman Empire.

**Samara (SME), 1586**  
 population: 1,171,820  
 AVG 19,7°C June, 21,5°C July  
 When the Soviet socialist Plochy Akhmetov visited Samara, he remarked, "I am not sure when in the West someone has built a big and beautiful settlement. Possibly only around Lake Geneva".

**Sochi (AZS), 1828**  
 population: 289,546  
 AVG 20,2°C June, 23,2°C July  
 Being part of the Caucasian States, it is one of the very few places in Russia with a subtropical climate, with warm to hot summers and mild winters.