

S-104 Ed. 2.0.0 Impact Study

For an extended period, the Tides, Water Level and Currents Working Group (TWCWG) has been dedicated to the advancement of S-104—Water Level Information for Surface Navigation, serving as a novel product specification for water level data intended to be used for adjustment of depth information in an underlying ENC or bathymetry product. The development of this product specification is aligned with the procedural framework for developing new or revised standards as described in IHO resolution 2/2007, which emphasizes the necessity for the Committee to assess proposals while considering the impact on pertinent stakeholders. This evaluation process entails a comprehensive analysis encompassing risk and feasibility, along with an estimation of the resources requisite for implementing a new or revised standard. Such considerations extend to the Member States Hydrographic Services.

The primary objective of the current impact study lies in the identification of stakeholders and the awareness of their readiness for the formal recognition of the S-104 product specification. It is noteworthy, however, that given the study pertains to edition 2.0.0, which is the operational edition, the intent and scope of the investigation are relatively moderate.

Stakeholders

Given that the S-104 product specification exists in an ecosystem with myriad other nautical products, the spectrum of stakeholders is notably extensive. It encompasses entities ranging from data producers to equipment manufacturers. This comprehensive list reflects the diverse array of contributors and participants involved in the production, dissemination, and utilization of nautical information. The inclusion of stakeholders across the entire supply chain underscores the collaborative nature of S-104 and acknowledges the interconnected roles played by various parties in ensuring the effectiveness and applicability of the water level product. As such, this impact study aims to meticulously engage with and prepare each stakeholder group, recognizing their unique perspectives and contributions within the broader context of the nautical information landscape.

This includes (but is not limited to):

- Data producers
- Regulators
- Product/data distributors
- RENCs
- VARs
- Type Approval
- Application developer
- Equipment manufacturers
- End Users

Questions

How do you see yourself (select multiple if needed)?

- Data producer
- Regulator
- Product/Data distributor
- RENC
- VAR
- Type Approval
- Application developer
- Manufacturer
- Other (describe)

Do you plan to produce any S-100 datasets?

- Yes
- Not yet decided/undecided
- No
- Inapplicable (not a data producer)

Do you plan to produce S-104 datasets?

- Yes
- Yes, under conditions (please describe including dates where known in Other)
- No
- Don't know/Undecided
- Inapplicable (not a data producer)
- Other (describe)

If you are a distributor/RENC/VAR/OEM/production or application software developer (including developing software for in-house use), do you plan to handle or implement S-104 datasets?

- Yes
- Yes, under conditions (please describe including dates where known)
- No
- Don't know
- Inapplicable
- Other (describe)

How confident are you that you understand how to handle or implement S-104?

- We have read and fully understand the details of the product specification.
- We have a reasonable understanding, and are confident we can implement.
- We understand the concept, but lack confidence in full understanding.
- We haven't yet studied the product specification.
- Other (please describe)

How frequently do you plan to update S-104 datasets?

(describe)

Do you rely on other parties to produce S-104 datasets with your data?

- Yes, we plan to use the RENC as the producer of our S-104 datasets
- Yes, we plan to use the VAR as the producer of our S-104 datasets
- Yes, we plan to support external parties with additional data to produce our S-104 datasets
- Yes, none of the above (please describe in Other)
- No, (please describe in Other)
- Inapplicable
- Other (describe)

Do you plan to use S-104 datasets (e.g., for navigation, distribution, implementation in equipment)?

- Yes
- Yes, under conditions (please describe in Other)
- No
- Other (describe)

If “Yes” or “Yes under conditions”, how do plan to use S-104 datasets? (e.g., route monitoring, route planning, etc.)

(describe)

Do you know where to obtain the S-104 datasets?

- Yes
- Yes, under conditions (please describe in Other)
- No
- Inapplicable
- Other (describe)

If you are a regulator, how do you intend to use S-104?

- To support the regulatory functions for which you carry responsibility
- For general awareness of the product specifications within the organization
- Not at all
- Inapplicable (not a regulator)
- Other (describe)

Please include any other information you feel may be relevant to this impact study.

(describe)

Replies

We conducted a survey to gather responses and in the following we aggregated those answers for each type of stakeholder. For a stakeholder where we didn't have a response, we tried to answer the questions according to the stakeholder as we see the current awareness right now.

Data producers

How do you see yourself (select multiple if needed)?

Data producer

Do you plan to produce any S-100 datasets?

Yes

Do you plan to produce S-104 datasets?

Yes

Don't know/Undecided

If you are a distributor/RENC/VAR/OEM/production or application software developer (including developing software for in-house use), do you plan to handle or implement S-104 datasets?

Inapplicable

Yes

How confident are you that you understand how to handle or implement S-104?

We have a reasonable understanding, and are confident we can implement.

We have read and fully understand the details of the product specification.

We understand the concept, but lack confidence in full understanding.

How frequently do you plan to update S-104 datasets?

Yearly

Not sure what you mean. The sealevel model runs 4 times a day and makes forecast to every hour.

Not yet decided

Annually for predicted water levels and daily for forecasts

A forecast updated four times a day for around 7 days

Daily (initially)

Annually or when required

Do you rely on other parties to produce S-104 datasets with your data?

Unsure/undecided

We plan to send S-104 datasets to RENCs etc to use. But if someone wants to produce S-104-product from our data, it is available free in our open data service.

We are responsible for the collection, storage and distribution of data, as well as the implementation of these products.

Yes, we plan to support external parties with additional data to produce our S-104 datasets

We try to convert our data into the S-104 format ourselves

No

Do you plan to use S-104 datasets (e.g., for navigation, distribution, implementation in equipment)?

No

We are more producers than users

Yes

No, We can't say at the moment

Yes, under conditions

No plan yet

If "Yes" or "Yes under conditions", how do plan to use S-104 datasets? (e.g., route monitoring, route planning, etc.)

Implementation and distribution

Products

Navigation and bathymetry

Do you know where to obtain the S-104 datasets?

Inapplicable

No

Yes

If you are a regulator, how do you intend to use S-104?

Inapplicable (not a regulator)

Please include any other information you feel may be relevant to this impact study.

I responded with "We have a reasonable understanding, and are confident we can implement." However, I think it would be really helpful to have more guidance on how we will practically produce these products. A lot of hydrographic offices are small or don't have the resources (people or money) so need to rely on larger ones.

Currently, the National Tide Network (19 stations) has tide information in almost real time (5 minutes) and daily tide predictions for the entire year are made for 26 ports on the Peruvian coast, in high/low tide format and also hourly, three months in advance.

Regulator

How do you see yourself (select multiple if needed)?

Regulator

Do you plan to produce any S-100 datasets?

No

Do you plan to produce S-104 datasets?

No

If you are a distributor/RENC/VAR/OEM/production or application software developer (including developing software for in-house use), do you plan to handle or implement S-104 datasets?

Inapplicable

How confident are you that you understand how to handle or implement S-104?

We understand the concept, but lack confidence in full understanding.

How frequently do you plan to update S-104 datasets?

Inapplicable

Do you rely on other parties to produce S-104 datasets with your data?

No, we don't see the need for generating S-104 datasets.

Do you plan to use S-104 datasets (e.g., for navigation, distribution, implementation in equipment)?

Yes, we like to harvest S-104 to have the data for internal use.

If "Yes" or "Yes under conditions", how do plan to use S-104 datasets? (e.g., route monitoring, route planning, etc.)

Internal testing/analysis/familiarity

Do you know where to obtain the S-104 datasets?

Yes, under conditions

If you are a regulator, how do you intend to use S-104?

To support the regulatory functions for which you carry responsibility.

Please include any other information you feel may be relevant to this impact study.

N/A

Distributor

How do you see yourself (select multiple if needed)?

Distributor

Do you plan to produce any S-100 datasets?

Yes

Do you plan to produce S-104 datasets?

Yes

Don't know/Undecided

If you are a distributor/RENC/VAR/OEM/production or application software developer (including developing software for in-house use), do you plan to handle or implement S-104 datasets?

Yes

How confident are you that you understand how to handle or implement S-104?

We have a reasonable understanding, and are confident we can implement.

We have read and fully understand the details of the product specification.

How frequently do you plan to update S-104 datasets?

Not yet decided

Daily (initially)

Annually or when required

Do you rely on other parties to produce S-104 datasets with your data?

We are responsible for the collection, storage and distribution of data, as well as the implementation of these products.

Yes, we plan to support external parties with additional data to produce our S-104 datasets

No

Do you plan to use S-104 datasets (e.g., for navigation, distribution, implementation in equipment)?

Yes

Yes, under conditions- we need to harvest the datasets from data producers or RENC's

If "Yes" or "Yes under conditions", how do plan to use S-104 datasets? (e.g., route monitoring, route planning, etc.)

Implementation and distribution

Products

Navigation and bathymetry

Do you know where to obtain the S-104 datasets?

Yes

Inapplicable

If you are a regulator, how do you intend to use S-104?

Inapplicable (not a regulator)

Please include any other information you feel may be relevant to this impact study.

N/A

RENC

How do you see yourself (select multiple if needed)?

RENC

Do you plan to produce any S-100 datasets?

Yes

Do you plan to produce S-104 datasets?

Yes

No

If you are a distributor/RENC/VAR/OEM/production or application software developer (including developing software for in-house use), do you plan to handle or implement S-104 datasets?

Yes

How confident are you that you understand how to handle or implement S-104?

We have a reasonable understanding, and are confident we can implement.

We have read and fully understand the details of the product specification.

How frequently do you plan to update S-104 datasets?

Daily (initially)

Do you rely on other parties to produce S-104 datasets with your data?

Inapplicable

Yes, we plan to support external parties with additional data to produce our S-104 datasets

Do you plan to use S-104 datasets (e.g., for navigation, distribution, implementation in equipment)?

No

Yes, under conditions- we need to harvest the datasets from data producers

If "Yes" or "Yes under conditions", how do plan to use S-104 datasets? (e.g., route monitoring, route planning, etc.)

Products

Do you know where to obtain the S-104 datasets?

Yes

If you are a regulator, how do you intend to use S-104?

Inapplicable (not a regulator)

Please include any other information you feel may be relevant to this impact study.

N/A

VAR

How do you see yourself (select multiple if needed)?

VAR

Do you plan to produce any S-100 datasets?

No

Do you plan to produce S-104 datasets?

No

If you are a distributor/RENC/VAR/OEM/production or application software developer (including developing software for in-house use), do you plan to handle or implement S-104 datasets?

Yes

How confident are you that you understand how to handle or implement S-104?

We have read and fully understand the details of the product specification.

How frequently do you plan to update S-104 datasets?

Daily (initially)

Do you rely on other parties to produce S-104 datasets with your data?

Yes, we plan to support external parties with additional data to produce our S-104 datasets. We plan to use the RENC as the producer of our S-104 datasets.

Do you plan to use S-104 datasets (e.g., for navigation, distribution, implementation in equipment)?

Yes, under conditions- we need to harvest the datasets from the RENCs or data producers.

If "Yes" or "Yes under conditions", how do plan to use S-104 datasets? (e.g., route monitoring, route planning, etc.)

Products

Do you know where to obtain the S-104 datasets?

Yes

If you are a regulator, how do you intend to use S-104?

Inapplicable (not a regulator)

Please include any other information you feel may be relevant to this impact study.

N/A

Application developer/Manufacturer

How do you see yourself (select multiple if needed)?

Application developer/Manufacturer

Do you plan to produce any S-100 datasets?

Inapplicable (not a data producer)

Do you plan to produce S-104 datasets?

Inapplicable (not a data producer)

If you are a distributor/RENC/VAR/OEM/production or application software developer (including developing software for in-house use), do you plan to handle or implement S-104 datasets?

Yes

How confident are you that you understand how to handle or implement S-104?

We have read and fully understand the details of the product specification.

How frequently do you plan to update S-104 datasets?

Regularly, as needed.

Do you rely on other parties to produce S-104 datasets with your data?

Inapplicable

Do you plan to use S-104 datasets (e.g., for navigation, distribution, implementation in equipment)?

Yes

If "Yes" or "Yes under conditions", how do plan to use S-104 datasets? (e.g., route monitoring, route planning, etc.)

Our ECDIS has a wide range of functions that use these datasets.

Do you know where to obtain the S-104 datasets?

Unfortunately, we don't know and use only available test data.

If you are a regulator, how do you intend to use S-104?

Inapplicable (not a regulator)

Please include any other information you feel may be relevant to this impact study.

N/A