**18th MEETING OF THE DATA QUALITY WORKING GROUP**

**7- 9 February 2023 –VTC**

**FINAL MINUTES**

1. **OPENING AND ADMINISTRATIVE ARRANGEMENTS**

The 18th meeting of the Data Quality Working Group (DQWG) was held as a remote video-teleconference (VTC) event from the IHO Secretariat, Monaco, from 7 to 9 February. The event was initially planned as a face-to-face meeting, but the Chair was unable to be physically present due to administrative reasons and it was decided at short notice to arrange the meeting as a simple VTC meeting. In the end, seven Members were physically present in Monaco, facilitating the exchanges and discussions on very technical issues in the margins of the meeting sessions.

The meeting was chaired by Mr Lingzhi Wu (China). Twenty-five registered delegates representing 14 Member States (Canada, China, Denmark, Egypt, Finland, France, Germany, India, Italy, Netherlands, Norway, Sweden, United Kingdom and United States), two representatives of the RENCs (IC-ENC[[1]](#footnote-1) , PRIMAR), the Chairs of the S-101 Project Team, ENCWG[[2]](#footnote-2), TWCWG[[3]](#footnote-3), MASS PT[[4]](#footnote-4), and HSWG[[5]](#footnote-5), four expert contributors (IEHG[[6]](#footnote-6), Geomod, Portolan Science, and University of New Hampshire) attended the meeting. The IHO Secretariat was represented by Director Abri Kampfer, Technical Standards Support Officer Jeff Wootton and Assistant Directors Yong Baek and Yves Guillam.

Chair express his warm welcome to all the participants, whether in Monaco or online. First of all, he apologized for not being able to attend the meeting in Monaco, especially to those participants who attend the face to face meeting. Due to the pandemic, he failed to get visa in time. Secondly, he Thanks for the kind understanding of all participants and the thoughtful arrangement of the IHO Secretariat, which make the meeting continue to be held in a VTC format. Finally, he expressed a special gratitude to S-101PT chair, TWCWG chair, HSWG chair team, CSBWG chair and MASSPT chair for their support to the meeting.

At the invitation of the chairman, Director Abri Kampfer opened the meeting highlighting the importance of the work of the DQWG in support of the other working groups and project teams in the development of the data quality components (including validation checks) of their product specifications. Reporting that the IMO recently approved the IHO proposed amendments to the ECDIS Performance Standards, he also stated that the unique transverse role of the DQWG was even more critical now than before, due to the strategic change in S-100 ECDIS with interacting navigational data layers enabled by the Interoperability Specification S-98. The Chair echoed these statements and noted that the continuation of the DQWG was however at stake since the calls for nominations of office bearers (Vice-Chair, Secretary) had remained unfruitful so far.

Chair opened the meeting, shared some meeting protocols, and invited each participant to introduce themselves one by one.

Chair presented the DQWG 17 final Minutes, and reported that this Minutes has been circulated to all members for review by the former Chair Mr. Edward Hands (Norway) and all the comments and suggestions received have been included in the final Minutes.

**[Decision 18/01]DQWG approved** the DQWG 17 Final Minutes.

**[Decision 18/02]DQWG approved** the draft agenda as presented at the meeting with some minor amendments in the timetable (agenda item 2.4 postponed on Day 2).

Chair provided a summary of the status of all current DQWG actions. The outstanding actions were discussed and updated accordingly, see Annex A.

DQWG Terms of Reference was reviewed by the meeting and no revisions were received.

Election of DQWG vice Chair and Secretary was implemented during the meeting.

**[Decision 18/03]DQWG agreed** that Mr. SCOTTYOUNGBLUT (Canada) takes a role of DQWG Secretary until DQWG-19 (2024) when a new election will be arranged.

**[Action18/01] DQWG Members were invited** to update the DQWG Membership list and contact details.

1. **Matters Relating to Upper IHO Bodies / Other WGs/PTs**

Chair provided an update on matters arising at the last HSSC meeting held in May 2022. The key issued highlighted were:

* New IHO Resolution xx/2023 – S-100 Implementation.
* New version 2.0 of the S-100 Roadmap timeline.
* IMO endorsement on S-100 in ECDIS Performance Standards.
* Progresses in the development of the S-1xx Product Specifications.

Mr. Yves Guillam (IHO Secretariat) highlighted the fundamental changes in S-100 ECDIS.

The HSSC14 List of Decisions and Actions for the DQWG are:

* HSSC14/40 - HSSC agreed on the principles of merging S-66 and S-67 into a single IHO publication in the future, also aiming to incorporate mariner ENC and ECDIS related information papers, and tasked the ENCWG (lead) and the DQWG to undertake this process.
* HSSC14/58 - HSSC welcomed the availability of the Spanish version of S-67 and invited Member States, to consider the possibility of translation of S-67 Ed.1.0.0.
* HSSC14/59 - HSSC encouraged member states to start populating appropriate POSACC/SOUACC values in existing S-57 ENCs for relevant spatial objects in preparation for conversion to S-101 – Permanent action.
* HSSC14/60 - DQWG to report on the progress in the development of Guidelines and Recommendations to HOs based on best practices to allocate CATZOC values (or S-101 ZOC values) from survey data qualified in application of the new Ed. 6.0 of S-44 - IHO Standards for Hydrographic Surveys. Liaison with other WGs/PTs needed before submission to HSSC.
* HSSC14/61 - HSSC noted that Guidance to be provided to the CSBWG will be a sub-set of the Guidelines from “Survey to CATZOC” (in preparation, see Action above).
* HSSC14/62 - Noting the vacancies at the position of DQWG Chair and Secretary, HSSC made a call in session inviting HSSC Members to nominate candidates with the risk that DQWG activities are put on hold (Chairpersonship interim by Vice-Chair for urgent matters only).
* HSSC14/63 - HSSC noted the outcome of the objective analysis made by the HSSC ISO 9001 Cell on the development of Ed. 2.0.0 of S-101 and agreed on the recommendations to monitor the progress on the Portrayal Catalogue.

The Chair provided a brief summary of the progress of the HSSC ISO 9001 cell:

* Two group meetings have been held on 3/03/2022 and 28/09/2022. Next meeting is planned for February 2023.
* Due to the delay in the development of S-101, submission of S-101 Ed 2.0.0 for HSSC endorsement by May 2024 is at risk now.
* DQWG has play a key role with in this by conducting the review of S-1xx Feature Catalogues, although there have been delays in the progress of the review due to various reasons.
* According to Action HSSC 14/18, Meeting between HSSC Vice chair and KHOA/IHO Secretariat representatives occurred in September 2022. Focused on S-99 and KHOA/IHO MOU from 2018. The Audit was conducted in order to get a better understanding of the shortfalls and difficulties in the operation of the GI Registry and come up with recommendations.

**[Action 18/02] Chair to monitor** the progress of IHO ISO 9001 Cell and report Data Quality matters back to the group in order to improve risk mitigation: S-98/consistent data quality information across S-101/S-1xx ECDIS Route monitoring products in particular.

Chair presented the new version of S-100 Roadmap timeline approved by C-6 and focused on the update of S-100 product specifications developments and timeline.

Mr. Yves Guillam (IHO Secretariat), Mr. Svein SKJAEVELAND (PRIMAR) and Director Abri Kampfer provide more details on the S-100 Roadmap timeline.

Mr. Chris Jones (TWCWG Chair) reported the progress on the development of S-104 and S-111 and focused on some data quality aspects.

DQWG noted the report of TWCWG, and expressed its gratitude to Mr. Chris Jones for his very comprehensive recorded presentation. The way the DQ measures are reported by TWCWG to be recommended as a model to be used for other PS developers.

Mr. Yves Guillam (IHO Secretariat) commented that to make sure the working group can work together, someone who is the member of both TWCWG and DQWG could be a DQ focal point in the TWCWG.

**[Action 18/03] Chair, supported by PRIMAR to feed** comments back to the TWCWG and to use the guidance included in Part C of S-97 as the template for comments.

Chair presented the CSBWG report provided by Ms. Jennifer Jencks (CSBWG Chair). The report introduced the background and progress of IHO crowdsourced bathymetry initiative, and discussed how DQWG and CSBWG could collaborate in CSB aspects.

DQWG noted the report of CSBWG, their request on data quality guidance for CSB, and expressed the gratitude to Ms. Jennifer Jencks.

Mr. Svein SKJAEVELAND (PRIMAR) commented that DQWG members have actively participant in the development of B-12, and suggest to discuss which level the data quality should be for CSB data and look into how the DQ elements described in S-97 part C could be captured from CSB data, and if all of them or only a selection should apply.

Mr. Yves Guillam (IHO Secretariat) reminded that CSBWG had requested DQWG to give a guidance on the data quality of CSB data which is related to CATZOC in DQWG16.

**[Action 18/04] Chair to report** to CSBWG14 or Ms. Jennifer Jencks on the “Survey to CATZOC” Guidelines Ed.1.0.0 (to be published in 2023).

1. **Review S-100 Based Product Specifications for DQ Elements**

**3.1 Progress on Cross check of DQ chapter of S-1xx PSs**

According to the action DQWG 17/07, the subWG comprised of Chair, NL, SE and UNH has implemented the cross check of DQ chapters of S-104 and S-128. Chair reported the Cross-Check results of S-104 Ed 1.0.0 and S-128 Ed 1.0.0.

Mr. Yves Guillam (IHO Secretariat) , Mr. Klas ÖSTERGREN (Sweden) and Mr. Svein SKJAEVELAND (PRIMAR) commented that the details in the report should be clearer, and except simply feedback to the developers, we can do more, for example, discuss how DQWG can support the developers of S-1XX product specifications, and provide a template of DQ chapter to the them.

**[Action 18/05] SubWG** to continue review of new and amended Product Specifications and report results to DQWG19. **Members** are invited to join the subWG (**Chair, NL, SE, US, UNH**).

**3.2 Recommended Template of Data Quality chapter of S-1xx Data Product Specifications**

Chair reported that a recommended template of data quality chapter of S-1xx data product specifications has been developed.

Jeff Wootton (IHO Secretariat) commented that this template should not be submitted to HSSC, but to S-100WG so that it could be included in the Appendix D of S-100 Part 11. He also commented that some information included in this paper can be used to change S-97 part C.

**[Decision 18/04] DQWG endorsed** the template for the DQ chapter of S-1xx Product Specifications.

**[Action 18/06] Chair** to submit the template as revision proposal for Appendix D of S-100 Part 11, to the S-100WG for consideration and possible inclusion in Ed. 5.1.0 of S-100.

**3.3 Report on key finding and recommendations for the individual Product Specifications**

Chair reported that based on the cross-check results of DQ chapters over the past two years, three papers has been prepared for S-100WG (S-101, S-102, S-121 and S-129), NIPWG(S-122, S-123, S-127 and S-128) and TWCWG(S-104 and S-111) consideration, respectively.

Mr. Sean Legeer (USA) commented that the version of each product specification should be indicated.

Mr. Klas ÖSTERGREN (Sweden), Mr. Svein SKJAEVELAND (PRIMAR) and Raphael MALYANKAR (Portolan Sciences) commented that all the points related to S-128 could be feedback to S-128PT for their consideration.

Mr. Yves Guillam (IHO Secretariat) commented that these papers should be more explicit so that the project teams can determine whether these points in these papers are applicable to them or not.

**[Decision 18/05] DQWG noted** the Papers for S-100WG, NIPWG and TWCWG consideration.

**[Action 18/07] Chair** to feedback these Papers to these WGs respectively and report results to DQWG19 and to invite WGs to nominate a DQ focal point in their WGs and him/her to participate in the activities of the DQWG.

1. **Provide Data Quality educational materials for the use of mariners**

**4.1 Update of S-67 translations**

Chair provided an update on the translation, and expressed the gratitude to France and China.

DQWG noted that the French version and Chinese version of S-67 have been uploaded on the IHO Website.

**4.2 Merging S-66 and S-67 into a single IHO publication**

Mr. Thomas Mellor (ENCWG Chair) reported that the ENCWG had consolidated the documents (including S-66, S-67, ENC and ECDIS Cyber Security Guidelines, and ENCWG information papers) into one unifying publication, but no editing to rationalize the content or remove indexes. He also proposed DWQG to form a subgroup to review the draft S-67 new edition and recommend edits to produce a first credible output for Mariners.

DQWG noted the report of ENCWG, and expressed the gratitude to Mr. Thomas Mellor.

**[Action 18/08] DQWG agreed to** establish a subWG to review the draft S-67 new edition and recommend edits to produce a first credible output for Mariners. Members are invited to join the subWG (Chair, SE, US, PRIMAR, NO, IT).

1. **Guidance to WGs and HOs on DQ aspects**

**5. 1 Review of S-1xx Feature Catalogues**

Chair reported that the Review of S-1xx Feature Catalogues subWG comprised of Chair and Expert Contributor of SevenCs has implemented the Cross check of feature catalogues of S-101 Ed 1.1.0, S-102 Ed 2.0.0, S-104 1.0.0, S-111 1.0.0 and S-129 1.0.0.

The aims of the Cross check of S-1xx Feature Catalogues are to:

* Confirm that the Feature Catalogue contents are consistent with the corresponding DCEG document.
* Identify any areas where the S-101 Feature Catalogue is not consistent with other S-1xx product specifications
* Confirm that the items present in the feature catalogue are consistent with the GI registry contents.
* Confirm that the Feature Catalogue structure and content conforms to the S-100 standard.

**[Decision 18/06] DQWG** endorsed the Report on the Review of S-1xx Feature Catalogues but recommended to reference carefully the versions that were reviewed.

**[Action 18/09] Chair** to feedback the review results and recommendations to S-1xx developers respectively. Members of S-1xx PTs to be invited to participate in the next review before submission of Ed. 2.0.0 in any case.

**[Action 18/10] DQWG** agreed to continue the cross check of other released S-1xx FCs. Members are invited to join the subWG (Chair, US, FR, SevenCs).

**5. 2 Report of S-101 Project Team**

Mr. Thomas Richardson (The S-101PT Chair) presented a report on the work of S-101 Project Team including the timeline of S-101 2.0.0, progress on changes to data quality model and portrayal, S-101 validation checks etc.

**DQWG note** the report of S-101PT, and expressed its gratitude to Mr. Thomas Richardson.

There are many topics Discussed during the meeting, for example, Impact of S-98 on the development of new edition of S-101, Volunteers from DQWG to join the development of S-101 validation checks, data quality impact of the conversion from S-57 to S-101.

**[Action 18/11] RENCs** to consider providing stats on the progress of the encoding of POSACC/ SOUACC to the DQWG Chair prior to HSSC16 (Action HSSC14/59 refers) for an assessment of S-57 readiness.

**5.3 Guidance from Survey to CATZOC**

Chair reported that the draft Guidelines and recommendations for Hydrographic Offices for the allocation of CATZOC has been developed by the CATZOC subWG and then reviewed by HSWG.

Mr. Yves Guillam (IHO Secretariat) provided a brief background of this work item, and commented that the draft could be submitted to HSSC for approval as the first edition. He also mentioned that the allocation of CSB data should be considered in the development of this paper.

**[Decision 18/07] DQWG** endorsed the Guidelines and recommendations for Hydrographic Offices for the allocation of CATZOC Edition1.0.0.

**[Action 18/12] Chair** to submit the Document Edition1.0.0 of a new Publication S-68 to HSSC 15 for approval (by 15 April), including reservations and add a short paragraph on the cartographic aspects in the foreword.SE to draft the short paragraph and provide it to the Chair.

**[Action 18/13] Chair** to recommend to HSSC15 the continuation of this task and subWG to continue the work and update the document.

**5.4 Report from HSWG**

HSWG Chair Team (Mr. David PARKER, Miss Megan GREENAWAY and Mr. Carlos Videira MARQUES) reported the HSWG’s review results of and comments on the draft Guidelines and recommendations for Hydrographic Offices for the allocation of CATZOC.

**DQWG noted** the report of HSWG, and expressed its gratitude to the HSWG Chair Team.

Mr. Klas ÖSTERGREN (Sweden) commented that accuracy is used in the current IHO standards like S-57 which is frozen. He also volunteered to provide a statement in the draft that this is not the direct translation and Hydrographic offices should take the cartographic aspects into consideration when assigning the CATZOC values.

**5.5 SPIs for IRCC related to DQWG**

**DQWG noted** the report from the IHO Sec.

Action 17/11 related to SPIs is complete.

**5.6 The allocation of CATZOC in Chinese ENCs**

Chair presented a draft CATZOC Allocation Scheme of Chinese ENC developed by China MSA. In the presentation, china request DQWG to Complete the Guidelines and recommendations for Hydrographic Offices for the allocation of CATZOC as soon as possible, so as to provide guidance on the CATZOC allocation to Member States.

**[Action 18/14] Chair** to liaise with IHO Secretariat to release the Guidelines and recommendations for Hydrographic Offices for the allocation of CATZOC on the IHO Website after HSSC15 approves the document.

1. **Revision of S-100 Part4c and S-97part C**

**6. 1 Recommendations on revising S-100 Part 4c**

Chair reported some recommended amendments to S-100 Part 4c and suggested to establish a subWG to review and revise S-100 Part 4c.

Mr. Svein SKJAEVELAND (PRIMAR) commented that the title of S-100 Part4c –C “Hydrographic Quality Metadata Attribute Definitions” should be renamed as “Quality Metadata Attribute Definitions” because S-100 is not only used in hydrographic domain.

Mr. Klas ÖSTERGREN (Sweden) and Director Abri Kampfer commented that this is quite a substantive changes to S-100 and we need to engage with S-100WG to discuss the timeframe of this task and ask their comments on this initial work paper.

**[Decision 18/08] DQWG** noted the recommended amendments for S-100 Part4c.

**[Action 18/15] Chair** to liaison with S-100WG to inform that the DQWG has started areview and revision of S-100 Part 4c.

**6. 2 Recommendations on revising S-97 Part C**

Chair reported some recommended amendments to S-97 Part C and suggested to establish a subWG to review and revise S-97 Part C.

Mr. Thomas Richardson (The S-101PT Chair) commented that there is potential overlap between validation checks being developed and these DQ measures.

Mr. Christos KASTRISIOS （University of New Hampshire) commented that 3Sigma should not be 95% but 99%, which means one of the S-100 and S-97 should be revised.

**[Decision 18/09] DQWG** noted the recommended amendments of S-97 Part C.

**[Action 18/16] Chair** to liaise with the S-100WG to inform that the DQWG has started a review and revision of S-97 Part C.

**[Action 18/17] DQWG** agreed to establish a subWG to review S-100Part 4c and S-97Part C but to limit the work to critical DQ issues only. Members are invited to join the subWG (Chair, NL and PRIMAR).

**6.3 ISO 191xx standards**

Mr. Thijs Ligteringen (the Netherlands) submit a spreadsheet for the consideration of DQWG. The spreadsheet is much valuable and include Terms, definitions, and abbreviated of ISO 19xxx standards.

The DQWG thanked NL for the spreadsheet on the definitions used in ISO 19xxx standards.

There is a discussion on the copyright issues during the meeting.

Mr. Thomas Richardson (The S-101PT Chair) shared a similar resource.

**[Action 18/18] DQWG** agreed to upload the ISO definitions on the DQWG webpage as a working document. NL to provide the draft covering note and a disclaimer if appropriate.

1. **MASS and DQ**

**7.1 Report from MASS PT**

Mr. Mark Casey (MASS PT chair) reported issues related to MASS including degrees of autonomy, current Charts not fit for purpose for MASS navigation, the progress of MASS PT since its establishment, and the plan of MASS PT.

**DQWG noted** the report of MASSPT, and expressed the gratitude to MR. Mark Casey.

Mr. Yves Guillam (IHO Secretariat) commented that at this stage we have to focus on the top priority items which means requirements for degree 1&2, and check whether the current standards are fit for the purposes or not, we can monitor the activities of MASS on the degree 1&2, use current product and current standards, and see whether or not we need to put additional supplements, Then we can move to degree 3 or 4.

Chair made another comment that the decision maker in the future MASS world will not be human but machine, it means the DQ will be supposed to play a more essential role in the future MASS world. Therefore, chair suggested to keep monitoring the progress of MASS and provide more support to MASSPT according to their needs.

**[Action 18/19] DQWG** agreed to consider the DQ requirements of MASS. Members are invited to feedback their comments and recommendations to DQWG Chair, when appropriate.

1. **S-100 Validation and DQ**

Chair reported that S-100WG7 had decided to set up a S-100 validation sub-Group to develop the S-100 validation document and request the S-100 validation sub-Group to work taking into consideration of related papers from DQWG. In addition, a validation workshop organized by S-100 validation sub-Group will be hosted in middle of 2023 in Monaco.

Mr. Thomas Richardson (The S-101PT Chair) presented the progress on the development of S-101 validation checks.

Mr. Sean Legeer (USA) commented that DQWG can assist in creating new validation checks.

Mr. Yves Guillam (IHO Secretariat) commented that DQWG members can consider participating in the S-100WG Validation Workshop and report to the Chair, and then Chair to provide feedback with DQWG comments and recommendations on the DQ requirements in S-100 validation checks to S-100WG and S-1xx PTs.

Svein SKJAEVELAND (PRIMAR) commented that the public attributes could be a topic for discussion if DQWG want to assist in linking validation checks to data quality measures.

**[Action 18/20] Members** are invited to consider participating in the S-100WG Validation Workshop in Middle of 2023 in Monaco (Contact: S-100 Validation SubWG Chair Ms. Elizabeth Hahessy, Email: elihh@gst.dk), and report to the Chair, and Chair to provide feedback with DQWG comments and recommendations on the DQ requirements in S-100 validation checks to S-100WG and S-1xx PTs.

**[Note] DQWG** identified a new task to link DQ checks (S-100 generic and products-specific) to DQ measures.

1. **Review of DQWG Work plan and List of Actions and Decisions**

**9.1 Review of meeting actions and decisions**

The working group reviewed and agreed on the list of decisions and actions arising from DQWG18, see Annex B.

**9.2 New Work Plan**

Chair present the new work plan of DQWG (2023-2024). Two new items “Review S-97Part 4C” and “Develop the DQ validation checks” are added to the work plan.

**[Decision 18/10] DQWG** approved the new Work Plan 2023-2024.

**10. Date and venue of the next meeting**

Chair made a call for volunteers to host the 19th and 20th meeting of DQWG. No volunteers came forward.

Finally, chair said that China MSA is willing to host the DQWG-19 meeting, but it is still to be reconfirmed, so it is not a final decision.

**[Decision 18/11] DQWG** agreed that the next meeting is scheduled to be a physical meeting in China in 2024 (dates and venue to be confirmed).

**[Action 18/21] Chair** to feedback the specific date and venue to IHO Secretariat as soon as possible.

The decision on Dates and venue of DQWG20 was delayed to the next meeting.

**11. Closure of the Meeting**

Chair announced that all of the agendas had been finished, and express his gratitude to IHO Secretariat for their hospitality as well as professional and wonderful arrangement, and thanked all participants for their actively participation and fantastic contribution to the meeting, which is much valuable. He wished all participants in Monaco have a safe trip home, and wished all of participants a good health and prosperity. At the end, he declared the meeting closed.

**Annex A – Status of DQWG17 Actions**

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| **Action Number** | **Action** | **Delegate** | **Target date** | **Status** |
| 17/01 | Volunteers for the S-100 part 4c drafting group to inform Chair (Ref: Action 15/09) | All | 25th Feb | Done. |
| 17/02 | Monitor outcomes from MASS PT and report back to group on DQ related issues (Ref HSSC Action 13/49) | Chair | DQWG 18 | Permanent |
| 17/03 | Provide update on S-67 translation into French  (Supersedes action 16/08) | FR | DQWG 18 | Done. |
| 17/04 | Publish Chinese language version of S-67 on IHO website | IHO Sec | none | Done. |
| 17/05 | SubWG to develop a template for the DQ chapter of S-1xx Product Specifications | Chair, NL, SE, UNH | DQWG 18 | Done. |
| 17/06 | SubWG to prepare a report of key finding and recommendations for the individual Product Specifications | Chair, NL, SE, UNH | DQWG 18 | Done. |
| 17/07 | SubWG to continue review of new and amended Product Specifications | Chair, NL, SE, UNH | none | Permanent |
| 17/08 | Volunteers for the S-1xx FC SubWG drafting group to inform Chair | All | 1st March | Done. |
| 17/09 | SubWG to begin work on Review of S-1xx Feature Catalogues upon delivery of Ed 1.0.2 of S101 FC  (Supersedes action 16/05) | Chair, Vice Chair, | DQWG 18 | Done. |
| 17/10 | Prepare a joint paper on the proposed changes to S-67 | Chair, ENCWG Chair | HSSC 14 | Done. |
| 17/11 | IHO Sec to liaise with PRIMAR Re: SPIs for IRCC | IHO Sec | None | Done. |
| 17/12 | CATZOC SubWG to work to finalise Survey to CATZOC guidance document  (Supersedes action 16/06) | CATZOC SubWG  Cahir, CA, DK, FR, NL, UK, US, CSMART, UNH | DQWG 18 | Done. |

**Annex B – List of DQWG18 Actions**

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| **Action Number** | **Action** | **Delegate** | **Target date** | **Status** |
| 18/01 | DQWG Members were invited to update the DQWG Membership list and contact details. | All | *Permanent* |  |
| 18/02 | Monitor the progress of IHO ISO 9001 Cell and report Data Quality matters back to the group in order to improve risk mitigation: S-98/consistent data quality information across S-101/S-1xx ECDIS Route Monitoring products in particular. | Chair | DQWG 19 |  |
| 18/03 | Arising from TWCWG7  (28 Feb – 02 Mar 2023). Provide comments back to the TWCWG and to use the guidance included in Part C of S-97 as the template for comments. | Chair & PRIMAR | DQWG 19 |  |
| 18/04 | Report to CSBWG14 or Ms. Jennifer Jenckson, the “Survey to CATZOC” Guidelines Ed.1.0.0 (to be published in 2023). | Chair | CSBWG14 (16-18 August 2023) |  |
| 18/05 | SubWG to continue review of new and amended Product Specifications and report results to DQWG19. Members are invited to join the subWG. | Chair, NL, SE, US, UNH | DQWG 19 |  |
| 18/06 | Submit the template as revision proposal for Appendix D of S-100 Part 11, to the S-100WG for consideration and possible inclusion in Ed. 5.1.0 of S-100. | Chair | S-100WG8 (13 - 17 November 2023) |  |
| 18/07 | Papers from S-100WG, NIPWG and TWCWG - report results to DQWG19 and to invite WGs to nominate a DQ focal point in their WGs and him/her to participate in the activities of the DQWG. | Chair | DQWG 19 |  |
| 18/08 | DQWG agreed to establish a subWG to review the draft S-67 new edition and recommend edits to produce a first credible output for Mariners. Plan is to submit proposed draft S-67 Ed. 2.0.0 to HSSC-15 | Chair, SE, US, PRIMAR, NO, IT | HSSC15 (15 April 2023) |  |
| 18/09 | Regarding S-1xx Feature Catalogues - Chair to feedback the review results and recommendations to S-1xx developers respectively. Members of S-1xx PTs to be invited to participate in the next review before submission of Ed. 2.0.0 in any case. | Chair | DQWG19 |  |
| 18/10 | DQWG agreed to continue the cross check of other released S-1xx FCs. | Chair, US, FR, SevenCs | DQWG19 |  |
| 18/11 | Regarding S-101PT, RENCs to consider providing stats on the progress of the encoding of POSACC/ SOUACC to the DQWG Chair prior to HSSC16 (Action HSSC14/59 refers) for an assessment of S-57 readiness. | Chair, RENCs | HSSC16 |  |
| 18/12 | Submit the Document Edition 1.0.0 of a new Publication S-68 to HSSC 15 for approval, including reservations and add a short paragraph on the cartographic aspects in the foreword. SE to draft the short paragraph and provide it to the Chair. | Chair, SE | HSSC15 (15 April 2023) |  |
| 18/13 | Regarding ‘Survey to CATZOC” document, Chair to recommend to HSSC15 the continuation of this task and subWG to continue the work and update the document. | Chair, subWG | HSSC15 (15 April 2023) |  |
| 18/14 | Chair to liaise with IHO Secretariat to release the Guidelines and recommendations for Hydrographic Offices for the allocation of CATZOC on the IHO Website after HSSC15 approves the document. | Chair, IHO Secretariat | DQWG19 |  |
| 18/15 | Chair to liaison with S-100WG to inform that the DQWG has started a review and revision of S-100 Part 4c. | Chair | End of March 2023 |  |
| 18/16 | Chair to liaise with the S-100WG to inform that the DQWG has started a review and revision of S-97 Part C. | Chair | End of March 2023 |  |
| 18/17 | DQWG agreed to establish a subWG to review S-100Part 4c and S-97Part C but to limit the work to critical DQ issues only. | Chair, NL and PRIMAR | End of March 2023 |  |
| 18/18 | DQWG agreed to upload the ISO definitions on the DQWG webpage as a working document. NL to provide the draft covering note and a disclaimer if appropriate. | NL, Chair, IHO Secretariat | March 2023 |  |
| 18/19 | DQWG agreed to consider the DQ requirements of MASS. Members are invited to feedback their comments and recommendations to DQWG Chair, when appropriate. | Chair, All DQWG Members | DQWG19 |  |
| 18/20 | Members are invited to consider participating in the S-100WG Validation Workshop in Middle of 2023 in Monaco (Contact: S-100 Validation SubWG Chair Ms. Elizabeth Hahessy, Email: elihh@gst.dk), and report to the Chair, and Chair to provide feedback with DQWG comments and recommendations on the DQ requirements in S-100 validation checks to S-100WG and S-1xx PTs. | All DQWG Members | End of March, 2023 |  |

1. Also Chair of the S-101 Project Team. [↑](#footnote-ref-1)
2. ENC Standards Maintenance Working Group. [↑](#footnote-ref-2)
3. Tides, Water Levels and Currents Working Group (recorded presentation). [↑](#footnote-ref-3)
4. Maritime Autonomous Surface Ships (MASS) Navigation Project Team (PT) (recorded presentation). [↑](#footnote-ref-4)
5. Hydrographic Surveys Working Group. [↑](#footnote-ref-5)
6. Inland ENC Harmonization Group. [↑](#footnote-ref-6)