

# Development of parameters and data quality factors per sensor over time

For a general overview, the authors provide two tables summarizing the development of parameters for the reference object and the site conditions as well as the data quality factors for each sensor over time. The development process constitutes of the different steps “Literature Research” and stakeholder engagements “Questionnaire”, “Workshop 1”, “Workshop 2” and “Concluding E-Mail”. Table A1 summarizes, how many parameters and data quality factors were added and remained under discussion after which step of the generation process and when expert agreement was reached, i.e., after which step how many parameters and quality factors were accepted. All accepted parameters and data quality factors are the results listed in Tables I-V of the published paper. Table A2 lists all data quality factors that were under discussion at one point during the process but were rejected. It also documents the step during which rejection took place. In one instance during the “Workshop 1” for MBES and SSS, the numbers given in Table A1 do not match the markings in Table A2. This is due to the fact that new data quality factors were added during this step while others were rejected.

**TABLE A1**  
NUMBER OF DISCUSSED AND ACCEPTED PARAMETERS AND DATA QUALITY FACTORS PER SENSOR AFTER EACH DEVELOPMENT STEP OVER TIME.

Parameter/Data Quality Factor Group	Literature Research	Questionnaire	Workshop 1	Workshop 2	Concluding E-Mail
Parameters for Reference Object and Site Conditions Discussed	6	8	5	0	0
Parameters for Reference Object and Site Conditions Accepted	0	0	5	10	11
MBES Data Quality Factors Discussed	8	14	6	0	0
MBES Data Quality Factors Accepted	0	0	7	7	7
SSS Data Quality Factors Discussed	9	15	6	0	0
SSS Data Quality Factors Accepted	0	0	8	9	9
MAG Data Quality Factors Discussed	14	19	4	0	0
MAG Data Quality Factors Accepted	0	0	12	7	6
SBP Data Quality Factors Discussed	10	15	7	0	0
SBP Data Quality Factors Accepted	0	0	6	7	7

**TABLE A2**  
REJECTED DATA QUALITY FACTORS PER SENSOR AND DEVELOPMENT STEP OF THEIR REJECTION.

Name of Rejected Parameter/ Data Quality Factor	Literature Research	Questionnaire	Workshop 1	Workshop 2	Concluding E-Mail
MBES Data Quality Factors Rejected					
<i>Horizontal positioning accuracy of vessel (above water)</i>			x		
<i>Vertical positioning accuracy of vessel (above water)</i>			x		
<i>Altitude-Range Ratio</i>				x	
<i>Pitch</i>				x	
<i>Roll</i>				x	
<i>Yaw</i>				x	
<i>Bandwidth (FM pulse)</i>				x	
<i>Pulse Length (CW pulse)</i>				x	
SSS Data Quality Factors Rejected					
<i>Horizontal positioning accuracy of vessel (above water)</i>			x		
<i>Vertical positioning accuracy of vessel (above water)</i>			x		
<i>Pitch</i>				x	
<i>Roll</i>				x	
<i>Yaw</i>				x	
<i>Bandwidth (FM pulse)</i>				x	
<i>Pulse Length (CW pulse)</i>				x	

TABLE A2 CONTINUED

Name of Rejected Parameter/ Data Quality Factor	Literature Research	Questionnaire	Workshop 1	Workshop 2	Concluding E-Mail
<b>MAG Data Quality Factors Rejected</b>					
<i>Horizontal positioning accuracy of vessel (above water)</i>			x		
<i>Vertical positioning accuracy of vessel (above water)</i>			x		
<i>Survey line length</i>			x		
<i>Footprint</i>				x	
<i>Pitch</i>				x	
<i>Roll</i>				x	
<i>Yaw</i>				x	
<i>Number of Sensors (horizontally)</i>				x	
<i>Number of Sensors (vertically)</i>				x	
<i>Distance between Sensors (horizontally)</i>				x	
<i>Distance between Sensors (vertically)</i>				x	
<i>Distance of Sensor to Platform</i>				x	
<i>Signal Strength (sensor model specific)</i>					x
<b>SBP Data Quality Factors Rejected</b>					
<i>Horizontal positioning accuracy of vessel (above water)</i>			x		
<i>Vertical positioning accuracy of vessel (above water)</i>			x		
<i>Altitude</i>				x	
<i>Pitch</i>				x	
<i>Roll</i>				x	
<i>Yaw</i>				x	
<i>Bandwidth (FM pulse)</i>				x	
<i>Pulse Length (CW pulse)</i>				x	