

TABLE OF CONTENTS

FOREWORD	3
TABLE OF CONTENTS	4
ABBREVIATIONS AND ACRONYMS	11
PART I: CONTEXT	12
1 Introduction	13
1.1 Overview	13
1.2 Users and uses	14
1.3 Changes from previous versions	14
1.4 Content of document	15
2. ESS Common Quality Framework	16
2.1 Introduction	16
2.2 General quality management concepts and principles	16
2.2.1 General definitions	16
2.2.2 General quality management principles	18
2.3 ES Code of Practice and ESS Quality Assurance Framework	19
2.3.1 Introductory remarks	19
2.3.2 Institutional environment principles	19
2.3.3 Statistical process principles	20
2.3.4 Statistical output principles	20
2.3.5 ESS Quality assurance framework	21
2.4 Quality related regulations	21
2.4.1 Regulation on European statistics	21
2.4.2 Compliance with the ES COP	22
2.4.3 Regulations concerning quality in specific statistical domains	22
2.5 Other quality standards, guidelines, methods and tools	22
2.5.1 Introductory remark	22
2.5.2 ESS Quality Glossary	22
2.5.3 ESS Quality and Performance Indicators	23
2.5.4 Other ESS quality guidelines, methods and tools	23
3 Describing statistical processes and outputs	24
3.1 Introductory remarks	24
3.2 Single Integrated Metadata Structure	24
3.2.1 SIMS objectives and creation	24
3.2.2 SIMS structure	25
3.2.3 ESQRS and producer reports	26
3.2.4 ESMS and user reports	27
3.2.5 Future revision of SIMS	28
3.3 Generic Statistical Business Process Model	28
3.3.1 Overview of GSBPM	28

3.3 2 GSBPM phases	29
3.4 Relationship between SIMS and GSBPM	31
4. Types of statistical process	33
4.1 Introduction	33
4.2 Probability survey	34
4.3 Non-probability survey	34
4.4 Census survey	35
4.5 Administrative data process	36
4.6 Multisource process	37
4.7 Macro-aggregate compilation process	38
4.8 Special cases	38
5 Types of report	41
5.1 Introductory remarks	41
5.2 Subject of report	41
5.3 National and European levels	42
5.4 Producer and user reports	42
5.5 Degree of detail	43
5.6 Reporting reference period and frequency	43
5.7 Domain specific regulations involving quality reporting	43
5.8 Related documentation	45
6 Structure of guidelines and storage of reports	46
6.1 Structure of guidelines	46
6.2 ESS Metadata Handler	47
PART II: GUIDELINES	48
S.01 Contact	49
S.01 Example	50
S.02 Metadata update	51
S.02 Example	52
S.03 Statistical presentation	53
S.03.1-3 Data description, classification system and sector coverage	53
S.03.1-3 Example	54
S.03.4-6 Statistical concepts, definitions, units and populations	55
S.03.4-6 Examples	56
S.03.7-9 Reference area, time coverage and base period	58
S.03.7-9 Example	58
S.04 Unit of measure	59
S.04 Example	59
S.05 Reference period	60

S.05 Example	60
S.06 Institutional mandate	61
S.06 Examples	62
S.07 Confidentiality	63
S.07 Background	63
S.07.1 Confidentiality - policy	66
S.07.1 Further guidelines	66
S.07.1 Examples	67
S.07.2 Confidentiality – data treatment	69
S.07.2 Further guidelines	69
S.07.2 Examples	69
S.08 Release policy	71
S.08 Examples	72
S.09 Frequency of dissemination	73
S.09 Example	73
S.10 Accessibility and clarity	74
S.10 Background	74
S.10.1-5 Dissemination mechanisms/formats	75
S.10.1-5 Further guidelines	76
S.10.1-5 Examples	77
S.10.6-7 Documentation on methodology and quality	78
S.10.6-7 Further guidelines	79
S.10.6-7 Examples	79
S.11 Quality management	81
S.11 Background	81
S.11.1 Quality assurance	83
S.11.1 Further guidelines	83
S.11.1 Examples	84
S.11.2 Quality assessment	86
S.11.2 Further guidelines	86
S.11.2 Example	87
S.12 Relevance	88
S.12 Background	88
S.12.1 User needs	89
S.12.1 Background	89
S.12.1A Understanding and classifying users	89
S.12.1A Further guidelines	89
S.12.1A Examples	90
S.12.1B Assessment of outputs relative to user needs	91
S.12.1B Further guidelines	91
S.12.1B Examples	93

S.12.2 Usersatisfaction	94
S.12.2 Further guidelines	94
S.12.2 Examples	94
S.12.3 Completeness	96
S.12.3 Further guidelines	96
S.12.3 Examples	97
S.13 Accuracy and reliability	98
S.13 Background	98
S.13A techniques for evaluating accuracy	101
S.13.1 Overall accuracy	102
S.13.1 Further guidelines for all processes	102
S.13.1 Examples	102
S.13.1A Further guidelines for probability survey	104
S.13.1A Examples for probability survey	104
S.13.1B Further background and guidelines for non-probability survey	105
S.13.1C Further background and guidelines for census survey	106
S.13.1C Example for census survey	107
S.13.1D Further guidelines for administrative data process	108
S.13.1E Further guidelines for multisource process	109
S.13.1E Example for multisource process	109
S.13.1F Further guidelines for macro-aggregate compilation process	110
S.13.2 Sampling error	111
S.13.2A Further guidelines for probability survey	111
S.13.2A Examples for probability survey	114
S.13.2B Further guidelines for non-probability survey	116
S.13.2B Example for non-probability survey	116
S.13.2C Further guidelines for other type of statistical process	117
S.13.2C Example for other type of statistical process	117
S.13.3 Non-sampling error	117
S.13.3 Further guidelines	118
S.13.3.1 Coverage error	119
S.13.3.1A Further guidelines for probability survey	120
S.13.3.1A Examples for probability survey	121
S.13.3.1B Further guidelines for non-probability survey	122
S.13.3.1C Further guidelines for census survey	122
S.13.3.1C Example for census survey	123
S.13.3.1D Further guidelines for administrative data process	123
S.13.3.1D Example for administrative data process	124
S.13.3.1E Further guidelines for multisource process	124
S.13.3.1F Further guidelines for macro-aggregate compilation process	124
S.13.3.2 Measurement error	125
S.13.3.2 Further guidelines	125
S.13.3.2 Examples	128
S.13.3.3 Nonresponse error	130
S.13.3.3 Further guidelines	130

S.13.3.3 Examples	134
S.13.3.4 Processing error	136
S.13.3.4 Further guidelines	136
S.13.3.4 Example	137
S.13.3.5 Model assumption error	138
S.13.3.5 Further guidelines	138
S.13.3.5 Examples	139
S.14 Timeliness and punctuality	141
S.14.1 Timeliness	141
S.14.1 Further guidelines	142
S.14.1 Examples	142
S.14.2 Punctuality	144
S.14.2 Further guidelines	144
S.14.2 Examples	145
S.15 Coherence and comparability	147
S.15 Background	147
S.15A Terminology and general explanations	147
S.15B Possible differences in concepts	149
S.15C Possible differences in methods	149
S.15D Relationship between coherence/comparability and accuracy	150
S.15E General advice on coherence and comparability	151
S.15.1 Geographical comparability	151
S.15.1 Further guidelines	152
S.15.1 Examples	153
S. 15.2 Comparability over time	154
S.15.2 Further guidelines	154
S.15.2 Example	155
S.15.3 Coherence – cross domain	155
S.15.3 Further guidelines	156
S.15.3 Examples	156
S.15.3.1 Coherence – subannual and annual statistics	159
S.15.3.2 Coherence – national accounts	159
S.15.3.2 Further guidelines	159
S.15.3.2 Examples	160
S.15.4 Coherence – internal	162
S.15.4 Further guidelines	162
S.16 Cost and burden	164
S.16 Background	164
S.16 Further guidelines	166
S.16 Examples	167
S.17 Data revision	170
S.17 Background	170

S.17.1 Data revision - policy	171
S.17.1 Further guidelines	171
S.17.1 Examples	171
S.17.2 Data revision - practice	173
S.17.2 Further guidelines	174
S.17.2: Examples	174
S.18 Statistical processing	177
S.18 Background	177
S.18.1 Source data	178
S.18.1 Further guidelines	178
S.18.1 Examples	179
S.18.2 Frequency of data collection	184
S.18.2 Example	184
S.18.3: Data collection	184
S.18.3 Further guidelines	185
S.18.3 Examples	185
S.18.4-5: Data validation and data compilation	187
S.18.4-5 Further guidelines	188
S.18.4-5 Examples	189
S.18.6: Adjustment	193
S.18.6 Further guidelines	193
S.18.6 Examples	194
S.19 Comment	197
PART III SUPPLEMENTARY DOCUMENTS	198
A Quality and metadata reporting glossary	199
A1 Introductory notes	199
A2 Glossary	201
B Single Integrated Metadata Structure V2.0	234
B1 Introductory remarks	234
B2 Single Integrated Metadata Structure (SIMS) V2.0: Concepts	235
B3 ESS Standard for Quality Reports (ESQRS) V2.0: Concepts	236
B4 Euro-SDMX Metadata Structure (ESMS) V2: Concepts	237
B5 SIMS, ESMS and ESQRS inter-relationships	238
B6 SIMS Concepts, definitions and guidelines	242
C Guidelines for ESS Quality and Performance Indicators	263
C1 Standard Quality and Performance Indicators	263
C2 Guidelines for compilation of indicators	264
D Domain specific regulations involving quality reporting	290
D1 Introductory remarks	290
D2 List of and links to regulations involving quality reporting	290

E. Introduction to big data	302
E1 Purpose of the document	302
E2 Past, present and future work on using big data sources	303
E3 Relationship between big data and administrative data	304
E4 Quality of statistics produced with use of big data	305
E5 Suggestions for quality of big data and statistics	306
E6 Concluding remarks	309
F. References	310