Policies and Procedures

JNCC Evidence Quality Assurance (EQA) Policy

Appendix 5. Monitoring and Auditing

This appendix is an edited version of Evidence Quality Guidance Note 5 (EQGN5), written in 2013-14 by Helen Baker and edited by Richard Ferris and Matt Smith

https://jncc.gov.uk/about-jncc/corporate-information/evidence-quality-assurance/

To find out more about JNCC visit https://jncc.gov.uk/about-jncc/

Appendix 5. Monitoring and auditing [1]

1. Record keeping for monitoring compliance with the JNCC EQA Policy

1.1 General principles

In order to comply with the core principles in the JNCC EQA Policy, staff need to keep adequate records of the decisions, actions and outcomes associated with providing evidence and advice.

1.2 Project audit document (PAD)

As set out in the EQA Policy, section 10, the EQA flowchart (Figure 1) permits staff to determine when a project audit document (PAD) should be used. When appropriate, a PAD must be created and maintained throughout the life of a substantial piece of work (e.g. an in-house evidence review) or project so that monitoring could be undertaken easily and any external requests for information (e.g. FOI requests) can be managed as efficiently as possible. The EQA questionnaire on the SharePoint site must be used to record use of the PAD and the decisions taken if a PAD is not used. The SharePoint site will be monitored as part of the JNCC governance process (see EQA Policy document).

Forms in Annex 1 are to help staff ensure that they have captured relevant information; more detail can be recorded if this is helpful in managing a project or piece of advisory work (an example list of documentation is included in Annex 2, derived from Defra's (2015) Joint Code of Practice for Research (JCoPR), which might be useful for some survey projects).

The PAD should specify roles and responsibility of staff involved in the project with respect to document management and record keeping, including product sign-off processes. If the document contains personal information its management must be compliant with Data Protection Act requirements. Any confidential information should be clearly identified and controls for its management specified so that all staff involved in a project are able to judge when information can be shared externally (see 1.3, below)

The audit document should be fully completed at the end of the project to facilitate monitoring and should include a concluding statement on success of the quality assurance process used and any thoughts on improvements.

1.3 Confidentiality

Deciding whether information is confidential is very difficult, but there should always be a presumption that at some stage nearly all documented information that we deal with in procuring and reviewing evidence and in giving advice will go into the public domain. Judging what information to proactively publish and when to publish is important; it is fundamental to open and transparent government.

The Freedom of Information Act (FOI) and the Environmental Information Regulations (EIR) recognise that there will be valid reasons why some kinds of information may be withheld, such as if its release would prejudice national security or damage commercial interests. A list of exemptions is available (a good source of guidance is The Information Commissioner's Office), which includes publication, commercial confidence, damage to the environment (under EIR), personal information, etc. The Data Protection Act sets out information that

[1] This appendix is an edited version of EQGN 4, written in 2013-14 by Richard Ferris and edited by Helen Baker and Matt Smith

would be exempt from public disclosure in relation to personal information; staff must comply with the Act (training and guidance are available on the Civil Service Learning Portal).

If there is any doubt about whether information used to procure evidence or provide advice is confidential then staff should seek help from the Finance and Planning Team for issues related to procurement and the Communications Team for other issues. External experts, including peer reviewers, should be made aware of the limits to confidentiality in dealing with their personal information and the evidence that they provide before they participate in any evidence and advisory activity.

1.4 Proportionality

As with all approaches to EQA the effort made in documenting actions should be proportionate to the risks associated with the evidence (see 3EQA Policy 5.2). However, we recommend that even small, simple evidence and advice communications have some record of QA associated with them, for example, expert opinion given without the provider having checked and cited evidence could be described as such in an advisory communication.

1.5. Document management

To support effective QA actions, the following principles should be followed:

- All documentation must be managed in a designated space on a general access server unless there are genuine reasons for maintaining confidentiality and limited access.

- Folder structure and file-naming conventions should be agreed at the start of a project to help with management and version control, searching and accessibility to others.

- The use of a document tracking form is required for version control of any single document (see Annex 3 for examples). A circulation or distribution list can be a useful addition. Both of these can be removed from final products before publication, but should be kept for record.

- Document sharing and management software particularly SharePoint may be helpful for version control.

- All reports or papers should provide a formal citation for others to use, and include the date of publication. The general JNCC Communications email address can also be included to provide a future-proof way for users to contact staff about a specific publication.

- Document retention must follow current JNCC Policy. All physical and electronic information should be reviewed in accordance with the JNCC Retention and Disposal Protocol, Annex A, revised in 2018.

2. Monitoring of evidence quality within individual projects and across JNCC business

2.1 General principles

JNCC will monitor the quality of its evidence and advice on a regular basis and implement changes necessary to address any serious shortfall in compliance with its EQA Policy or the adequacy of that policy.

2.2 Monitoring approaches

Monitoring methods will include twice-annual checks through the SharePoint EQA site and using the PAD documents. The approach in any business year will be defined by the Executive Leadership Team (ELT).

The Joint Committee with guidance from ELT and the Audit and Risk Committee (ARAC) has responsibility for assessing how well JNCC is performing on evidence quality management; an annual report will be provided to ELT and the Committee.

2.3 Roles and responsibilities of others in monitoring evidence quality in JNCC

The Science Management Board (SMB) has an important role in quality assurance of evidence products. Processes and grant-in-aid projects are reviewed by the Statutory Nature Conservation Bodies (SNCBs), represented by the Chief Scientists' Group (CSG). This can be regarded as an important element of peer review (see earlier section).

Inter-agency (IA) groups (established by the CSG) and project steering groups can also play a role in supporting monitoring of EQA processes. Such roles should be agreed and incorporated in the terms of reference of any task or project, and included in a PAD.

In our longer-term evidence partnerships it may be beneficial to have partners involved in active monitoring of quality. Each project should consider how this might work in meeting the requirements set out by ELT for monitoring and reporting on evidence quality.

2.4 Reporting

Information on evidence quality management, including methods and outcomes, will be reported to the Joint Committee and published annually as part of our usual business reporting process.

ANNEX 1

FORMS FOR RECORDING EQA ACTIONS

FORM A – FOR USE WHEN PROCURING EVIDENCE

Note that this form can be adapted for a specific application.

Project stage	What to record	Comments
Initiation	Staff involved in the project and roles and responsibilities, including management authority	A Project Initiation Document (PID) is a useful tool for defining project governance
Specification development	Any peer review undertaken to refine the project specification, including who was involved (including position and organisation of external personnel)	Use EQA Policy Appendix 2 to help decide on scope of any peer review at this stage
Invitation to tender	Minimum quality controls are specified	See EQA Policy Table 1 for minimum requirements in procurement documentation to support the procurement of evidence that is 'fit for purpose' quality.
Tender evaluation	Panel membership and evaluation method (virtual or meeting). Criteria used and scores, and that capability test has been met	
Contract	Contractor CVs are on file	
	Methods are fit-for-purpose	
	Risk assessment associated with innovative methods is available and adequate mitigation planning is included	
	Peer review plans are specified and adequate	Use EQA Policy Appendix 2 to help decide on appropriate scope of peer review
	Contractor quality management system is adequate and in use	See list of recognised systems below. It is good practice to request a QA report from a contractor linked to specific milestones or deliverables
	Data management approaches are adequate	Check compliance with JNCC Data Management Policy and any additional requirements
	Contractor understands what is required in terms of communicating uncertainty	Use EQA Policy Appendix 1 as a guide to inform the contractor

Project stage	What to record	Comments
Checks and completion	Any changes to the project that might impact on evidence quality and the agreed methods for ensuring that quality management is maintained	
	Contractor has satisfactorily completed the project in accordance with the contract specification and demonstrated that quality management has been carried out as required	
	Any peer review undertaken outside of the contractual process, e.g. independent peer review of reports, including who was involved (including position and organisation of external personnel)	Peer review activities should typically be included as part of the project process, but there might be cases where JNCC undertakes additional independent review. See Appendix 2 for further details on the peer review process
	Any changes to project documents as a result of peer review outside of the contractual process	Use standard document version tracking

The table below shows examples of internationally recognised quality management systems.

ISO Standard	Purpose of Standard
ISO 9000 - Quality management	ISO 9000 addresses aspects of quality management standards. The standards provide tools and guidance on how to ensure that products and services meet clients' requirements and that quality is consistently improved.
ISO 14000 - Environmental management	Addresses various aspects of environmental management by providing tools for organisations seeking to identify and manage their environmental impact and improve environmental performance. The other standards in this category focus on specific environmental aspects such as life cycle analysis, communication and auditing.
ISO 26000 - Social responsibility	Provides guidance on how organisations can ensure their operations are ethical and transparent and conducted in a socially responsible manner.
ISO 31000 - Risk management	Provides guidance for managing risk and assists organisations to increase the likelihood of achieving objectives, identify opportunities and threats, effectively manage and treat risk, and ensure sound corporate governance.
ISO/IEC 27001 - Information security management	ISO 27000 standards help organisations keep secure assets such as financial information, intellectual property, employee details or information entrusted by third parties.
ISO 80000 - Quantities and units	Provides information about mathematical signs and symbols, their meanings, verbal equivalents and applications. The recommendations are intended mainly for use in the natural sciences and technology, but also apply to other areas where mathematics is applied.
ISO/IEC 17025 - General requirements for the competence of testing and calibration laboratories	Specifies requirements for the competence to carry out tests, calibrations, and sampling; covers testing and calibration performed using standard methods, non-standard methods, and laboratory-developed methods.

Further information on quality management systems can be found on the International Organisation for Standards website: http://www.iso.org/iso/home.htm

FORM B – FOR USE WHEN REVIEWING EVIDENCE AND GIVING ADVICE

Note that this form can be adapted for a specific application.

Activity	What to record	Comments
Objectives setting	• Any peer review methods used at this stage and names of reviewers (including position and organisation of external personnel)	Keep any peer reviewers' comments in original format
Selection of evidence	• Search method used, including any risk assessment made to determine search effort; • lists of search results for each specific search term; • criteria for assessing the relevance and quality of evidence; • list of evidence sources considered relevant but rejected and the reasons for rejection	Contractors should be requested during project initiation phase to keep a record of these
Use of evidence	• Any weighting of evidence used (method of weighting and results); • methods used for selecting any meta-analysis techniques and reasons for choosing those used; • methods for acquiring expert opinion and any validation methods, including reasons for excluding any expert opinions; • methods used for combining quantitative and qualitative evidence, including how and why these methods were chosen; • checks undertaken to ensure that all evidence that has been used is fully cited using the correct format (see p.25-27 in the JNCC Design Identity Guidance)	Keep all experts' comments in original format if using expert opinion as a source of evidence
Summary conclusions	• Check that they accurately reflect the evidence actually used; • ensure that any estimates of certainty have been described consistently; • peer review methods used, including selection, and reviewers names (and positions if external)	Keep all peer reviewers' comments in original format
Response options (advice)	• Any risk assessment methods used and reason for choosing them; • peer review methods used and reviewers names (and positions if external)	Keep all peer reviewers' comments in original format

ANNEX 2

JOINT CODE OF PRACTICE FOR RESEARCH (JCOPR) Defra (2015)

EXAMPLES OF DOCUMENTARY EVIDENCE

QUALITY ISSUE	EVIDENCE REQUIRED
1. Responsibilities	• Organisation structure showing line management responsibilities (organogram) • Updated and maintained list of personnel involved with the project (including sub-contractors) • Documented agreement with sub-contractors to adhere to JCoPR and evidence of rationale for appointment • Documented roles and responsibilities for all project staff (including subcontractors)
2. Personnel competence	• Consistent collation of CVs of all personnel associated with the project (including sub-contractors) • Maintenance of relevant, up-to-date training records for all project staff (including evidence showing awareness of obligation to comply with the JCoPR provisions)
3. Project planning	• Risk assessment (where appropriate) • Records of regular reviews of project timetables and plans • Up-to-date approved project plan with milestones and deliverables • Statistical validation of experimental plans and procedures for analysis of data • Documented approved procedures for sampling materials • Ethical approval documentation and project licences (where appropriate)
4. Quality Control	• Documented internal 'fit-for-purpose' review procedures • Records of consistently applied internal audits, findings and corrective actions taken • Approved publication policy with authorisation procedures
5. Health and safety	• Documentation to demonstrate both training and compliance. • Documentation on specific measures as appropriate
6. Handling of samples and materials	• Consistent application of a standardised system for controlling, labelling and tracking samples • Documented procedures for handling samples & materials • Up-to-date storage logbooks
7. Facilities and equipment	• Documented maintenance and calibration records of project equipment (as appropriate) • Records of regular maintenance of special facilities (e.g. refrigeration units) (as appropriate) • Documented standard operating procedures for project critical equipment, including emergency procedures
8. Documentation of procedures and methods	• Robust process for document and version control in all key project documentation • Validated Standard Operating Procedures

9. Research / work records	• Where facilities exist, research / work records should be stored consistently in both hard copy and electronic format (e.g. counter-signed laboratory notebooks or indexed computer data files) • Consistent and documented archiving procedures
10. Field-based research	• Documented risk assessment for field-based research, showing proactive steps taken to counter any risks identified

ANNEX 3

STANDARD DOCUMENT TRACKING FORM

This is a basic form for inclusion at the beginning of a document, which can be adapted to suit user needs. A standard form for recording circulation history of documents can also be included. See examples in use by marine teams below.

DOCUMENT VERSION TRACKING			
Author	**Document Name (and version)**	**Description (incl. revision details)**	**Date**

EXAMPLES OF DOCUMENT TRACKING FORMS USED BY MARINE TEAMS

(A) FOR USE IN A WORD DOCUMENT

BUILD STATUS:

Version	Date	Author	Reason/Comments

DISTRIBUTION:

Copy	Version	Issue Date	Issued To
Electronic/ Paper/Link			

(B) FOR USE IN A SPREADSHEET

Workbook Summary

Worksheet	Comments
Sheet1	

Annex: Version Control

Build status:

Date	Version	Author	Reason/Comments

Amendments in this release:

Worksheet	Amendment Summary

Distribution:

Copy	Version	Issue Date	Issued To
Paper/Electronic	0		A, B, C
	0		

ANNEX 4

AUTHORSHIP PROCEDURE

The determination of authorship of papers shall be in accordance with the following procedure based upon a simple points table. The maximum score possible is 100 points. Each potential author is awarded the highest realistic score in each category; whoever achieves a total of 25 points is offered joint authorship in rank order of total score. In the event of ties, near-misses are considered; if none exists, alphabetical order is used.

Co-authorship scoring system:

Intellectual input (planning/designing/interpreting)	**Points**
No contribution	0
One detailed discussion	5
Several detailed discussions	10
Correspondence or longer meetings	15
Substantial liaisons	20
Closest possible involvement	25
Practical input: data-capture (setting-up/observing/recording/abstracting)	
No contribution	0
Small contribution	5
Moderate indirect contribution	10
Moderate direct contribution	15
Major indirect contribution	20
Major direct contribution	25
Practical input: beyond data-capture (data processing/organising)	
No contribution	0
Minor or brief assistance	5
Substantial or prolonged assistance	10
Specialist input from related fields	
No contribution	0
Brief or routine advice	5
Specially-tailored assistance	10
Whole basis of approach	15
Literary input (contribution to first complete draft of manuscript)	
No contribution	0
Edited others' material	5
Contributed small sections	10
Contributed moderate proportion	15
Contributed majority	20
Contributed virtually all	25