

# Guidance on Information Quality Assurance to Chapter Authors of the National Climate Assessment Question Tools

## Introduction:

The Question Tools are intended for use by the chapter authors of the National Climate Assessment (NCA) to consider whether and how to use source material in the NCA under the requirements of the Information Quality Act (IQA). The NCA must comply with the IQA. The chapter authors' review of each source material under the NOAA IQA Guidelines will provide the building blocks for this compliance.

As background, please also refer to:

- **GUIDANCE FOR TECHNICAL INPUT TEAMS:** *FREQUENTLY ASKED QUESTIONS, PRELIMINARY GUIDANCE ON INFORMATION QUALITY ASSURANCE IN PREPARING TECHNICAL INPUT FOR THE NATIONAL CLIMATE ASSESSMENT*, <http://globalchange.gov/images/NCA/nca-info-quality-assurance-faq.pdf>; and
- **GENERAL PRINCIPLES FOR CHAPTER AUTHORS:** *GENERAL PRINCIPLES USED IN THE DEVELOPMENT OF GUIDANCE FOR ASSURING INFORMATION QUALITY IN THE NATIONAL CLIMATE ASSESSMENT*, approved by the NCADAC on November 16, 2011, [http://www.globalchange.gov/images/NCA/Information-Quality-Principles-Draft\\_2011-11-16.pdf](http://www.globalchange.gov/images/NCA/Information-Quality-Principles-Draft_2011-11-16.pdf)
- **NOAA'S IQA GUIDELINES:** [http://www.cio.noaa.gov/Policy\\_Programs/info\\_quality.html](http://www.cio.noaa.gov/Policy_Programs/info_quality.html)

## Instructions on the use of the Question Tools:

The questions listed on page 2 below are the same questions listed in the Decision Tree format. The questions are organized in the general topical areas set forth in the NOAA IQA Guidelines.

The goal is to provide a methodology for you, as chapter authors, to use to achieve consistent consideration of source material under the NOAA IQA Guidelines while allowing authors to use your expertise in your field. The Question Tools are not intended to be checklists; and documentation of use for specific source materials is not required. However, we request that if you ultimately answer “no” to any question set for any source material that you decide to use, you attach to your draft chapter an explanation of your decision.

“Source” or “source materials” are used in the Question Tools to broadly include all information or data that you are considering using in your chapter, regardless of its origin or how it came to your attention. *Attachment A* is a list of anticipated source materials, is intended to be illustrative and not limiting. If you are considering only part of a document or set of data in the NCA, then apply the Question Tools for the portion under consideration.

“Use” is intended to broadly encompass any way that the source is associated with the NCA, including incorporation of the source into the chapter, citing or referencing the source, or linking to the source.

### Sample Considerations

- Peer Reviewed and Published Literature: For this type of source material, use the question methodology to determine whether, what portion of, and how a specific source material should be used in the NCA. In most cases for this type of source material, the analysis will be brief.
- Workshop Summary: For this type of source material, use the question methodology to determine whether, what portion of, and how a specific source material should be used in the NCA. An important consideration may be that raised in question 2 below (regarding the conclusions drawn from the available materials: is the underlying data or information sufficient to support the conclusions drawn in the source materials? If not, are there more general conclusions that can be used from the data and information that are available?).
- Indigenous Knowledge: For this type of source material, use the question methodology to determine whether, what portion of, and how a specific source material should be used in the NCA. An important consideration may be those raised in question 2 below (regarding the conclusions drawn from the available materials: is the underlying data or information sufficient to support the conclusions drawn in the source materials? If not, are there more general conclusions that can be used from the data and information that are available?). And question 3 below (is it clear which data were used in the analysis? are the various assumptions that were employed clearly articulated? are the specific analytic methods that were applied clearly articulated and/or previously published? are the statistical procedures employed documented? or can the use of the source materials be sufficiently qualified for use?).

**Questions: As you consider whether and how to use each source material, consider each of the following questions.**

#### **UTILITY - Is the particular source important to your chapter?**

1. Is the source material relevant to the chapter's geographic and/or subject matter scope?  
⇒ If not, is there another author team to whom this source material should be referred?

#### **TRANSPARENCY AND TRACEABILITY - Are source materials identifiable and available?**

2. Is the underlying data or information that supports relevant conclusions that are drawn in the source materials publicly available?  
⇒ If not, are there more general conclusions that can be used from the data and information that is available?
3. For any analytic result in the source material:
  - a. Is it clear which data were used in the analysis?
  - b. Are the various assumptions that were employed clearly articulated?
  - c. Are the specific analytic methods that were applied clearly articulated and/or previously published?
  - d. Are the statistical procedures employed documented?⇒ If the answer to any of the above is "no," can the source author provide clarification or can the use of the source materials be sufficiently qualified or conditioned for use?

#### **OBJECTIVITY - Why and how were the source materials created?**

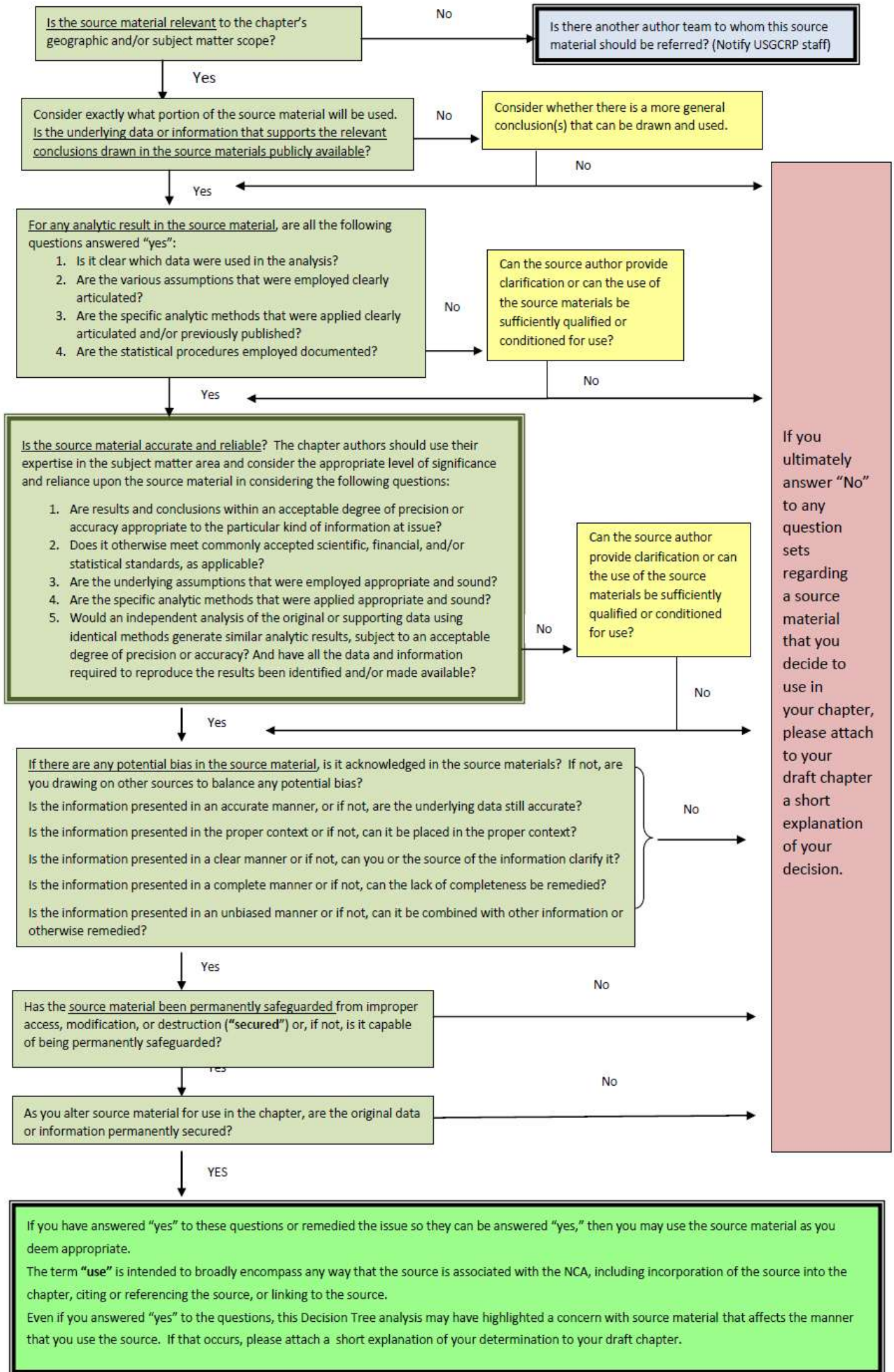
4. Is the source material accurate and reliable? The chapter authors should use their expertise in the subject matter area and consider the appropriate level of significance and reliance upon the source material in considering the following questions:
  - a. Are results and conclusions within an acceptable degree of precision or accuracy appropriate to the particular kind of information at issue?
  - b. Does it otherwise meet commonly accepted scientific, financial, and/or statistical standards, as applicable?
  - c. Are the underlying assumptions that were employed appropriate and sound?
  - d. Are the specific analytic methods that were applied appropriate and sound?
  - e. Would an independent analysis of the original or supporting data using identical methods generate similar analytic results, subject to an acceptable degree of precision or accuracy? And have all the data and information required to reproduce the results been identified and/or made available?

⇒ If the answer to any of the above is “no,” can the source author provide clarification or can the use of the source materials be sufficiently qualified or conditioned for use?
5. Is there any potential bias in the source material, and if so, is it acknowledged in the source materials and/or are you drawing on other sources to balance any potential bias? For bias, consider the following questions:
  - a. Is the information presented in an accurate manner? If not, are the underlying data still accurate?
  - b. Is the information presented in the proper context? If not, can it be placed in the proper context?
  - c. Is the information presented in a clear manner? If not, can you or the source of the information clarify it?
  - d. Is the information presented in a complete manner? If not, can the lack of completeness be remedied?
  - e. Is the information presented in an unbiased manner? If not, can it be combined with other information or otherwise remedied?

#### **INFORMATION INTEGRITY AND SECURITY - Will the source materials remain reasonably protected and intact?**

6. Has the source material been permanently safeguarded from improper access, modification, or destruction (“secured”)? If not, is it capable of being permanently safeguarded?
7. As you alter source material for use in the chapter, are the original data or information permanently secured?

## Information Quality Assurance for National Climate Assessment - Decision Tree





## **ATTACHMENT A**

### **ANTICIPATED TECHNICAL INPUT TYPES (UPDATE AS NEEDED)**

#### **TRADITIONAL**

1. Journal Articles
2. Literature Reviews
3. Synthesis Reports
4. Meeting/Workshop Reports
5. Government Reports (state or federal)
6. NGO Reports
7. Company Reports
8. Technical Reports/Papers
9. Unpublished Original Papers (review papers, discussion papers, findings)
10. Working Papers
11. Presentations & Conference Proceedings

#### **EPHEMERA**

12. Fact Sheets
13. Newsletters
14. Bulletins
15. Case Studies
16. Interviews
17. Surveys

#### **JOURNALISM**

18. Traditional Media (newspapers, magazines, books)
19. Online Publications (newspapers, magazines, blogs, newsletters, websites)

#### **DATA AND REPRESENTATION**

20. Observational Datasets (analyses or the actual datasets)
21. Public health Data
22. Demographic Data
23. Proprietary Datasets (analyses or the actual datasets)
24. Graphics
25. Maps or GIS
26. Photos
27. Videos
28. Proprietary Datasets (analyses or the actual datasets)
29. Graphics

#### **MODELS AND EXPERIMENTAL APPROACHES**

30. Models & Modeling Results
31. Experimental Products (e.g., local or regional decision-support tools, models, observing/monitoring systems, climate predictions & outlooks, early warning systems)

#### **EXPERT REPRESENTATION**

32. Expert Elicitations
33. Traditional/Indigenous/Local Knowledge

#### **SOCIAL MEDIA**