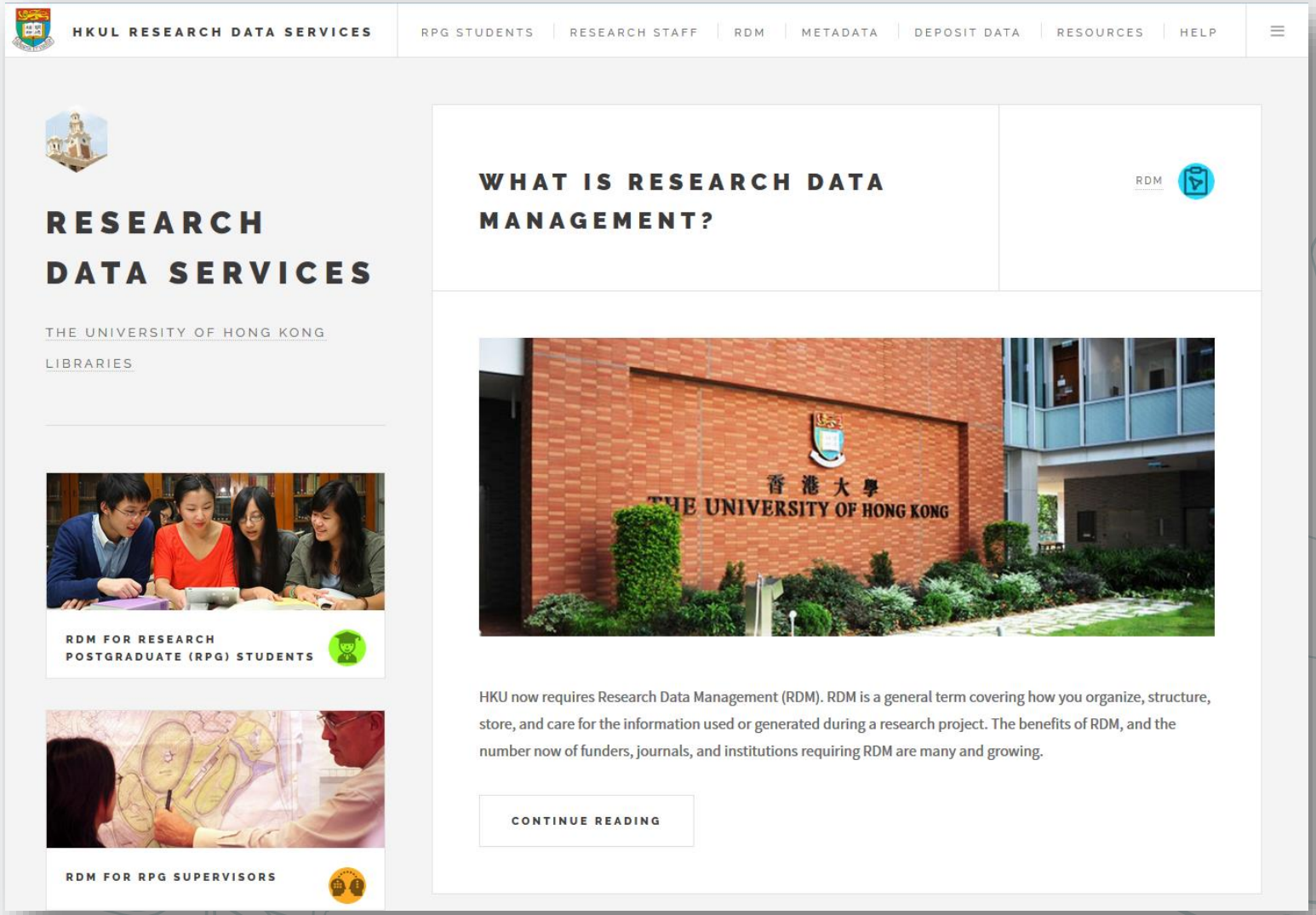
Research Data Management (RDM) WORKSHOP for Research Postgraduate Students – Manage Qualitative Research Data Using NVivo 11 for MAC

Part 1

HKUL Research Data services

https://lib.hku.hk/researchdata/



Agenda

Part 1	1. Overview	40 min.
	2. Import bibliographic data from EndNote	
	Exercise and Break	10 min.
Part 2	3. Coding Queries	40 min.
	Exercise and Break	10 min.
Part 3	4. Import survey data	30 min.
	Exercise and Break	10 min.
Round up	5. Import document, image, audio and video files	20 min.
	6. Backup your project file & other resources	5 min.
	Q&A	5 min.

170 min.

Learning Outcomes

- Key features of NVivo 11 for Mac
- How to:
  - Prepare text and media data
  - Import and organize data
  - Add notes and memos
  - Run queries

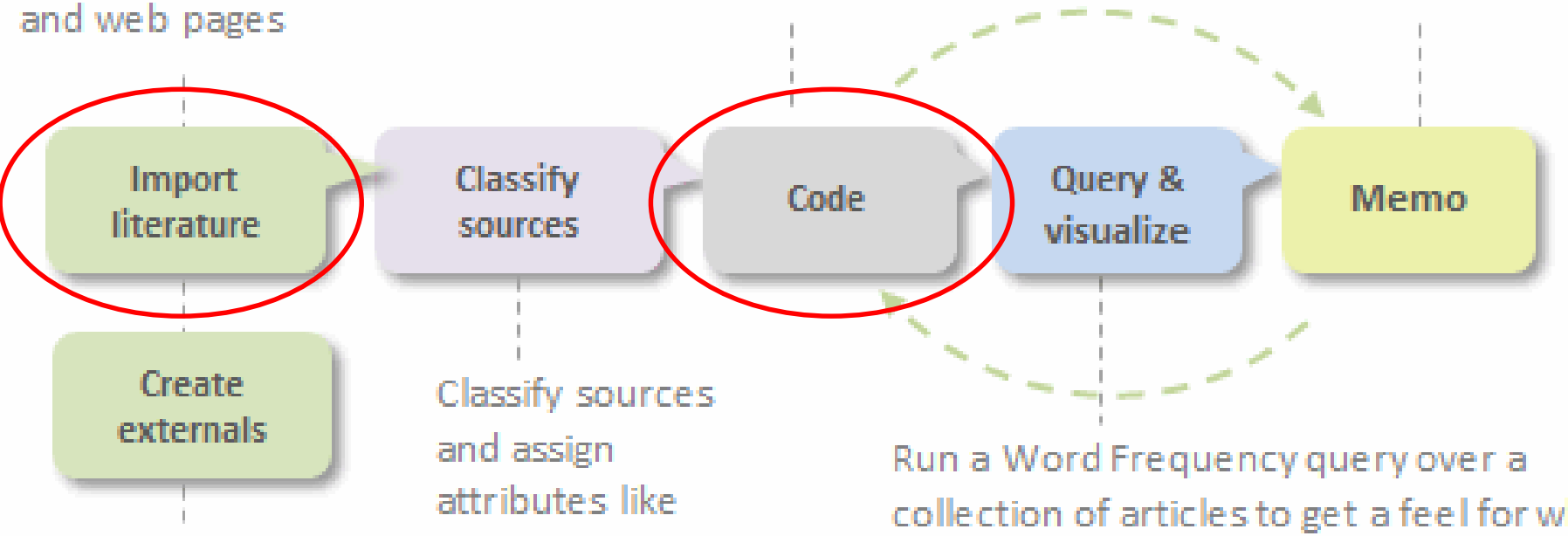
1.
NVivo for Mac overview

Literature review

Import articles, reports and web pages

Explore each source and code the themes as you go

Create a linked memo and critique each source



Classify sources and assign attributes like author or publication date

Create externals for books and other non-digital items and summarize the contents

Run a Word Frequency query over a collection of articles to get a feel for what they contain. Run a Text Search query to find words or phrases in the literature—visualize the results in a Word Tree. Use a Matrix Coding query to see which themes are under represented—these 'gaps' could be a good launching point for your research!

http://help-nv11mac.qsrinternational.com/desktop/concepts/using_NVivo_for_qualitative_research.htm

https://blatryk.wordpress.com/2013/09/15/handheld-coding-thoughts-on-the-science-of-design-research/

https://blatryk.wordpress.com/2013/09/15/handheld-coding-thoughts-on-the-science-of-design-research/

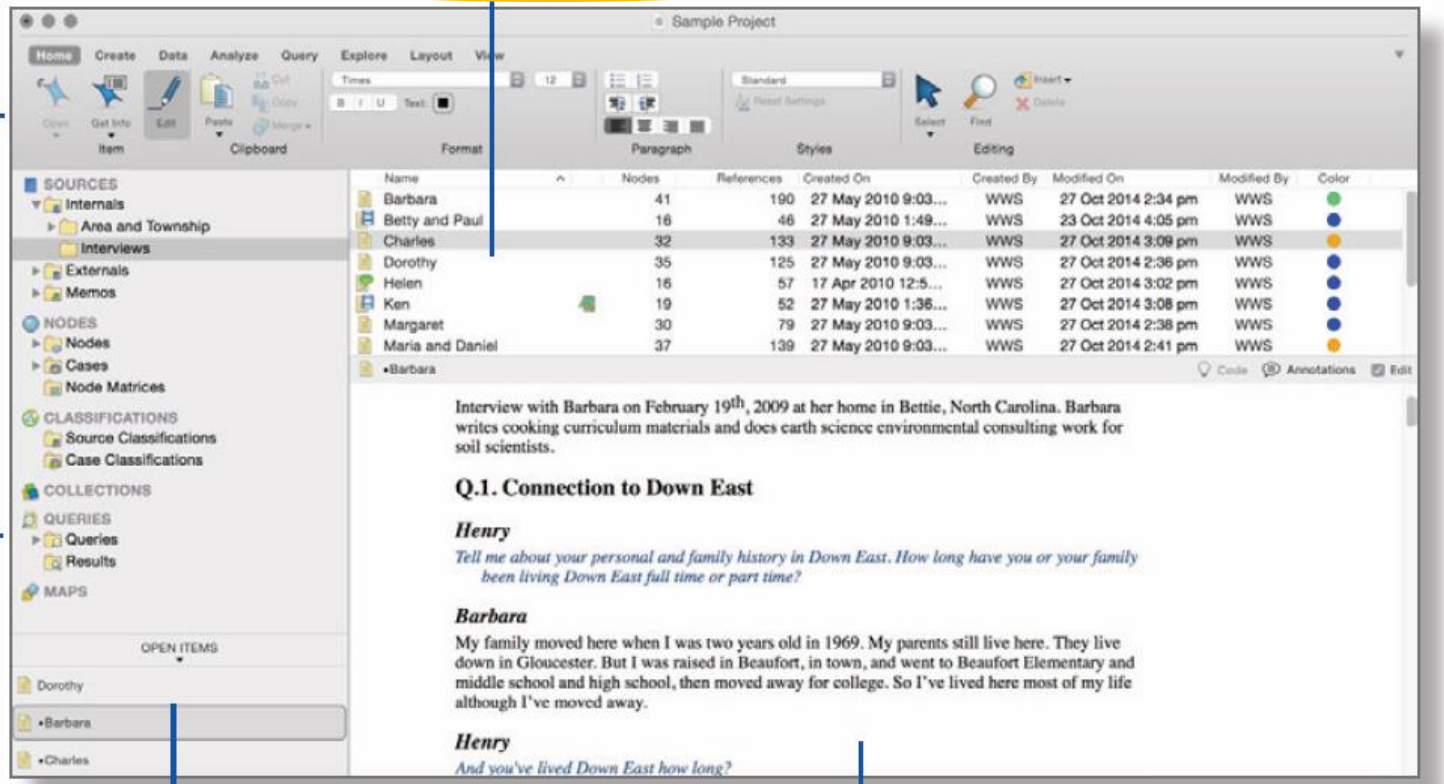
The NVivo work area

Source: NVivo-for-Mac-Getting-Started-Guide.pdf

The NVivo work area provides easy access to all your project material.

See the contents of a folder in List View

Most NVivo commands are available on the menu or the ribbon



Navigation View lets you organize your material into folders

Move between currently open items

Work with your sources, nodes or other project items in Detail View

Work with the ribbon or the menus

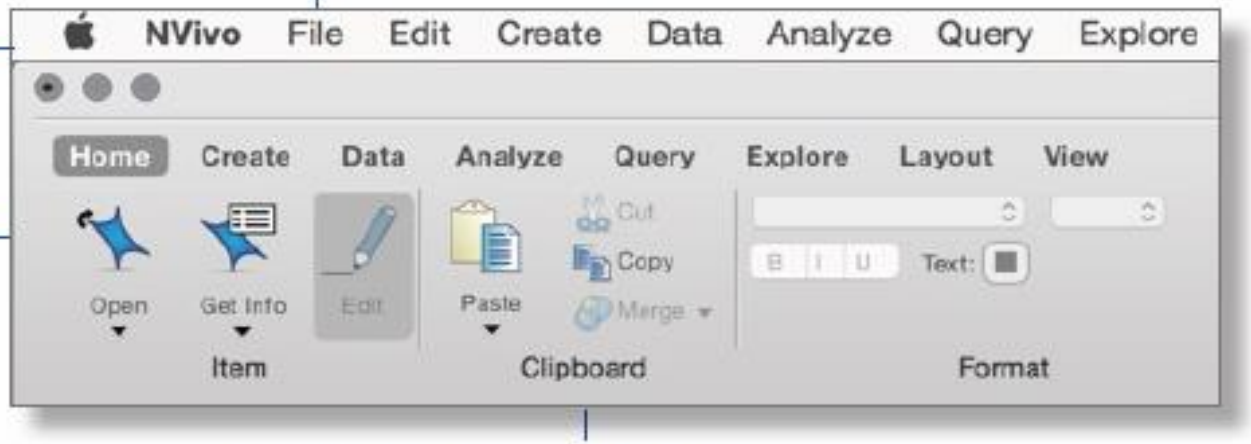
You can work with NVivo using the menu commands or the ribbon. On the ribbon, commands are organized into logical groups, collected together under tabs. Each tab relates to a type of activity, such as creating new project items or analyzing your source materials.

The File menu gives you access to project-related commands

Most NVivo commands are available on the menu or the ribbon

Menu

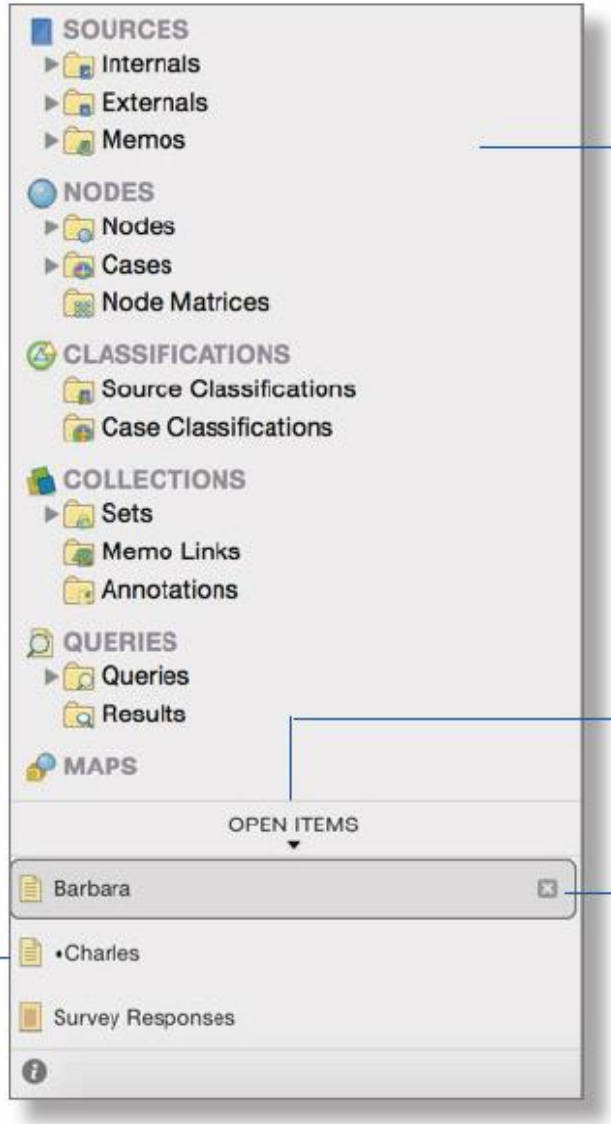
The ribbon provides easy access to most commands



Commands are organized in groups

Navigation View

Navigation View helps you to organize and easily access all of the items in NVivo:

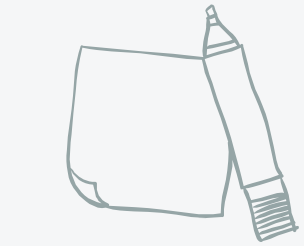


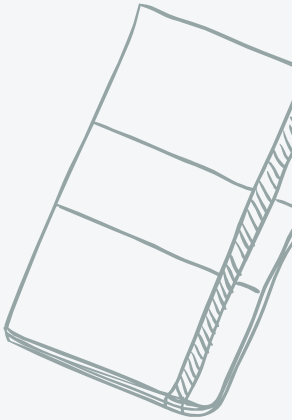
NVivo provides folders for your research materials. You can add folders under them to organize project items

Click to close all items that are currently open

Click to close an individual item

This area shows all the items that are currently open



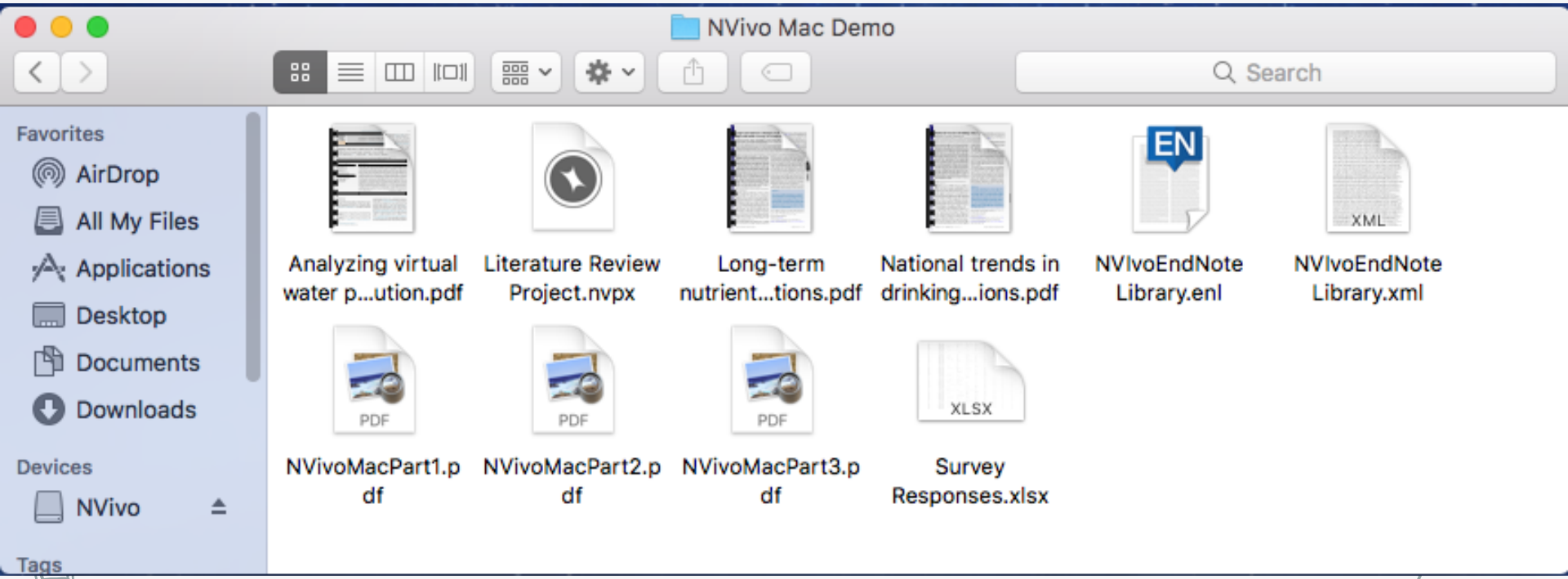


2.

Import bibliographic data from EndNote

Demo files listing

Here is the list of all the files for the demo:



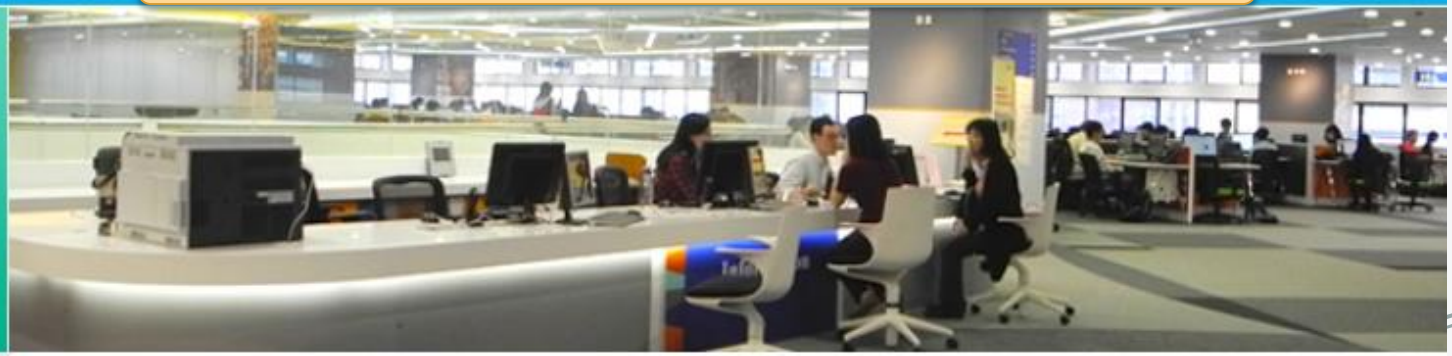
The University of Hong Kong Libraries

Hours | Contact Us | e-Forms | Services

HKUL > Endnote@HKUL

http://lib.hku.hk/endnote/download.html

Endnote@HKU



- Endnote@HKU
- Download Endnote
- Training and Support

Download Endnote

Choose the operating system of your computer. Download Endnote and the filters.

Windows

1. Endnote X8 (Windows) [Installation Guide for Windows]
2. Filters for Windows
3. Check latest updates for Windows

Macintosh

1. Endnote X8 (Macintosh) [Installation Guide for Macintosh]
2. Filters for Macintosh
3. Check latest updates for Macintosh.

Download and install EndNoteX8

EndNote Library Mac Demo 4 records.enlp

THOMSON REUTERS

Search Library

My Library

All References 4

Configure Sync...

Recently Added

Unfiled

Trash

My Groups

Find Full Text

Author	Year	Title
Mohamed, A. Abdelrhman	2016	Modelin
Onwuegbuchunam, D.; Ebe,...	2017	An Anal
[illegible]	[illegible]	Oil Spil
[illegible]	[illegible]	Quantif

Record Summary...
New Reference...
Edit References...
Move References to Trash
Add References To ▶
Copy References To ▶
E-mail Reference
Remove References From Group
Cut
Copy
Copy Formatted
Paste

Mark as Read
Mark as Unread
Rating

Show All References
Show Selected References
Hide Selected References

File Attachments ▶
Find Full Text ▶
Find Reference Updates...
URL ▶

Restore to Library
Resolve Sync Conflicts...

Attach File...
Open with Preview
Save As...
Convert to Relative Links
Rename PDFs...

Rating

Author
Mohamed, A. Abdelrhman

Year
2016

Title
Modeling Water Clarity and Light Quality in Oceans

Journal
Journal of Marine Science and Engineering

Volume
4

Start Page

Mohamed, A. A. (2016). Modeling Water Clarity and Light Quality in Oceans. *Journal of Marine Science and Engineering*, *4*(4), 80. doi: 10.3390/jmse4040080

Attach PDF file to references

EndNote Library Mac Demo 4 records.enlp

Find Reference Updates

THOMSON REUTERS

Search Libr

My Library

All References 4

Configure Sync...

Recently Added

Unfiled

Trash

My Groups

Find Full Text

Author	Year	Title
Mohamed, A. Abdelrhman	2016	Modelin
Onwuegbuchunam, D.; Ebe,...	2017	An Anal
Polychronis, Kolokoussis; V...	2018	Oil Spill
Seyedabdolhossein, Mehvar...	2018	Quantif

Select the items from EndNote
Will automatically import PDF attachments as well

Rating

Author
Mohamed, A. Abdelrhman

Year
2016

Title
Modeling Water Clarity and Light Quality in Oceans

Journal
Journal of Marine Science and Engineering

Volume
4

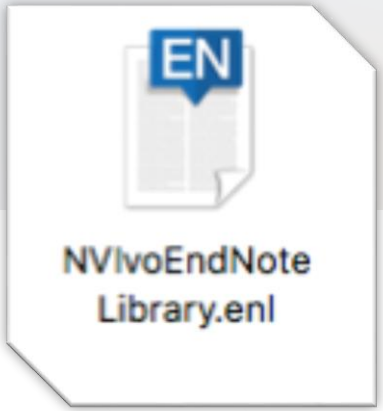
Issue
4

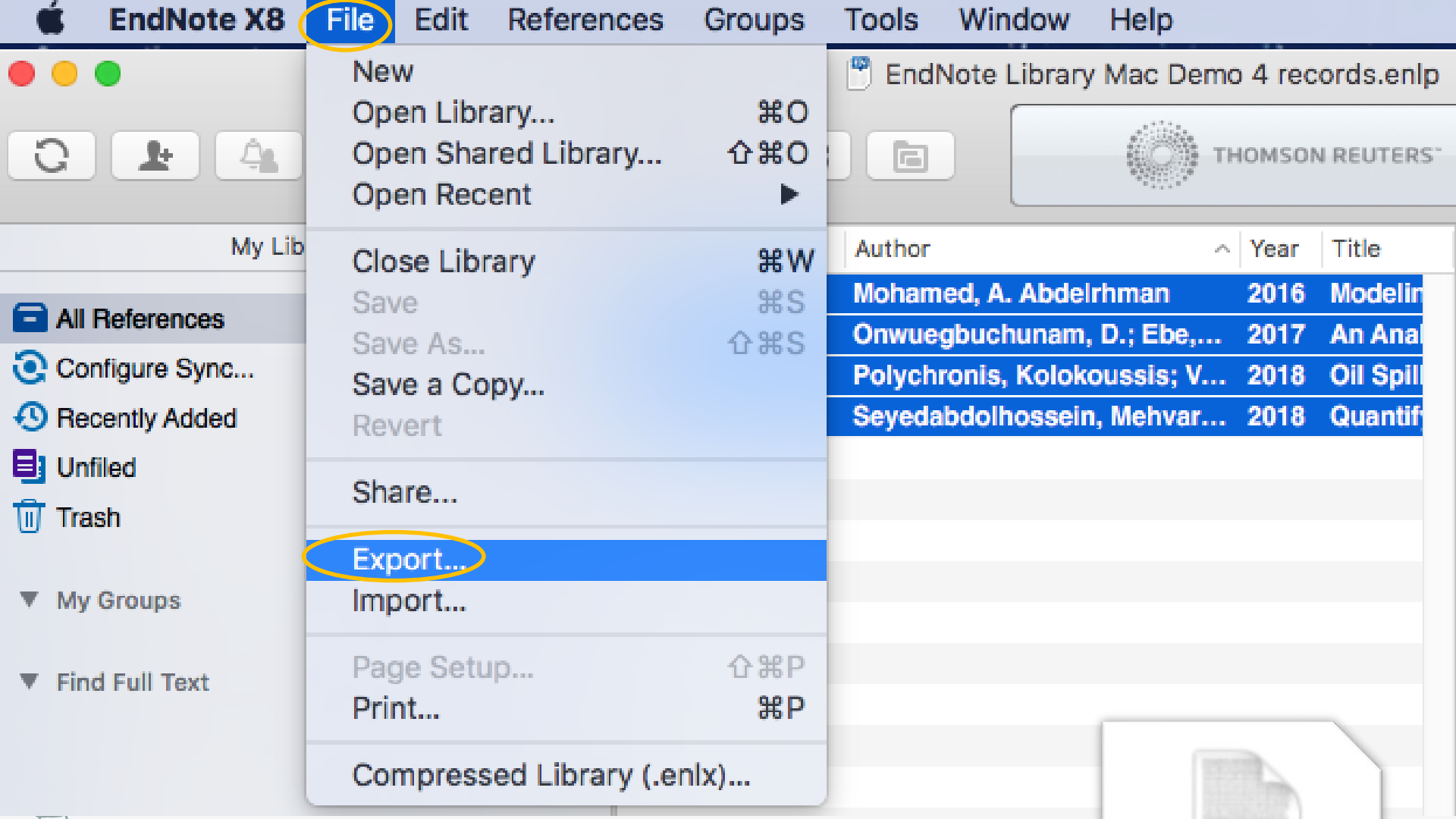
Pages
80

Start Page

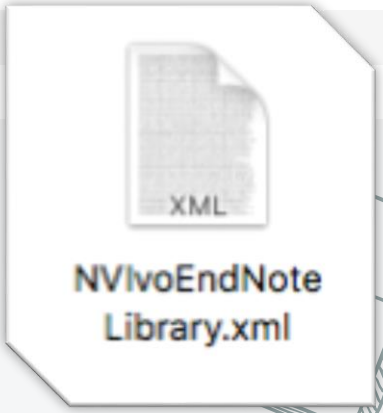
Epub Date

Date

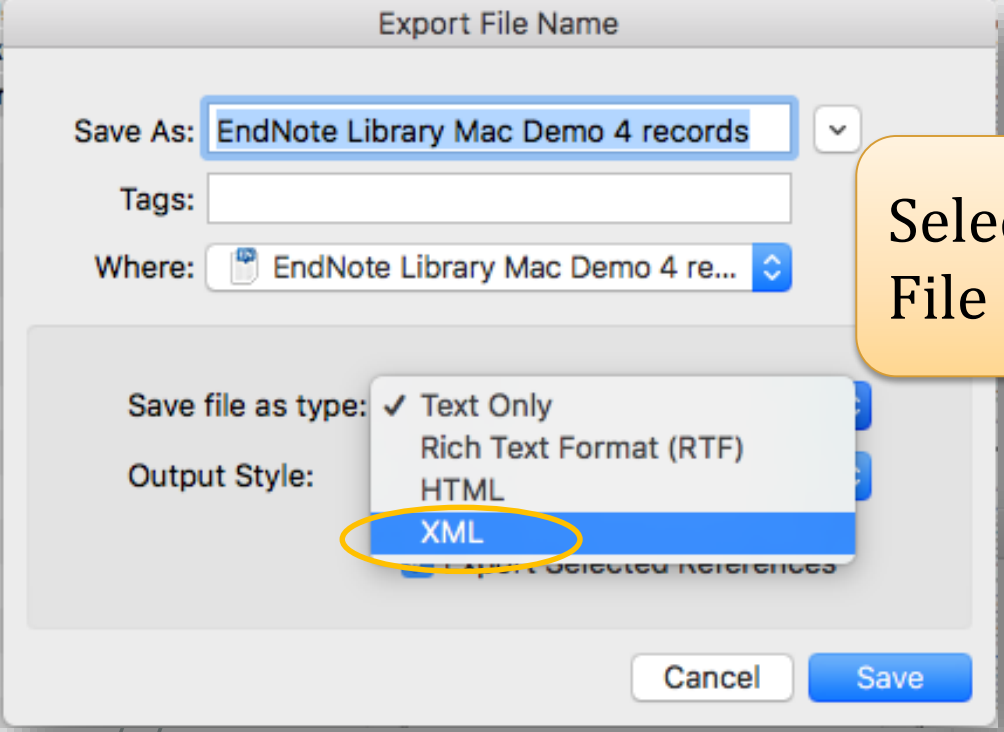


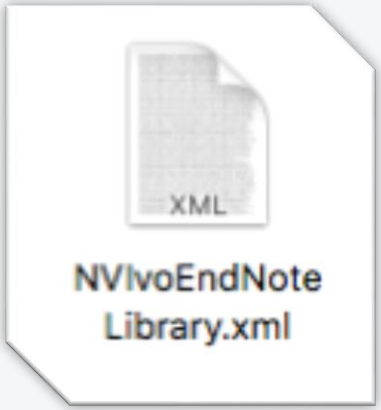


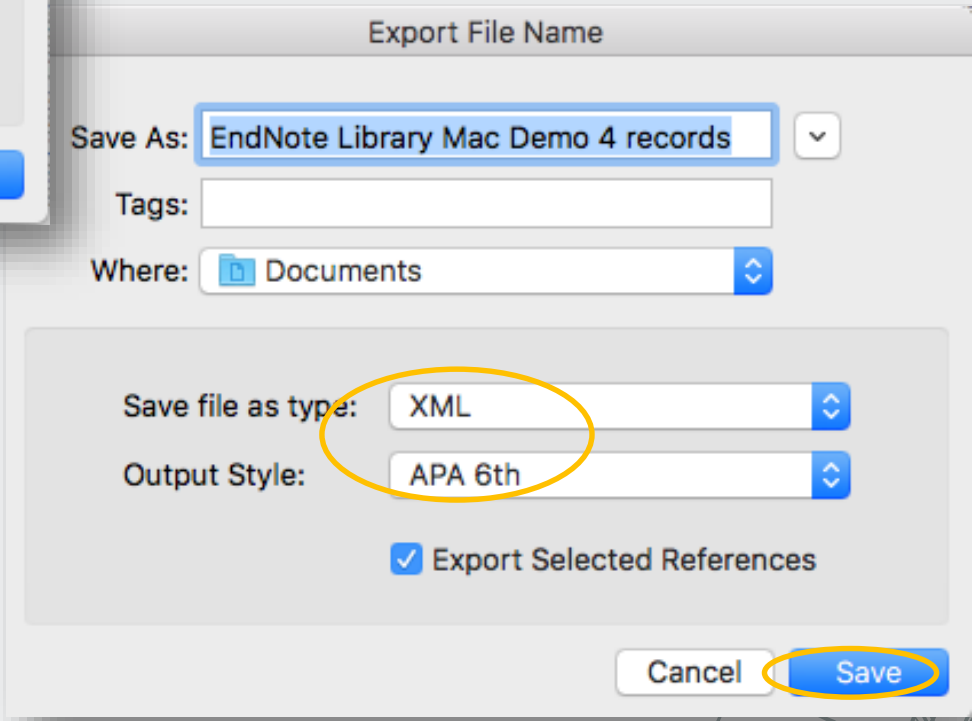
Select the item from EndNote
File > Export > Save as XML (*.xml)



Select the item from EndNote
File > Export > Save as XML (*.xml)







NVivo File Edit Create Data Analyze Query Explore Layout View Window Help

Welcome to NVivo for Mac

Version: 11.4.3 (2084)

Create new project
Create a new project

Create a copy of the sample project
Explore and experiment with NVivo using the sample project

Learn about using NVivo
Access the Getting Started guide and other learning resources

Access support resources
Find answers in the QSR forum and FAQs or contact Customer Support

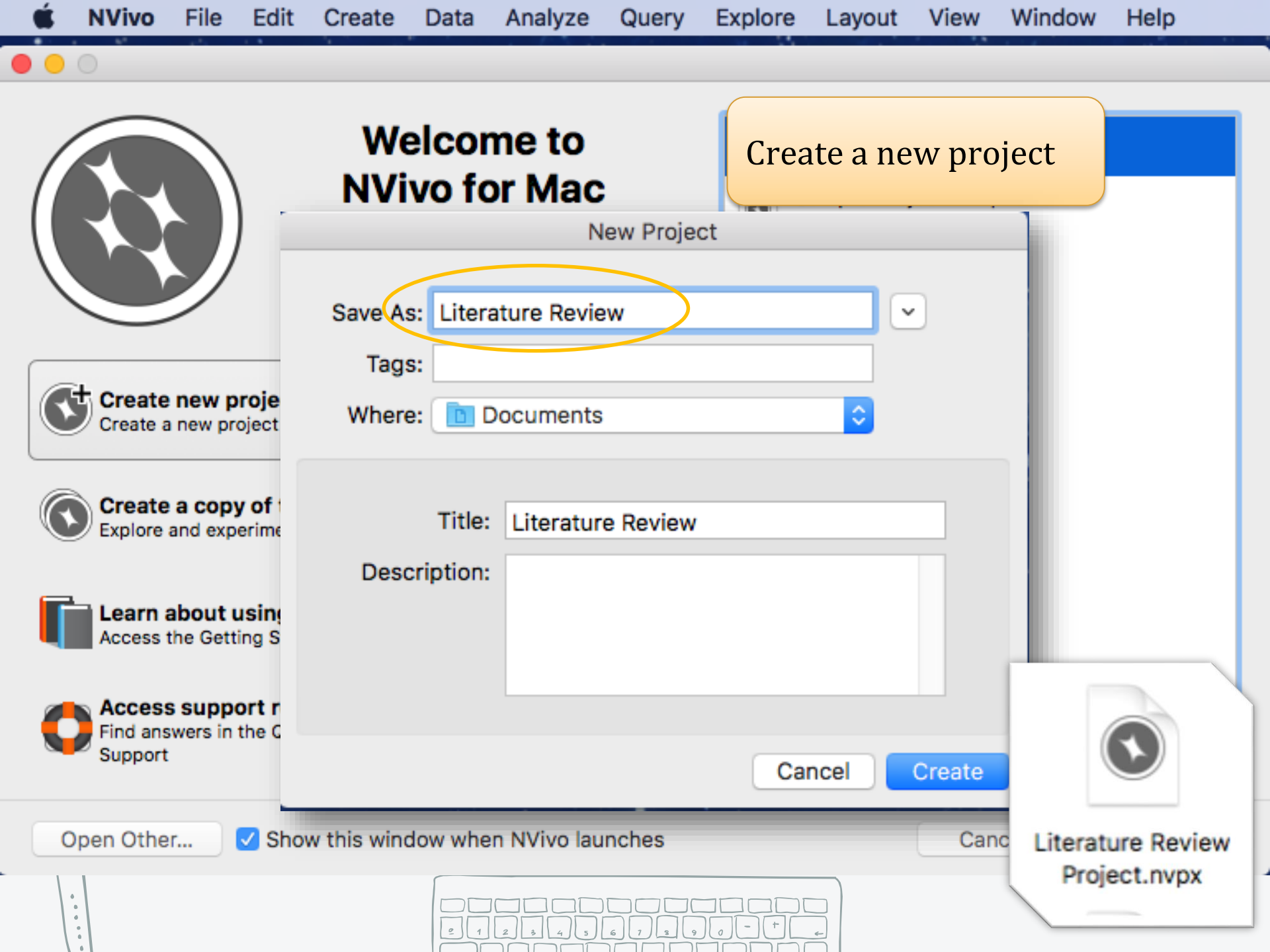
Sample Project2.nvpx
/Users/hkuhkul/Documents

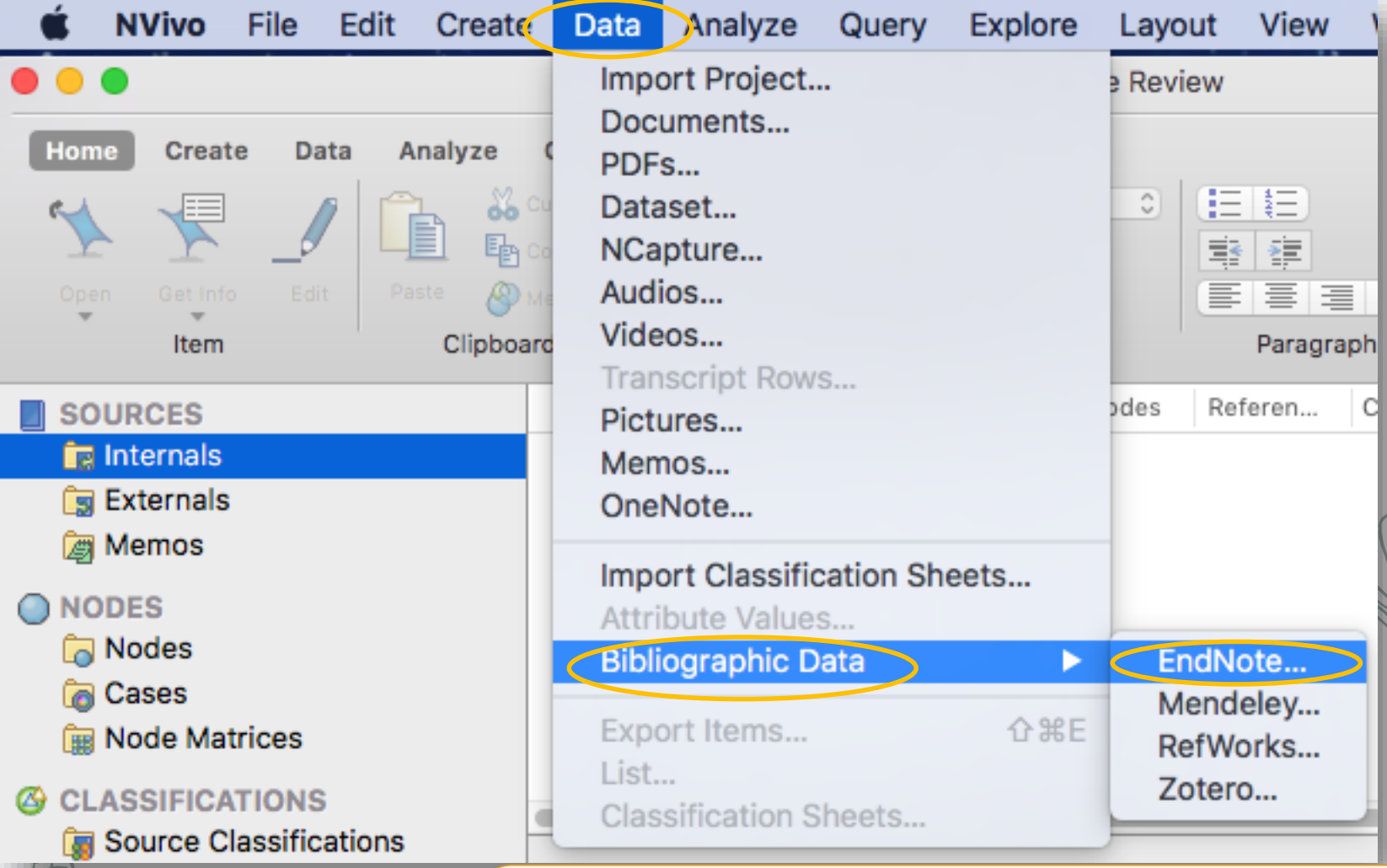
Sample Project 1.nvpx
/Users/hkuhkul/Documents

Create a new project

Literature Review Project.nvpx

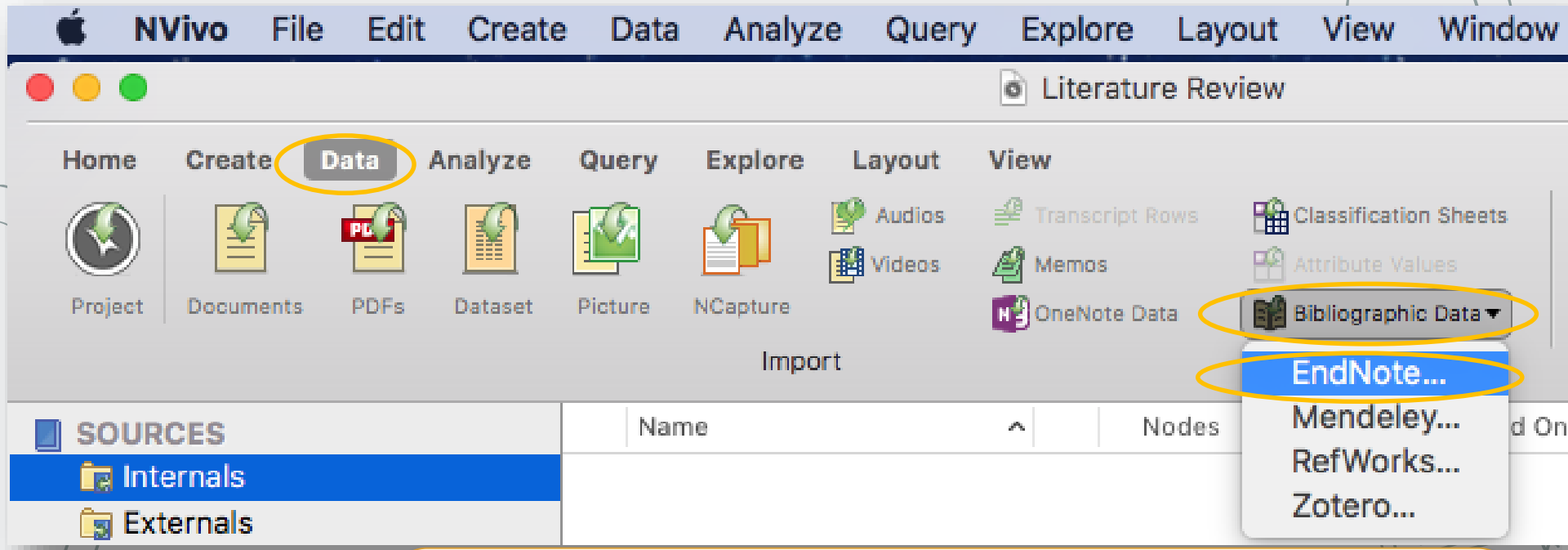
Open Other... Show this window when NVivo launches


NVivo File Edit Create Data Analyze Query Explore Layout View Window Help
Welcome to NVivo for Mac
Create a new project
New Project
Save As: Literature Review
Tags:
Where: Documents
Title: Literature Review
Description:
Cancel
Create
Create new proje
Create a new project
Create a copy of
Explore and experime
Learn about usin
Access the Getting S
Access support r
Find answers in the C
Support
Open Other...
Show this window when NVivo launches
Canc
Literature Review Project.nvpx

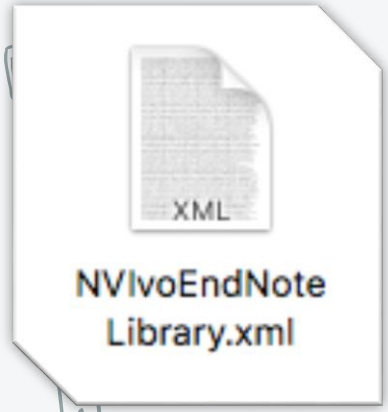


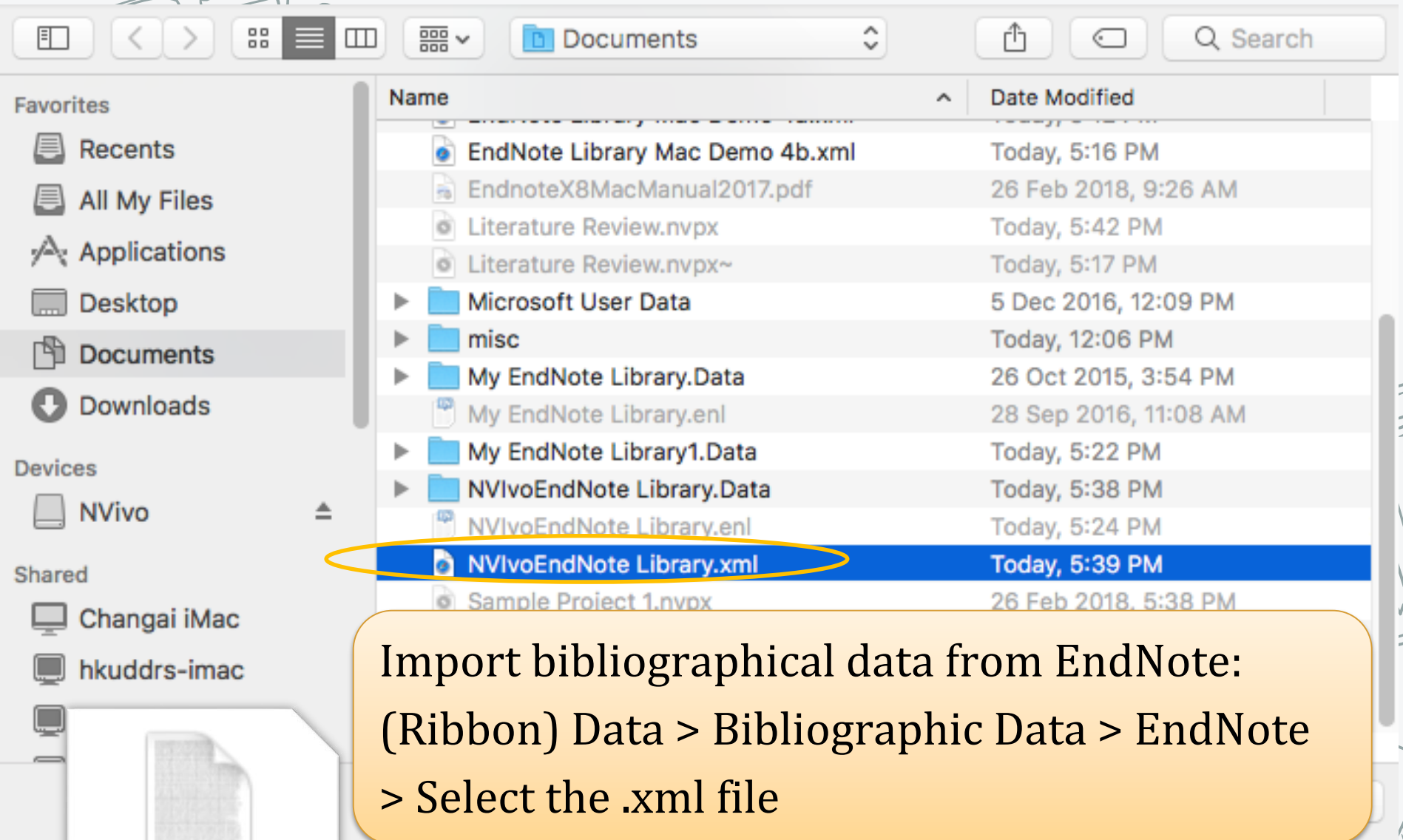
Import bibliographical data from EndNote:

Data > Bibliographic Data > EndNote



Import bibliographical data from EndNote:
(Ribbon) Data > Bibliographic Data > EndNote





Import bibliographical data from EndNote:
(Ribbon) Data > Bibliographic Data > EndNote
> Select the .xml file

Import Bibliographic Data Assistant - Step 1 of 2

Specify name and classification options

Name sources by : Author and Year

Title

Assign sources to : Single classification (Reference)

Different classifications based on record type

Select Author and Year

Select Different classifications

? Cancel

Next

Import Bibliographic Data Assistant - Step 2 of 2

Specify how reference records are handled

Location to create sources

Create Internals in : Internals

Create Externals in : Externals

- [x] Import source content from file attachments, URLs or figures where available
- [x] Create memos from abstract, keywords and notes

Select these two options

? Cancel

Back OK

NVivo File Edit Create Data Analyze Query Explore Layout View Window Help

Literature Review

Import PDF files | Data | Analyze | Query | Explore | Layout | View

Project | Documents | PDFs | Dataset | Picture | NCapture | Audios | Videos | Transcript Rows | Memos | OneNote Data | Classification Sheets | Attribute Values | Bibliographic Data | Items | List | Classification Sheets

Import | Export

SOURCES
- Internals
- Externals
- Memos

NODES
- Nodes
- Cases
- Node Matrices

CLASSIFICATIONS
- Source Classifications
- Case Classifications

COLLECTIONS
- Sets
- Memo Links
- Annotations

QUERIES
- Queries
- Results

MAPS
- Maps

OPEN ITEMS

Lefcheck, Jonathan S., Orth, Robert J....

Name	Nodes	Referen...	Created On	Created By	Modified On
Allaire, Maura, Wu, Haowei & Lall, Upmanu (2018)-13	0		Today, 5:40 PM	EC	Today, 5:40 PM
Lefcheck, Jonathan S., Or...	0	0	Today, 5:40 PM	EC	Today, 5:40 PM

Articles with PDFs in Internals

Lefcheck, Jonathan S., Orth, Robert J., Dennison, William C., Wilcox, David J., Murphy, Rebecca R., Ke... Code Annotations

PNAS

Long-term nutrient reductions lead to the unprecedented recovery of a temperate coastal

Jonathan S. Lefcheck[a,b,1], Robert J. Orth[b], William C. Dennison[c], David J. Wilcox[b], Rebecca R. Murphy[d], Jennifer Keisman[e], Cassie Gurbisz[f,g], Michael Hannam[h], J. Brooke Landry[i], Kenneth A. Moore[b], Christoph Jeremy Testa[k], Donald E. Weller[h], and Richard A. Batiuk[l]

[a]Center for Ocean Health, Bigelow Laboratory for Ocean Science, East Boothbay, ME 04544; [b]Department of Biological Sciences, Virginia In Science, The College of William & Mary, Gloucester Point, VA 23062; [c]University of Maryland Center for Environmental Science, Cambri [d]University of Maryland Center for Environmental Science, Chesapeake Bay Program Office, Annapolis, MD 21403; [e]US Geological Surve 21228; [f]National Socio-Environmental Synthesis Center, Annapolis, MD 21401; [g]Environmental Studies Program, St. Mary's College of Ma

Lefcheck, Jonathan S., Orth, Robert J., Dennison, William C., Wilcox, David J., Murphy, Rebecca R., Keisman, Jennifer, Gurl

NVivo File Edit Create Data Analyze Query Explore Layout View Window Help

Literature Review

Home Create Data Analyze Query Explore Layout View

Project Documents PDFs Dataset Picture NCapture Audios Videos Transcript Rows Memos OneNote Data Classification Sheets Attribute Values Bibliographic Data

Import

Items List Classification Sheets

Export

SOURCES
- Internals
- Externals
- Memos

NODES
- Nodes
- Cases
- Node Matrices

CLASSIFICATIONS
- Source Classifications
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QUERIES
- Queries
- Results

MAPS

OPEN ITEMS

Lefcheck, Jonathan S., Orth, Robert J....

McKeown, A. Elaine & Bugyi, George (...

Name	Nodes	Referen...	Created On	Created By	Modified On
Hobbie, Sarah E., Finlay, J...	0	0	Today, 5:40 PM	EC	Today, 5:40 PM
Huang, Tinglin (2015)-8	0	0	Today, 5:40 PM	EC	Today, 5:40 PM
Li, Hui, Yang, Zhifeng, Liu...	0	0	Today, 5:40 PM	EC	Today, 5:40 PM
McKeown, A. Elaine & Bu...				EC	Today, 5:42 PM

Articles without PDF in Externals

Right click > Get Info

Open
Get Info
Open External File
Export...
Print...
Copy
Delete
Code Sources
Uncode Sources
Auto Code...
Memo Link
Create As
Add To Set...
Visualize
Color
Classification

McKeown, A. Elaine & Bugyi, George (2016)-7

Code Annotations Edit

SOURCES › Externals › McKeown, A. Elaine & Bugyi, George (2016)-7

External Properties

General

Name: McKeown, A. Elaine & Bugyi, George (2016)-

Description: "This book highlights several important water-related issues and explores a number of potential solutions to the problem of water

Location: Externals

Size: 9 KB

Color:

External

Type: Other

Location:

Location Description: Unknown

Contents:

Unit:

Start range: 0

End range: 0

Attribute Values

Classification: Book

Attribute	Value
Abbreviation	Unassigned
Access Date	Unassigned
Accession Num...	Unassigned

Modification History

Cancel Done

External Properties

General

Name: Li, Hui, Yang, Zhifeng, Liu, Gengyuan, Casaz:

Description:

Location: Externals

Size: 9 KB

Color:

External

Type: Web Link

URL Path: http://www.scienc...59652617310983

Location Description:

Contents:

Unit:

Start range: 0

End range: 0

Attribute Values

Classification: Journal Article

Attribute	Value
Access Date	Unassigned
Accession Num...	Unassigned
Added To Library	Unassigned

Modification History

Cancel Done

NVivo File Edit Create Data Analyze Query Explore Layout View Window Help

Literature Review

Home Create Data Analyze Query Explore Layout View

Project Documents PDFs Dataset Picture NCapture Audios Videos Transcript Rows Memos OneNote Data Classification Sheets Attribute Values Bibliographic Data

Import

Items List Classification Sheets

Export

SOURCES Hide
- Internals
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- Source Classifications
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COLLECTIONS
- Sets
- Memo Links

OPEN ITEMS
- Huang, Tinglin (2015)-8 Imported...
- Hobbie, Sarah E., Finlay, Jacques C...
- Allaire, Maura, Wu, Haowei & Lall, U...
- McKeown, A. Elaine & Bugyi, Georg...
- Li, Hui, Yang, Zhifeng, Liu, Gengyua...

Name	Nodes	Referen...	Created On	Created By	Modified On
Allaire, Maura, Wu, Haow...	0	0	Today, 5:40 PM	EC	Today, 5:40 PM
Hobbie, Sarah E., Finlay, J...	0	0	Today, 5:40 PM	EC	Today, 5:40 PM
Huang, Tinglin (2015)-8 I...	0	0	Today, 5:40 PM	EC	Today, 5:40 PM
Lefcheck, Jonathan S., Or...	0	0	Today, 5:40 PM	EC	Today, 5:40 PM
Li, Hui, Yang, Zhifeng, Liu...	0	0	Today, 5:40 PM	EC	Today, 5:40 PM
McKeown, A. Elaine & Bu...	0	0	Today, 5:40 PM	EC	Today, 5:40 PM

Allaire, Maura, Wu, Haowei & ... (2018)-13 Imported Notes Code Annotations Edit

Click Memos to view abstract imported from EndNote

Click to edit memo

Content imported from reference library at 05:40 PM, Tuesday Mar 06, 2018

{Abstract}
Drinking water contaminants pose a harm to public health. S
illness, such as the 16 million cases of acute gastroenteritis t
community water systems. Here, we show that health-based drinking water quality violations
are widespread, with 9–45 million people possibly affected during each of the past 34 years.
While relatively few community water systems (3–10%) incur health-based violations in a
given year, improved compliance is needed to ensure safe drinking water nationwide.
Currently, state enforcement agencies lack a systematic procedure to select systems for

SOURCES › Memos › Allaire, Maura, Wu, Haowei & Lall, Upmanu (2018)-13 Imported Notes

NVivo File Edit Create Data Analyze Query Explore Layout View Window Help

Literature Review

Home Create Data Analyze Query Explore Layout View

Project Documents PDFs Dataset Picture NCapture Audios Videos Transcript Rows Memos OneNote Data Classification Sheets Attribute Values Bibliographic Data

Import

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OPEN ITEMS
- McKeown, A. Elaine & Bugyi, Georg...
- Li, Hui, Yang, Zhifeng, Liu, Gengyua...
- Lefcheck, Jonathan S., Orth, Rober...
- Book
- Journal Article

Name	Type	Created On	Created...	Modified On	Modifie
Book		Today, 5:40 PM	EC	Today, 5:40 PM	EC
Journal Article		Today, 5:17 PM	EC	Today, 5:40 PM	EC

Source classification

Journal Article

Name	Author	Year	Title	Journal	Volume
Allaire, Maura, W...	Allaire, Ma...	2018	National tr...	Proceedin...	115
Lefcheck, Jonath...	Lefcheck,...	2018	Long-term...	Proceedin...	Unassigned
Hobbie, Sarah E.,...	Hobbie, S...	2017	Contrastin...	Proceedin...	114
Li, Hui, Yang, Zhi...	Li, Hui; Ya...	2017	Analyzing...	Journal of...	161

CLASSIFICATIONS › Source Classifications › Journal Article

NVivo File Edit Create Data Analyze Query Explore Layout View Window Help

Literature Review

Home Create Data Analyze Query Explore Layout View

Close All | Close | Zoom | Detail View | Coding Stripes | Highlight | Node | Node Matrix | Classification

Application | Window | Coding | Detail View

✓ On Right
At Bottom

Change the detail view panel

SOURCES
- Internals
- Externals
- Memos

NODES
- Nodes
- Cases
- Node Matrices

CLASSIFICATIONS
- Source Classifications
- Case Classifications

COLLECTIONS
- Sets
- Memo Links

OPEN ITEMS
- Li, Hui, Yang, Zhifeng, Liu, Gengyua...
- Lefcheck, Jonathan S., Orth, Rober...
- Book
- Journal Article
- Allaire, Maura, Wu, Haowei & Lall, U...

Allaire, Maura, Wu,
Lefcheck, Jonathan

Allaire, Maura, Wu, Haowei & Lall, Upmanu (2018)-13 | Code | Annotations

PNAS

National trends in drinking water qu

Maura Allaire[a,1], Haowei Wu[b], and Upmanu Lall[b,c]

[a]Department of Urban Planning and Public Policy, University of California, Irvine, CA 92697; [b]Columbia
NY 10027; and [c]Department of Earth and Environmental Engineering, Columbia University, New York,

Edited by Susan Hanson, Clark University, Worcester, MA, and approved January 9, 2018 (received for r

Ensuring safe water supply for communities across the United States is a growing challenge in the face of aging infrastructure, impaired source water, and strained community finances. In the aftermath of the Flint lead crisis, there is an urgent need to assess the current state of US drinking water. However, no nationwide assessment has yet been conducted on trends in drinking water quality violations across several decades. Efforts to reduce violations are of national concern given that, in 2015, nearly 21 million people relied on community water systems that violated health-based quality standards. In this paper, we evaluate spatial and temporal patterns in health-related violations of the Safe Drinking Water Act using a panel dataset of 17,900 community water systems over the period 1982–2015. We also identify vulnerability factors of communities and water systems through probit regression. Increasing time trends and violation hot spots are detected in several states, particularly in the Southwest region. Repeat violations are prevalent in locations of violation hot spots, indicating

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This paper present

SOURCES › Internals › Allaire, Maura, Wu, Haowei & Lall, Upmanu (2018)-13

Name

- Safe drink water
- Water quality
  - Quality monitoring
  - Quality violations

Command+f to search keyword in the pdf

Lefcheck, Jonathan S., Orth, Robert J., Dennison, William C., Wilcox, David J., Murphy, Rebecca R., Keisman, Jennifer, Gurbisz, Cassie, Hannam, Michae...

water quality

widely recognized in Chesapeake Bay (24, 25) and elsewhere (22, 26, 27), but we demonstrate that they operate simultaneously and at large scales, a key finding that validates small-scale experimental work (19) and has direct implications for nutrient management.

We also find a consistent role for biodiversity (i.e., species richness of SAV) in promoting cover (Figs. 1 and 2). At the bay-wide average richness of three species, one additional species would result in a 1.8-fold increase in total SAV cover. Because salinity strongly affects species' distributions in Chesapeake Bay (18), the consequences of increasing diversity applies primarily to oligohaline and freshwater regions (Fig. 1 *A* and *B*), where more than a dozen SAV species coexist (*SI Appendix*, Table S1) and where recovery has been greatest (Fig. 3*A*) (28). The importance of richness in our models was unexpected, as its inclusion was meant only to distinguish monospecific stands of species like *Zostera marina* and *Hydrilla verticillata*, which are known to respond differently than other SAV species in this system (8, 15). We believe this result is robust because we accounted for sampling effort through rarefaction (Figs. 1 and 2), and we modeled extrinsic controls on cover such as sampling area, nutrient concentration, and light availability that might generate otherwise spurious correlations (e.g., ref. 24; see also *SI Appendix*). The richness effect is consistent with global studies of terrestrial plants and fishes (29, 30) and provides large-scale confirmation of diversity effects reported for local seagrass plots in the Indo-West Pacific (31). Our finding confirms, then, that conservation or restoration of species diversity could further enhance recovery of underwater grasses.

have seen large resurgences in seagrass cover with improved water clarity, such as in Tampa Bay, Florida (33), or improved sediment stability, as in the Wadden Sea (34); but the Chesapeake Bay has seen greater total and proportional recovery than any other SAV restoration project of which we are aware. There have also been well-documented increases in kelp forests after the cessation of trawling or implementation of no-take reserves in the Gulf of Maine (35), Norway (36), and Tasmania (37), and on coral reefs in the Bahamas (38), although these studies generally extrapolate from local observations or model predictions to the regional scale. While recovery in these systems is undeniably sizable, the lack of actual cover data contrasts these examples against shallow subtidal SAV systems where regional cover can be accurately quantified. Our precise measures of SAV cover makes a strong case for the Chesapeake Bay as one of the preeminent ecological restorations reported to date.

The Chesapeake Bay Program, which is responsible for overseeing the SAV restoration reported here, is also a unique example of cooperation among federal, state, and local agencies. While most other recoveries have occurred in one or few jurisdictions, the Chesapeake Bay watershed spans six US states and the District of Columbia. The coordination, monitoring, and enforcement of regulations pertaining to water quality and habitat protection have therefore posed a significant challenge. Despite these difficulties, sustained efforts have yielded a substantial positive outcome for the overall health of the bay (Fig. 3). Studies that provide positive examples of successful human intervention have been shown to strengthen public support for

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Lefcheck, Jonathan S., Orth, Robert J....

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Allaire, Maura, Wu, Haowei & Lall, Upmanu (2018)-13 | Code | Annotations

PNAS

National trends in drinking water qu

Maura Allaire[a,1], Haowei Wu[b], and Upmanu Lall[b,c]

[a]Department of Urban Planning and Public Policy, University of California, Irvine, CA 92697; [b]Columbia
NY 10027; and [c]Department of Earth and Environmental Engineering, Columbia University, New York,

Edited by Susan Hanson, Clark University, Worcester, MA, and approved January 9, 2018 (received for r

Ensuring safe water supply for communities across the United States is a growing challenge in the face of aging infrastructure, impaired source water, and strained community fina
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temporal patterns in health-based violations of the S
Water Act using a panel dataset of 17,900 comm
systems over the period 2015. We also identify
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Ensuring safe wate

Allaire, Maura, Wu, Haowei & Lall, Upmanu (2018)-13

In terms of vulnerability factors, we find that violation incidence in rural areas is substantially higher than in urbanized areas. Meanwhile, private ownership and purchased water source are associated with compliance. These findings indicate the types of underperforming systems that might benefit from assistance in achieving consistent compliance. We discuss why certain violations might be clustered in some regions and strategies for improving national drinking water quality.

drinking water | water quality | violations | Safe Drinking Water Act | regulatory compliance

Ensuring access to safe drinking water poses a challenge for US water systems in the face of aging infrastructure, impaired source water, and strained community finances. Communities across the country have been impacted by recent cases of impaired water quality. The Flint crisis exposed as many as 98,000 residents to elevated levels of lead, disinfection byproducts (DBPs), and *Escherichia coli* and *Legionella* bacteria. In addition, substantial populations have coped with interruptions to potable water supply due to the Elk River chemical spill in West Virginia and unregulated toxins formed during algal blooms near Toledo, Ohio. These well-publicized events motivate the need to assess the current state of US drinking water quality. How widespread are violations? Are violations more prevalent in vulnerable communities, such as low-income and rural areas? Do utility characteristics, such as private ownership and origin of source water, influence the likelihood that violations occur?

Identifying threats and potential improvements to water services are needed, given that an estimated 16.4 million cases of acute gastroenteritis each year in the United States are attributed to community water systems (CWSs) (1). Equity concerns are also gaining recognition as evidence builds regarding lower income and minority communities receiving poor quality water (2, 3). Generally, water systems in the United States provide reliable and high-quality drinking water. Violations tend to

water quality violations across sev
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and violations have generally been
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summary statistics of violations for
2011. A key finding is that similar
systems incur health-based violatio

Significance

Drinking water contaminants po
Some can cause immediate illness
of acute gastroenteritis that occu
water systems. Here, we show
water quality violations are wi
people possibly affected during
While relatively few community
health-based violations in a given
needed to ensure safe drinking

Create a new node

At Existing Nodes or Cases...
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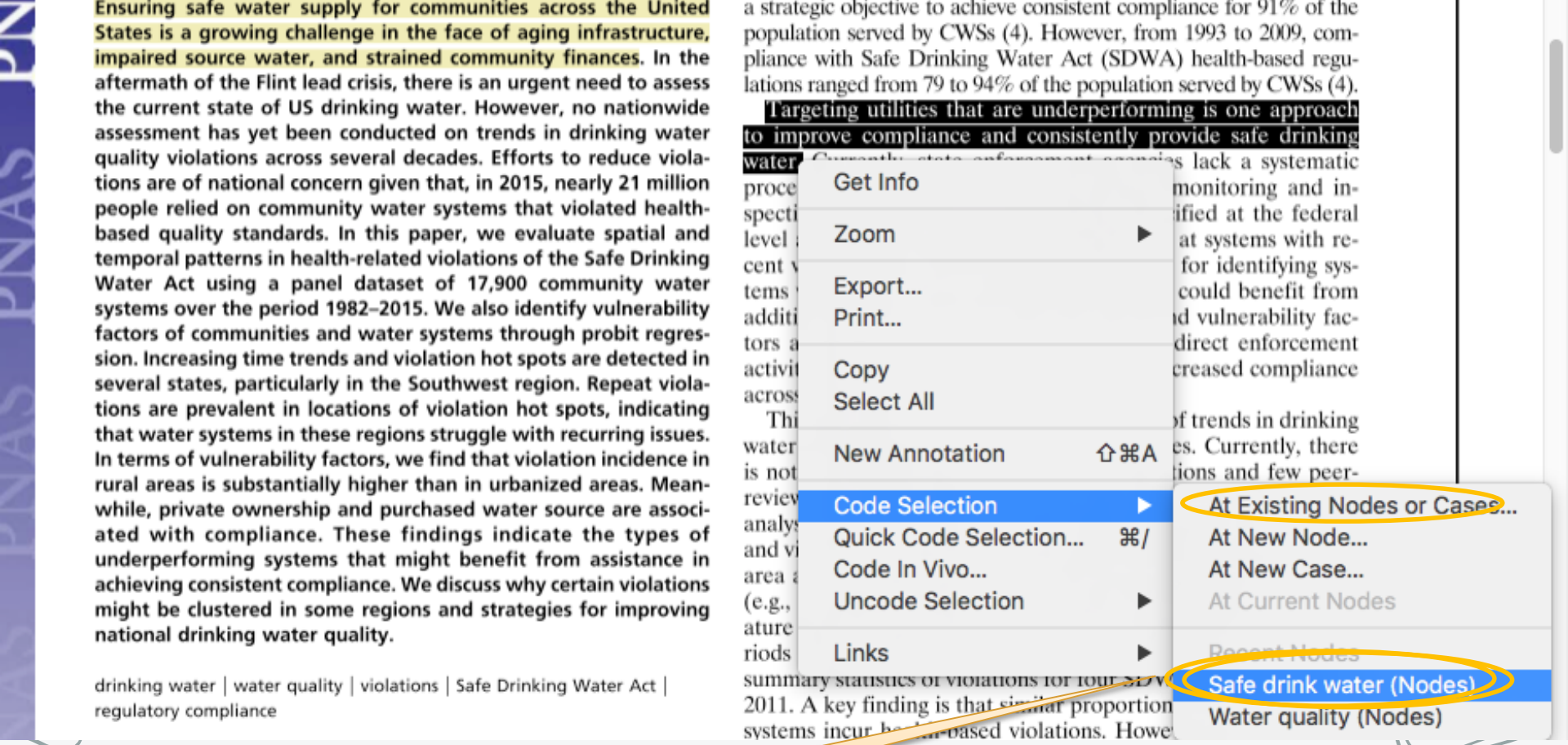

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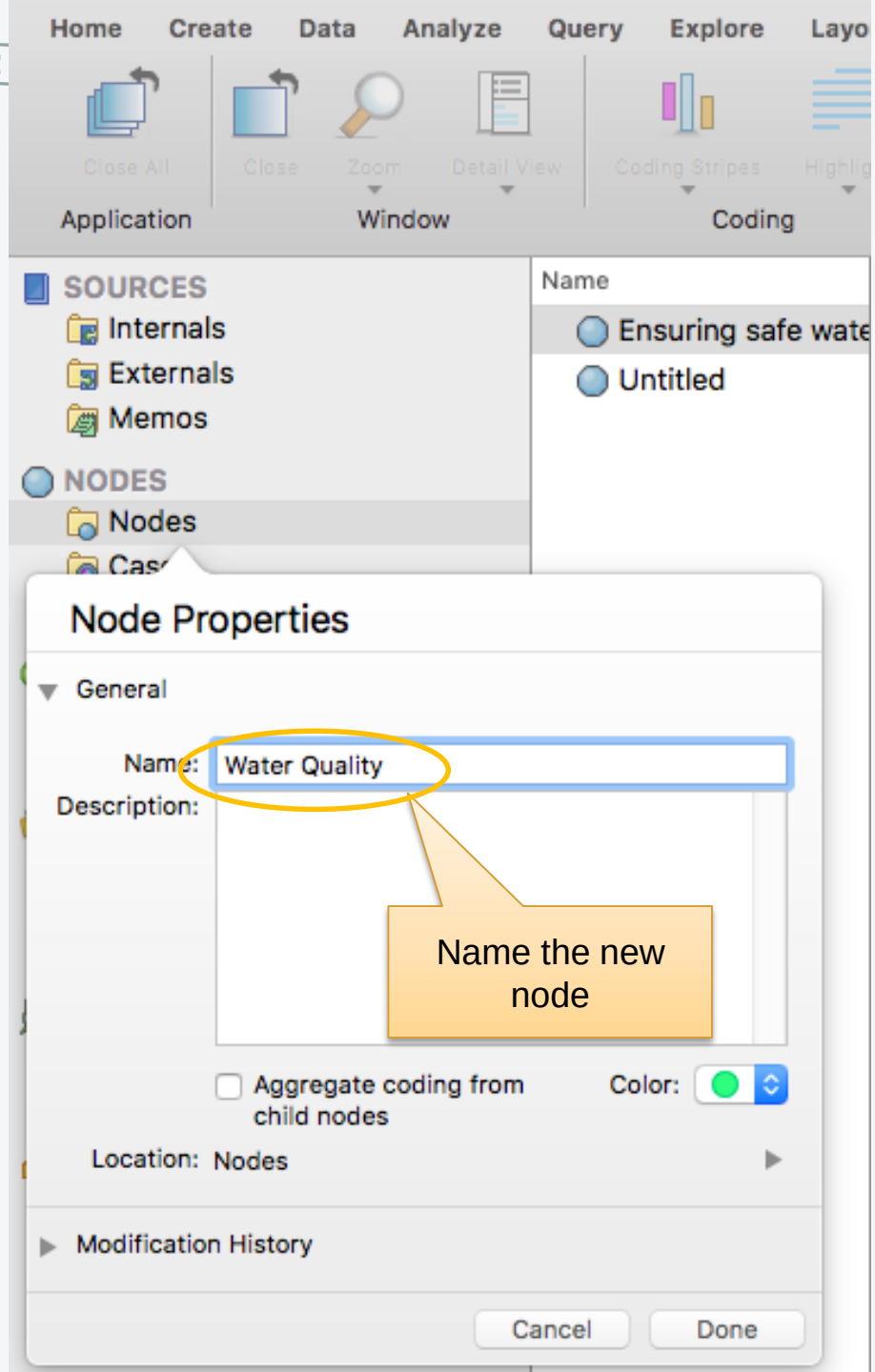
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- Lefcheck, Jonathan S., Orth, Robert J....
- Allaire, Maura, Wu, Haowei & Lall, Up...
- Safe drink water
- Water quality

Name
- Safe drink water
- Water quality

Safe drink water

Code | Annotations

Summary | Reference

Internals\\Allaire, Maura, Wu, Haowei & Lall, Upmanu (2018)-13
1 reference coded, 0.22% coverage

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Ensuring safe water supply for comm ities across the United States is a growing chal in the face of aging infrastructure, in ired source water, and strained community fina

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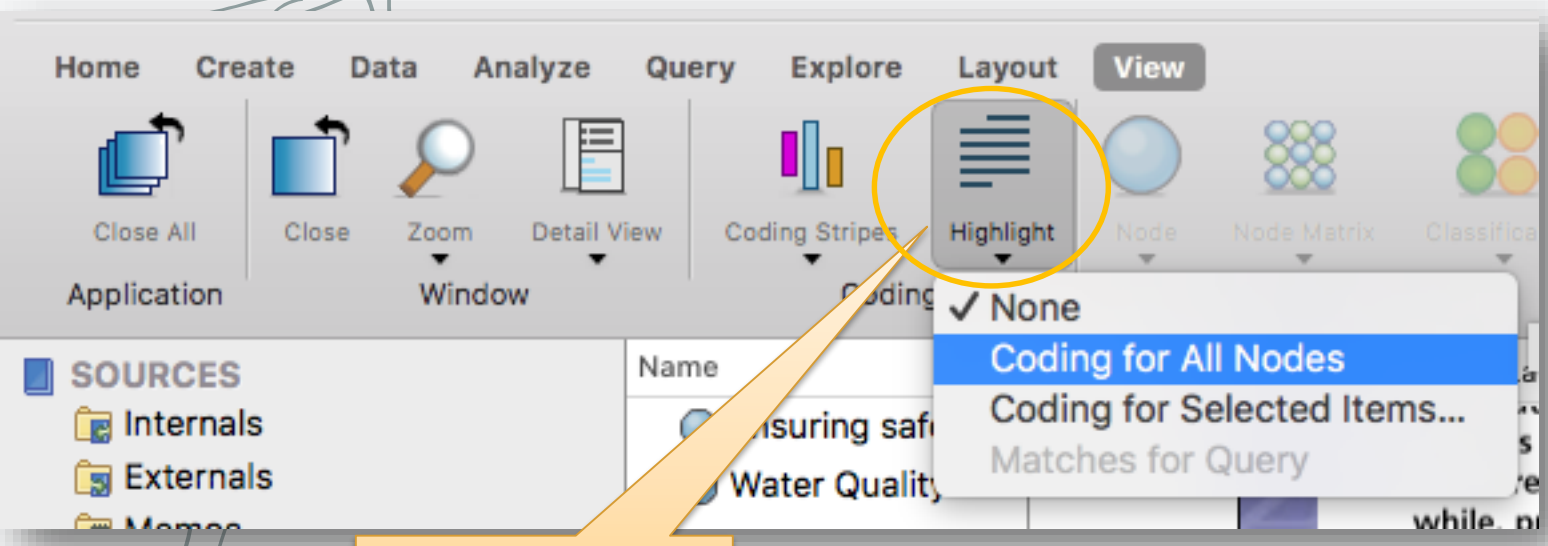

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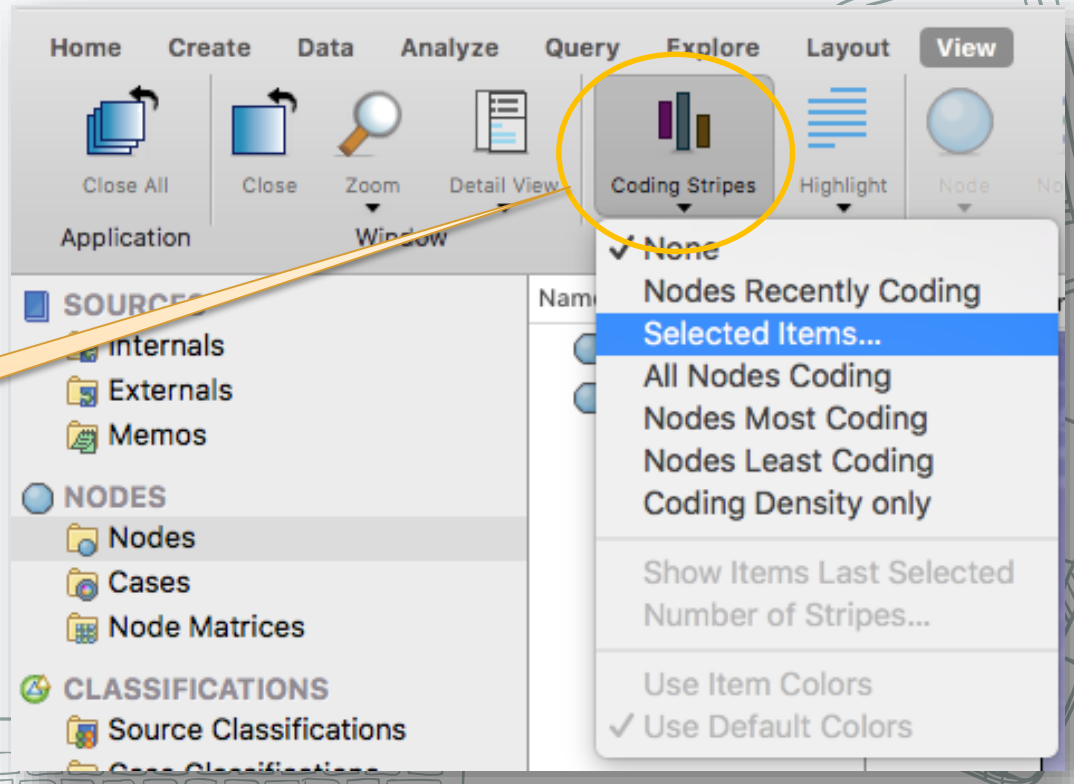

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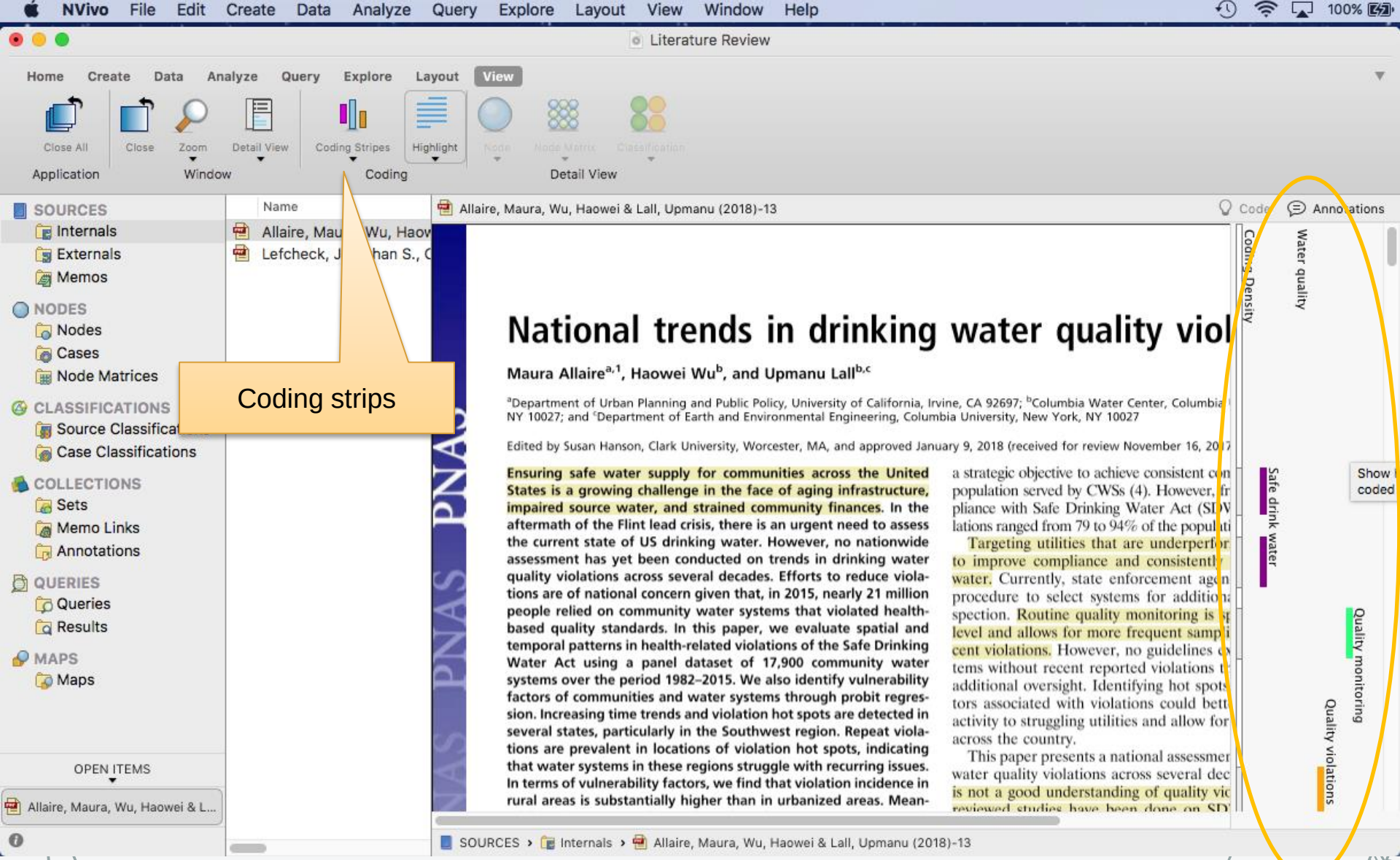
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Safe drink water
Quality monitoring
Quality violations
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National trends in drinking water quality viol
Maura Allaire[a,1], Haowei Wu[b], and Upmanu Lall[b,c]
[a]Department of Urban Planning and Public Policy, University of California, Irvine, CA 92697; [b]Columbia Water Center, Columbia NY 10027; and [c]Department of Earth and Environmental Engineering, Columbia University, New York, NY 10027
Edited by Susan Hanson, Clark University, Worcester, MA, and approved January 9, 2018 (received for review November 16, 2017
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a strategic objective to achieve consistent con
population served by CWSs (4). However, fr
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activity to struggling utilities and allow for
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This paper presents a national assessmen
water quality violations across several dec
is not a good understanding of quality vio
reviewed studies have been done on SDW
SOURCES › Internals › Allaire, Maura, Wu, Haowei & Lall, Upmanu (2018)-13

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OPEN ITEMS

Allaire, Maura, Wu, Haowei & L...

Name
- Safe drink water
- Water quality
  - Quality monitoring
  - Quality violations

New Top Level Node...
Export List...
Print List...
Paste
Merge Into New Node...
Sort By
Expand/Collapse

Right click on space to create new node at the root level

Allaire, Maura, Wu, Haowei & Lall, Upmanu (2018)-13

National trends in d

Maura Allaire[a,1], Haowei Wu[b], and Upmanu

[a]Department of Urban Planning and Public Policy, Univer
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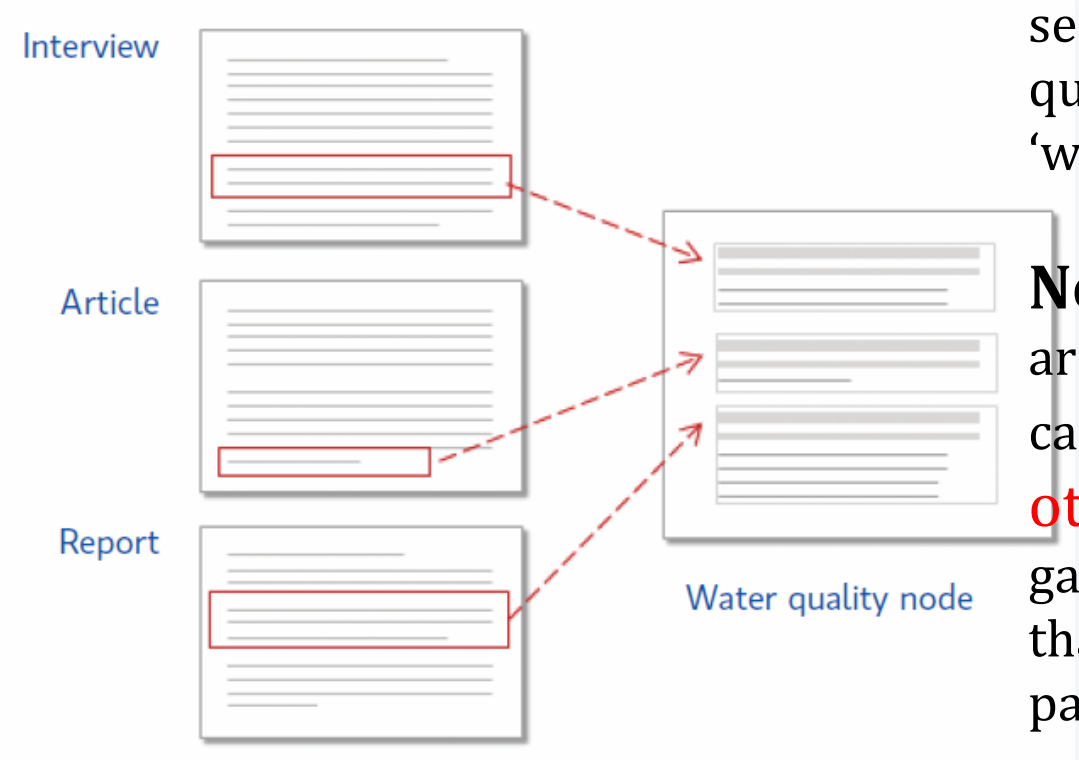
SOURCES › Internals › Allaire, Maura, Wu, Haowei &

NVivo Key Terms



Coding

is the process of gathering material by topic, theme or case. For example, selecting a paragraph about water quality and coding it at the node 'water quality'.

Nodes

are containers for your coding that can represent themes, topics or other concepts—they let you gather related material in one place so that you can look for emerging patterns and ideas.

Source: NVivo-for-Mac-Getting-Started-Guide.pdf

Nodes on themes

	Mixed	Positive	Neutral	Negative
2 weeks before election day				
1 week before election day				
On election day				
1 day after election day				

Case Nodes to compare across time

Nodes on themes

	Mixed	Positive	Neutral	Negative
Hong Kong Island				
Kowloon West				
Kowloon East				
New Territories East				

Case Nodes represent places

Nodes on themes

	Mixed	Positive	Neutral	Negative
Male				
Female				

Case Nodes for demographic attributes

Coding

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- Safe drink water
- Water quality

Name	Sources	References	Crea
Safe drink water	1	2	To
Water quality	1	1	To
Quality monitoring	2	3	To
Quality violations	1	2	To

Quality monitoring — Code — Annotations

Summary | Reference

Internals\\Allaire, Maura, Wu, Haowei & Lall, Upmanu (2018)-13
1 reference coded, 0.16% coverage

Reference 1: 0.16% cover

Routine quality monitoring is specified at the federal level and allows for more frequen sampling at systems with recent violations.

Internals\\Lefcheck, Jonathan S., Orth, Robert J., Dennison, William C., Wilcox, Davi Murphy, Rebecca R., Keisman, Jennifer, Gurbisz, Cassie, Hannam, Michael, Landry Brooke, Moore, Kenneth A., Patrick, Christopher J., Testa, Jeremy, Weller, Donald E Batiu
2 references coded, 0.44% coverage

Reference 1: 0.26% cover

lumbia. The coordination, monitoring, and enforcement of regulations pertaining to wa quality and habitat protection have therefore posed a significant challenge.

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Water Quality Data. Water quality data were obtained from the Chesapeake Bay Progra Water Quality Monitoring Database (w

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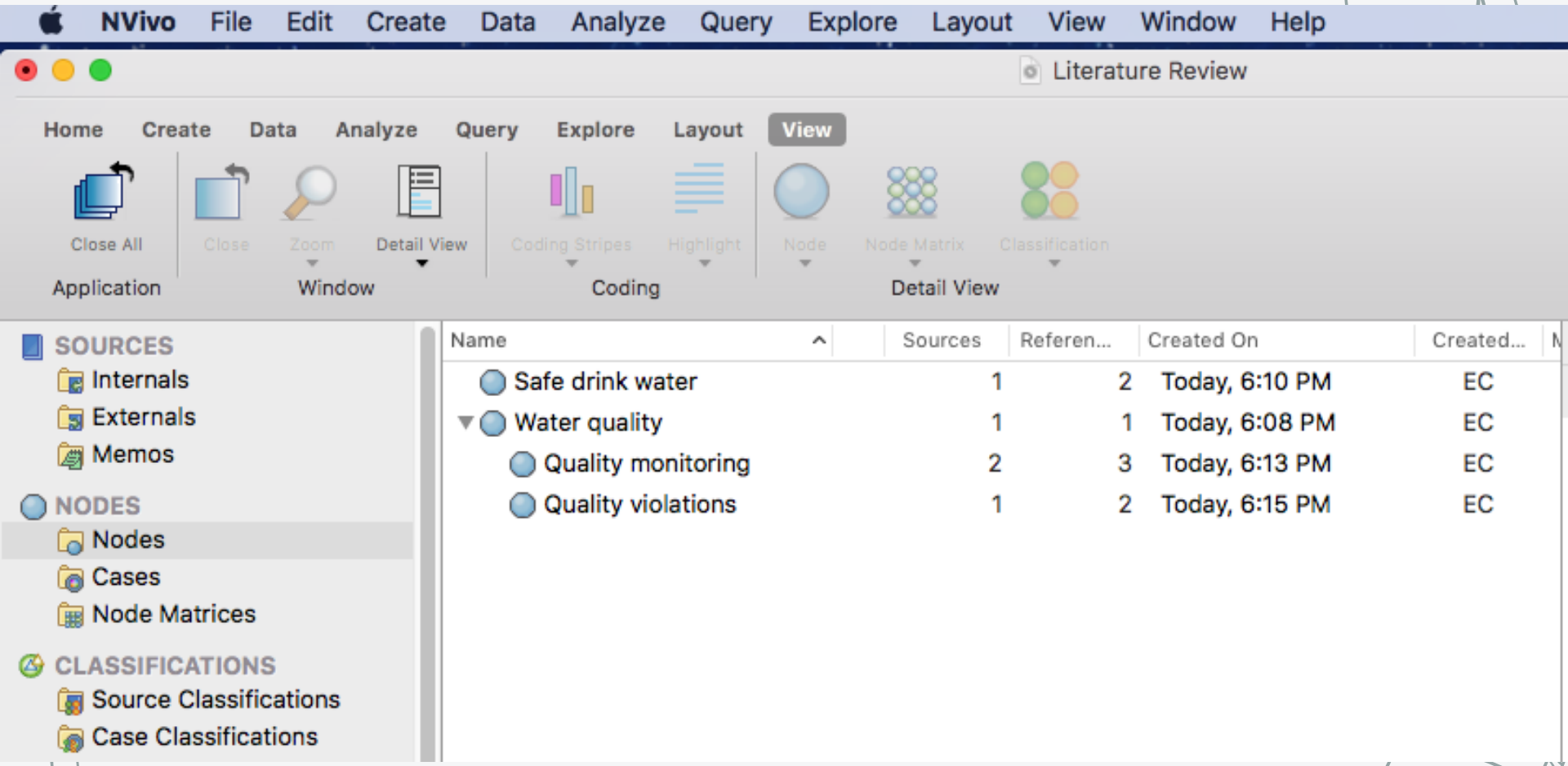
Coding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Safe drink water 1 2 Today, 6:10 PM EC
Water quality 1 1 Today, 6:08 PM EC
Quality monitoring 2 3 Today, 6:13 PM EC
Quality violations 1 2 Today, 6:15 PM EC

Hierarchy Chart

Sample Project 1

Create an explore diagram to see all the project items connected to the selected item

ery | Explore | Layout | View

Mind Map | Hierarchy Chart | Explore Diagram | Comparison Diagram | Source Classification Sheets | Case Classification Sheets

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  - Autocoded Social Media
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- Nodes compared by number of cod...
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- Nodes compared by number of cod...

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  - Mixed
  - Negative
  - Neutral
  - Positive
- Balance
- Community change
- Economy
- Infrastructure
- Memorable quotes
- Natural environment
- Policy, management
- Real estate developmen
- Sense of community Do

Nodes compared by number of coding references

Visualize:
- Coding for Nodes
- Coding for Sources
- Attribute values for Cases
- Attribute values for Sources

Compare: All Nodes | All Cases | Selected Items

Coded at: All Sources | Selected Items

For example, see if some nodes have more coding references than others to identify prominent themes in the project.

Treemap | Sunburst | Summary

Nodes	Number of coding references	Ag
Nodes\\Attitude	0	
Nodes\\Attitude\Mixed	44	
Nodes\\Attitude\Negative	500	
Nodes\\Attitude\Neutral	27	
Nodes\\Attitude\Positive	422	
Nodes\\Autocoded Responses\\Autocoded Interview Q...	0	
Nodes\\Autocoded Responses\\Autocoded Interview Q...	11	
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Nodes\\Autocoded Responses\\Autocoded Interview Q...	11	
Nodes\\Autocoded Responses\\Autocoded Interview Q...	10	
Nodes\\Autocoded Responses\\Autocoded Interview Q...	10	
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Size by:
- Coding references
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- Items coded
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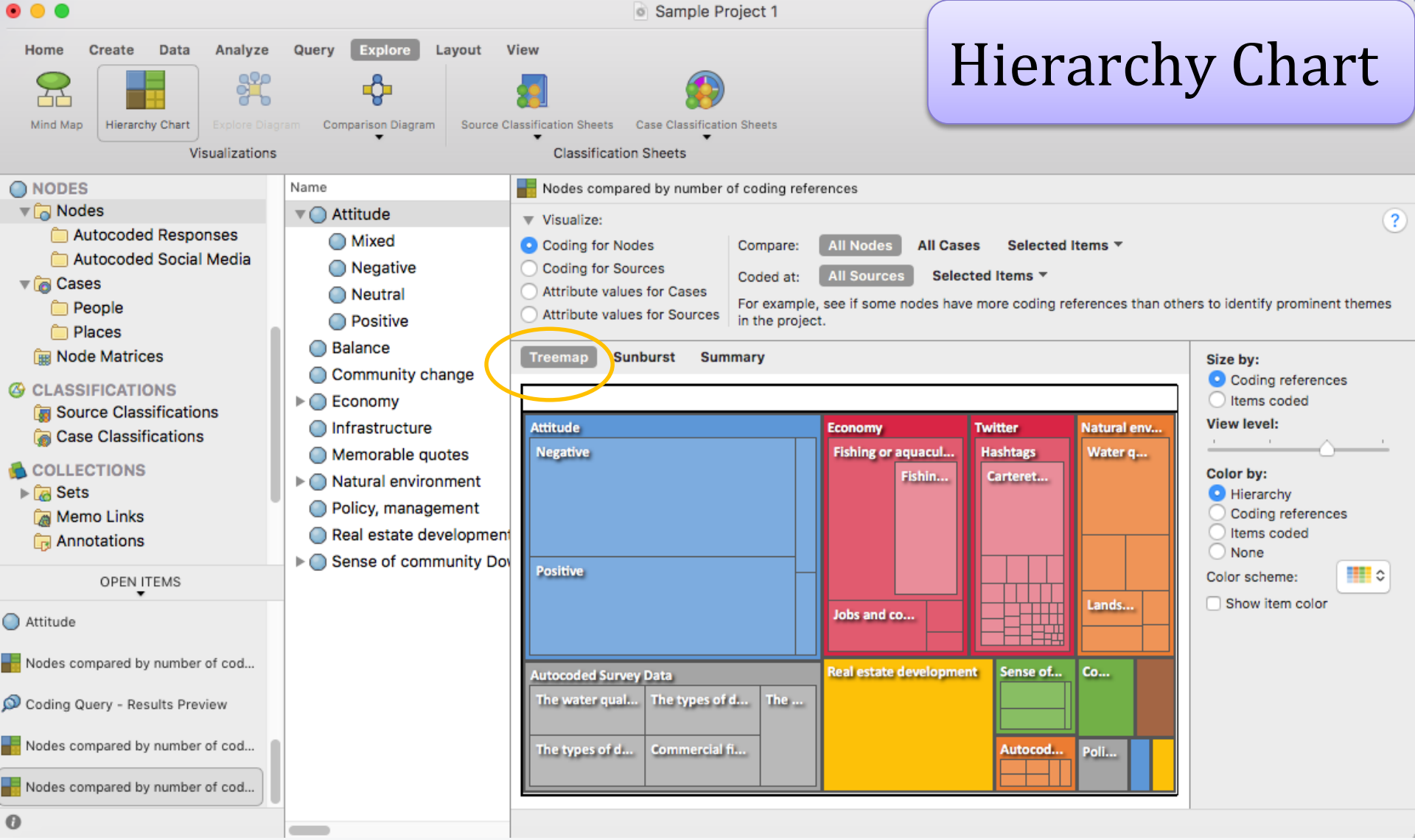
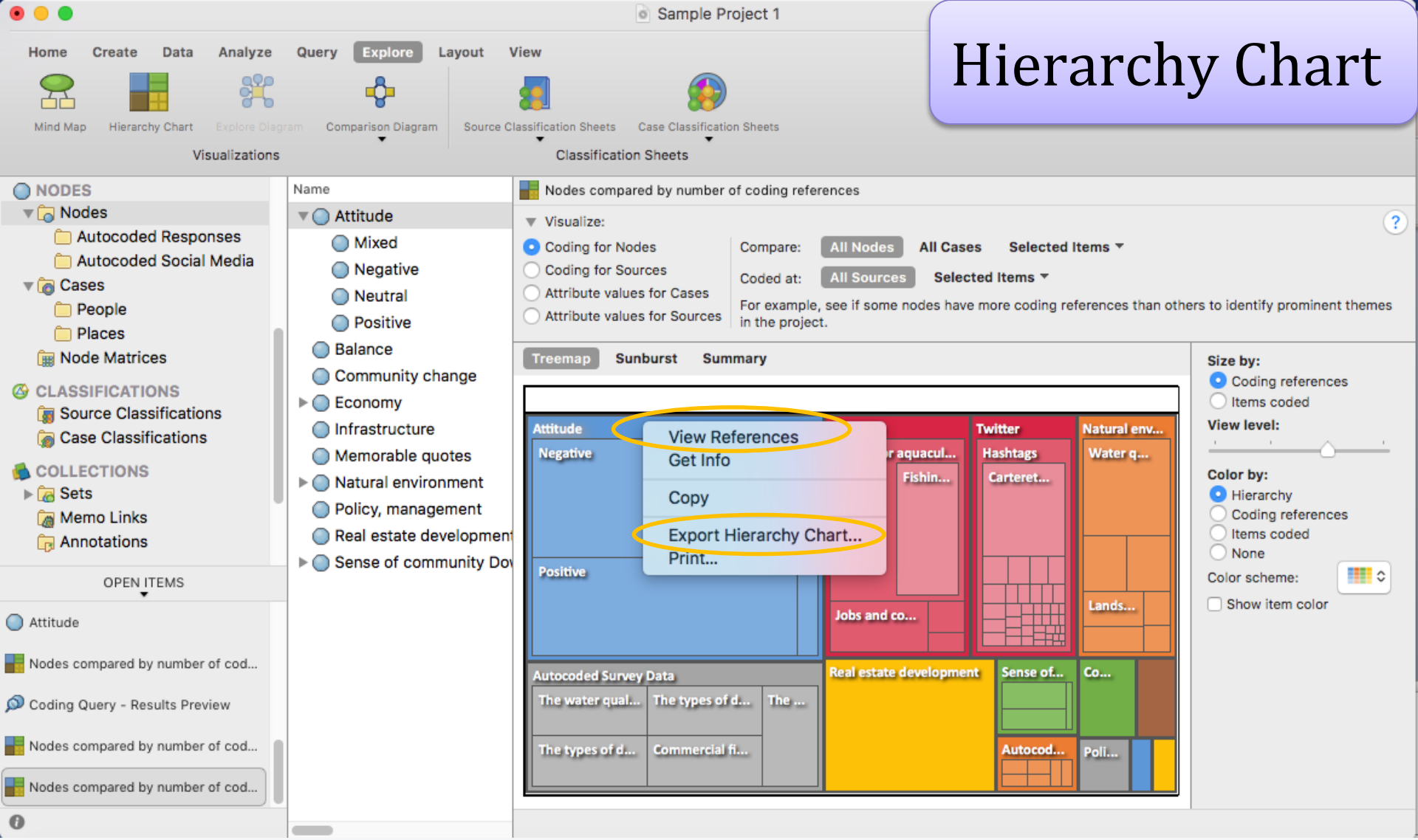
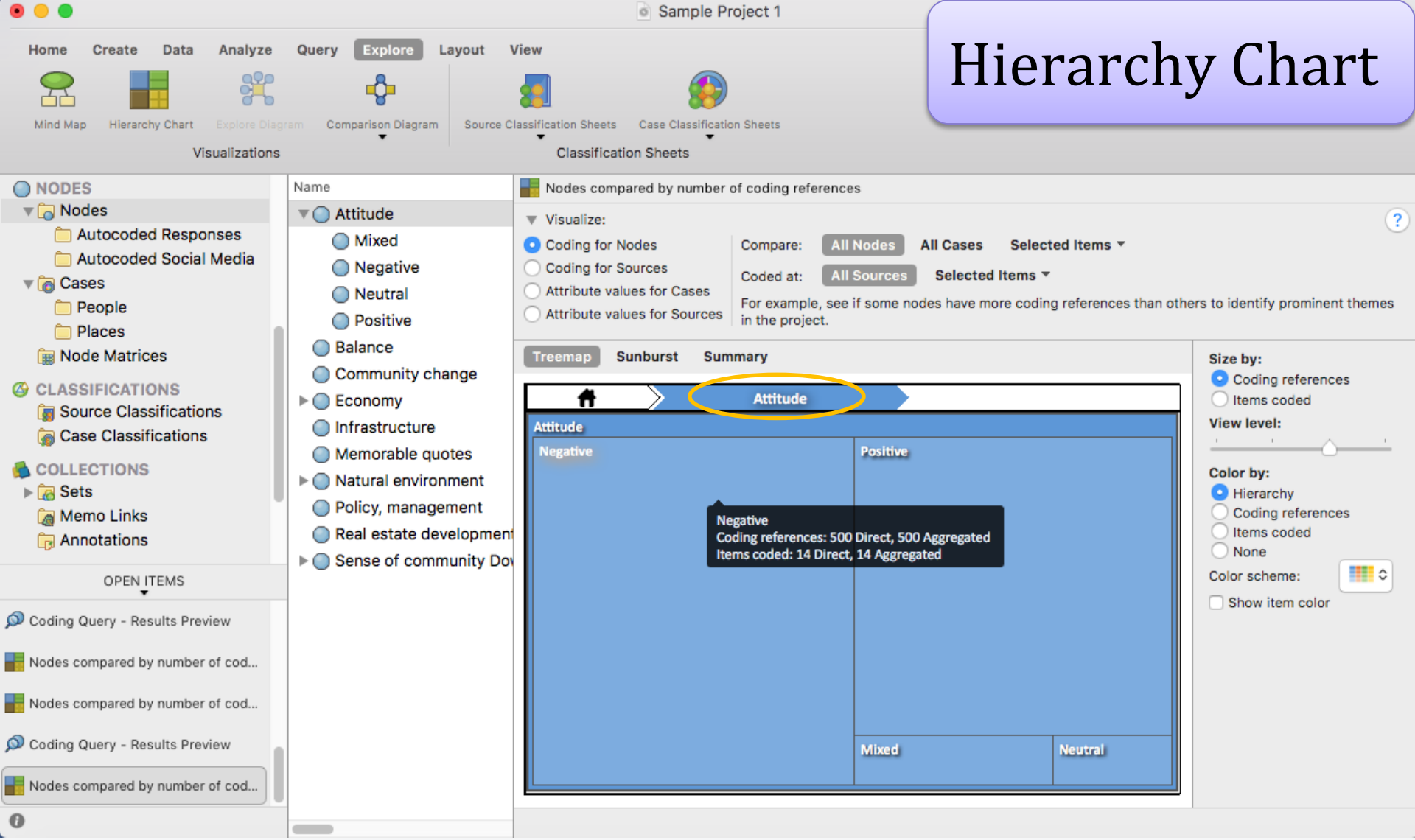
Hierarchy Chart



Hierarchy Chart



Hierarchy Chart



Hierarchy Chart

Sample Project 1

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- Nodes compared by number of cod...
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- Sense of community Do

Coding Query - Results Preview | Code | Annotations

Coding Query Criteria | Run Query | Save Results... | Save Query...

Search in: All Sources | Selected Items | Items in Selected Folders

For content matching these criteria:

All of the following are true

Coded at all of these nodes (1) Negative

Summary | Reference

Internals\\Interviews\\Barbara
3 references coded, 10.59% coverage

Reference 1: 3.50% coverage

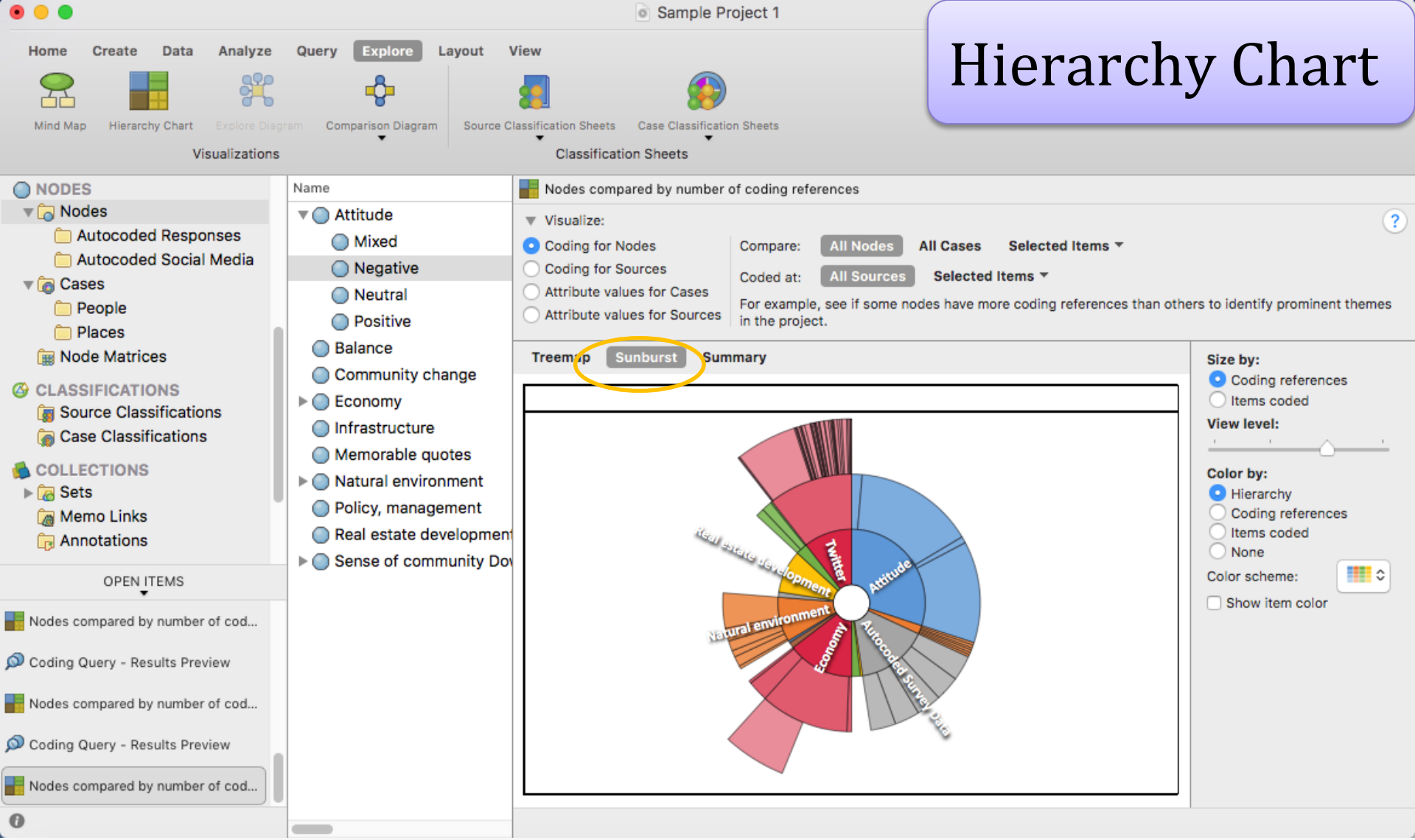
And it's tough for people to get septic permits. As environmental standards have gotten more stringent, some local people that have inherited land are finding that they can't get a permit, or they have but they have to install a very, very expensive pretreatment system, which is too much to pay for. And so I've seen it be a challenge for local people who are trying to stay where they grew up.

Reference 2: 4.75% coverage

The biggest change that I'm aware of is the sense – I think that now there's the sense the commercial fishing as a livelihood is dying as a viable option. And I know – I think that that is a change since 30 years or 35 years ago. I don't remember that being sort of this sense of doom. For me that's the most profound. That's a huge thing that I think is very sad.

Coding Query - Results Preview

Hierarchy Chart



Hierarchy Chart

Sample Project 1

Home | Create | Data | Analyze | Query | Explore | Layout | View

Mind Map | Hierarchy Chart | Explore Diagram | Comparison Diagram | Source Classification Sheets | Case Classification Sheets

Visualizations | Classification Sheets

NODES
- Nodes
  - Autocoded Responses
  - Autocoded Social Media
- Cases
  - People
  - Places
- Node Matrices

CLASSIFICATIONS
- Source Classifications
- Case Classifications

COLLECTIONS
- Sets
- Memo Links
- Annotations

OPEN ITEMS
- Nodes compared by number of cod...
- Coding Query - Results Preview
- Nodes compared by number of cod...
- Coding Query - Results Preview
- Nodes compared by number of cod...

Name
- Attitude
  - Mixed
  - Negative
  - Neutral
  - Positive
- Balance
- Community change
- Economy
- Infrastructure
- Memorable quotes
- Natural environment
- Policy, management
- Real estate development
- Sense of community Dov

Nodes compared by number of coding references

Visualize:
- Coding for Nodes
- Coding for Sources
- Attribute values for Cases
- Attribute values for Sources

Compare: All Nodes | All Cases | Selected Items

Coded at: All Sources | Selected Items

For example, see if some nodes have more coding references than others to identify prominent themes in the project.

Treemap | Sunburst | Summary

Attitude

Positive | Mixed | Negative

Size by:
- Coding references
- Items coded

View level:

Color by:
- Hierarchy
- Coding references
- Items coded
- None

Color scheme:

Show item color

1. Keep node structure simple.
   Up to a maximum of 3 levels.
2. Unique node name
3. Separate nodes for AutoCode and Manually coded nodes

1.

Create at least 3 new nodes from the articles you've imported to Nvivo. Each code with some references

5 minutes

Agenda

Part 1	1. Overview	40 min.
	2. Import bibliographic data from EndNote	
	Exercise and Break	10 min.
Part 2	3. Coding Queries	40 min.
	Exercise and Break	10 min.
Part 3	4. Import survey data	30 min.
	Exercise and Break	10 min.
Round up	5. Import document, image, audio and video files	20 min.
	6. Backup your project file & other resources	5 min.
	Q&A	5 min.

170 min.