

# High-level accessibility review – BTAA (Ebsco eBooks - final version)

## Primary Point of Contact

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**April 21<sup>st</sup>, 2017**



## High-level accessibility review – Ebsco eBooks

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## EBSCO EBOOKS

### Summary (top 3 problems for Ebsco)

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The pages in this flow return few issues from an automated testing perspective, but will still present significant problems for screen reader users, especially once users get down the consulting the resources themselves. Some of the most significant issues found during this testing include:

1. challenges raised to consult an ebook resource using NVDA,
2. objects not being accessible to keyboard only users, and
3. keyboard focus not being managed in a way that facilitates wayfinding for screen readers.

### Accessibility findings

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#### Project wide issues

The issues presented in this section were identified in multiple pages, and are recorded here to avoid repetition.

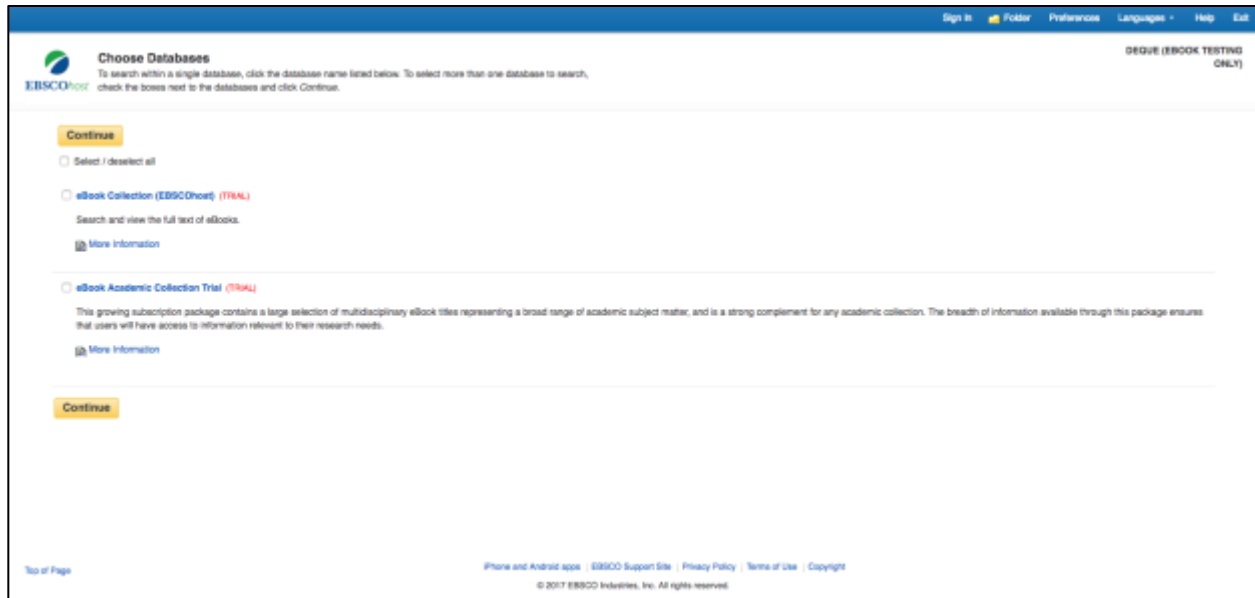
#### Automated findings using Axe

- **WCAG 1.4.3** - All text elements must have sufficient contrast between text in the foreground and background colors behind it in accordance with WCAG 2 AA contrast ratio thresholds. Some of the text in pages has insufficient contrast.
- **WCAG 2.1.1** - All accesskeys (when used) in the document must be unique. Put another way, accesskeys must not be repeated to prevent unexpected effects for keyboard users. Pages have multiple elements with the same accesskey attribute values.
- **WCAG 2.4.1** - Each page must offer a mechanism to bypass repeated blocks of content or interface elements (like header and navigation) and quickly arrive at the main content.
- **WCAG 4.1.1** - ARIA attributes (i.e. starting with aria-) must have valid names. Referring to a misspelled attribute or to one that does not exist will result in an invalid attribute and thus failure of this Rule. There are occurrences of an attribute mislabeled as "aria-haspop".

#### Additional manual findings using NVDA screen reader

- **WCAG 1.3.1** - Elements acting as headings on some pages are not marked up as such. Changing the markup would allow screen reader users to easily locate content in the page, and easily navigate to sections while relying on descriptive headings.
- **WCAG 1.3.1** – Groups of radio buttons are not programmatically associated with their common group labels. The group labels are not identified as such to assistive technologies.
- **WCAG 2.4.4** – The purpose of many links and calls to action in the pages are not meaningful, even within their immediate contexts. Providing complementary information would help distinguish the links or calls to action, as they are all labeled the same way.

## 1. Ebsco Landing page



### Automated findings using Axe

- Nothing beyond what has been reported under “Project-wide issues”.

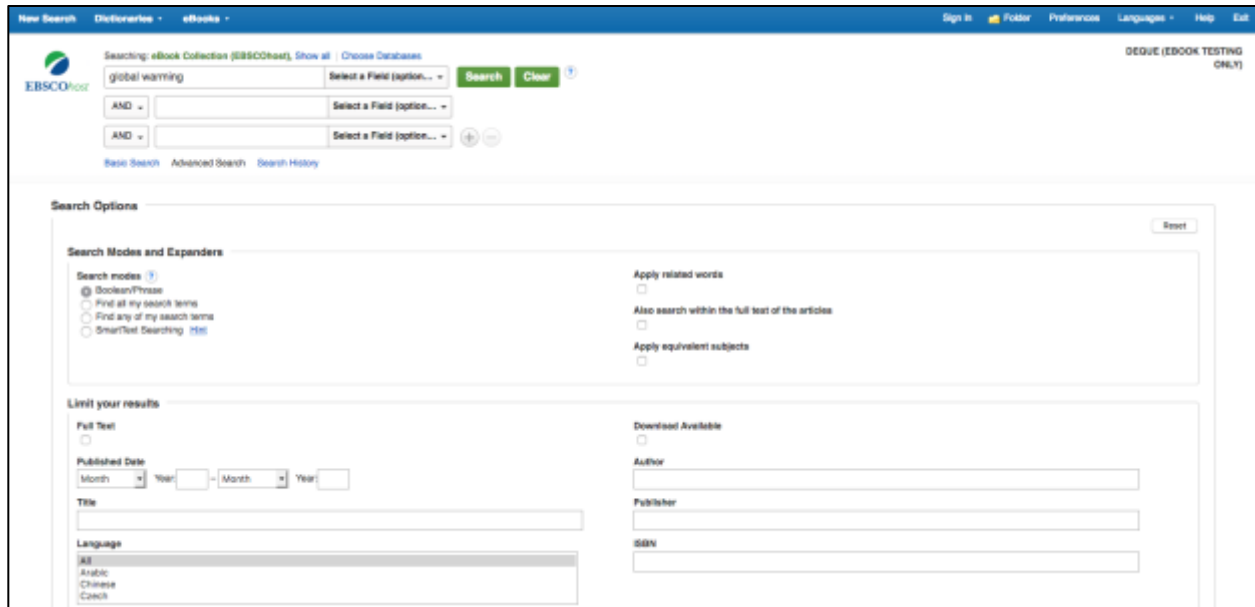
### Additional manual findings using NVDA screen reader

- **WCAG 2.4.6** - The page has a <H1> and a <H2> that are labeled the same way (“Choose databases”). It would be better to differentiate the content of the headings, so users can more easily tell them apart and better understand the structure of the content.

### Notes

Menus, search boxes, dropdowns, icons, links below search boxes were all quickly tested for accessibility as per instructions.

## 2. Running a simple search (Searching Databases page)



The screenshot displays the EBSCO eBooks search interface. At the top, there is a search bar with the text "global warming" and a "Search" button. Below the search bar, there are two "AND" operators with dropdown menus for selecting fields. The "Search Options" section includes "Search Modes and Expanders" with radio buttons for "Boolean/Phrase" (selected), "Find all my search terms", "Find any of my search terms", and "SmartText Searching". There are also checkboxes for "Apply related words", "Also search within the full text of the articles", and "Apply equivalent subjects". The "Limit your results" section includes checkboxes for "Full Text" and "Download Available", and input fields for "Published Date" (Month, Year, Month, Year), "Title", "Language" (with a dropdown menu showing "All", "Arabic", "Chinese", "Czech"), "Author", "Publisher", and "ISBN".

### Automated findings using Axe

- Nothing beyond what has been reported under “Project-wide issues”.

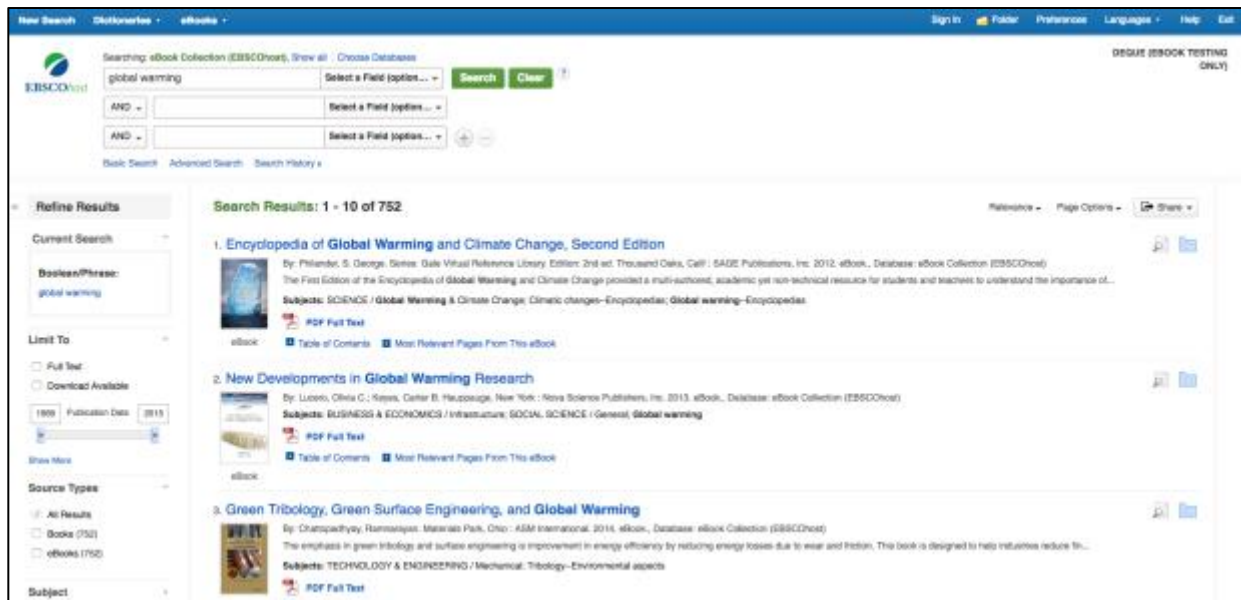
### Additional manual findings using NVDA screen reader

- **WCAG 1.3.1** – Form controls rely on title attribute values to convey their purpose. While this is acceptable as per WCAG, it is not a reliable way to convey information to assistive technologies. Consider using aria-label attributes instead.
- **WCAG 3.3.2** - The dropdown menus for “And”, “Or” and “Not” are not assigned text label that allows users to easily understand the purpose of these controls.

### Notes

Findings above (as well as those found in the “Project-wide” section) reflect low hanging fruits identified in the time allocated for testing.

### 3. Search Results page



#### Automated findings using Axe

- **WCAG 1.1.1** - The alt text provided for the book jackets only convey “book jackets”, which isn’t sufficient to let a screen reader user know what the title of the publication is about.

#### Additional manual findings using NVDA screen reader

- **WCAG 1.3.1** - All checkbox groups must have either a proper aria-labelledby value for all group members, or a proper containing <fieldset> or ARIA group to associate them programmatically for screen reader users.
- **WCAG 1.3.1** – The tables provided in the “Subject”, “Publishers’ and “Category” modal windows do not have proper association for table header cells and data cells. As a result, the header cells are not conveyed when navigating through the tables.
- **WCAG 2.1.1** - The tooltip for the preview available on the right (the icon next to the Add to folder icon) is not keyboard accessible and icon only be triggered on mouseover. It is also skipped over by screen readers due to CSS rules.
- **WCAG 2.1.1** – The slider provided in the left column for the “Limit to” section cannot be operated using only the keyboard.
- **WCAG 2.1.1** - The up and down arrows in the “Category” modal window are not keyboard operable and require a mouse to operate.
- **WCAG 2.4.3** – When a filtering option is chosen (sort by or page options dropdowns), the page is updated and the keyboard focus is sent back at the top of the page, meaning screen reader users (as well as keyboard users) need to make their way back to the search results again. Expectation is that the focus will be set on the search results when filters are applied, to facilitate navigation.
- **WCAG 4.1.2** - Assistive technology users such as screen reader users are not being made aware that a filter has been applied to the page once one of the sorting options have been selected. The same is true of the “Add results to folder” feature – screen reader users are not being

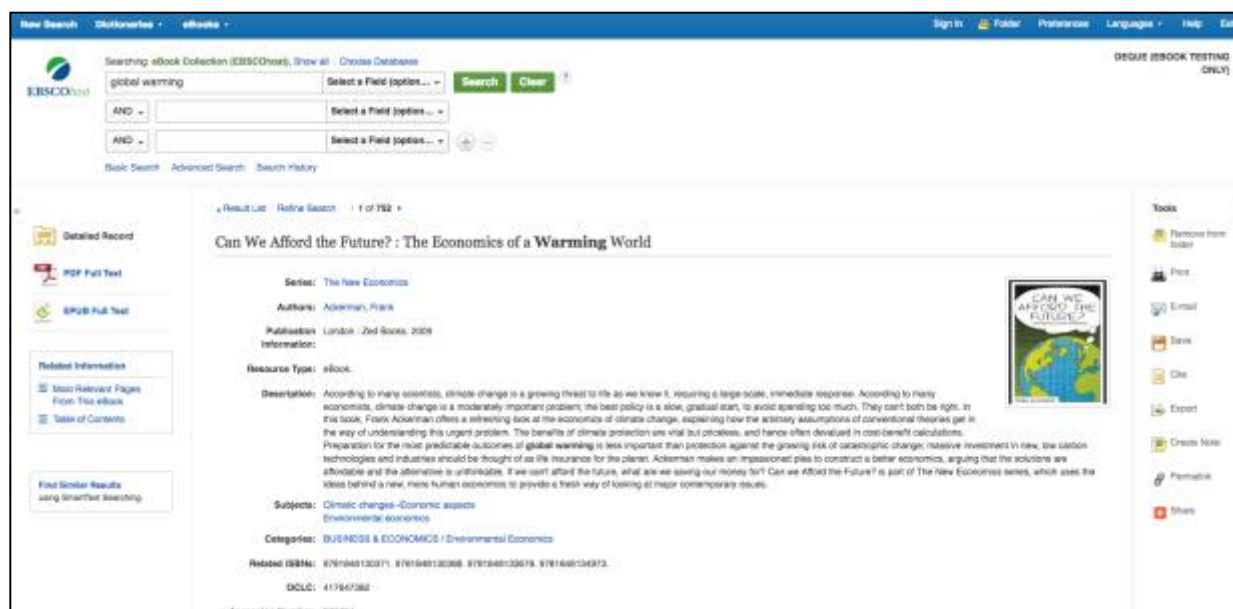
confirmed that this action has been successfully completed (while sighted users are given a visual confirmation).

- **WCAG 4.1.2** - Triggering the “Sort by”, “Page options”, or “Share” buttons with the keyboard does not announce the state of the newly displayed modals back to screen reader users.

## Notes

Instructions provided for testing were followed on the page shown above. While the entire page was quickly considered, specific attention was given to the 3 options in the top right corner, the adding results to folder feature and the book jacket images). The findings above (as well as those found in the “Project-wide” section) reflect low hanging fruits identified in the time allocated for testing. The “Refine Results” filters have also been tested as part of this screen.

## 4. Resource Details page



### Automated findings using Axe

- Nothing beyond what has been reported under “Project-wide issues”.

### Additional manual findings using NVDA screen reader

- **WCAG 1.1.1** – The alt text for the book cover is only defined as “book jacket” which is very generic and does not say much about the title of the book itself. Providing a more meaningful alt text value would help users confirm which book is being displayed.
- **WCAG 1.3.1** – In the Email non-modal dialog window, dropdown menus are associated with some of the options in the radio buttons grouping. These dropdowns do not have programmatic labels assigned to them.
- **WCAG 2.1.1** – The toolbar made available in the rich text editor for taking Notes is not keyboard compatible. These functionalities can only be triggered while using the mouse.
- **WCAG 3.3.1** - In the Email non-modal dialog window, when the form is submitted and errors are returned, focus is not set to the error messages and as a result, screen reader users cannot tell if error were returned and have no way to confirm if submitting the form was a success.

- **WCAG 4.1.2** – The rich text editor available for taking Notes does not convey all functionalities to screen readers.

## Notes

Instructions provided for testing were followed on the page shown above for refined results. While the entire page was quickly considered, specific attention was given to the details of the resource itself. The findings above (as well as those found in the “Project-wide” section) reflect low hanging fruits identified in the time allocated for testing.

## 5. Individual ebook



### Automated findings using Axe

- **WCAG 1.3.1** - Certain aria roles are being used without their expected counterparts, such as the tablist role being used without a tab role on the child element.
- **WCAG 2.4.1** - Frames and iframes must be assigned meaningful title attribute values to clearly announce their content to users of assistive technologies.
- **WCAG 3.1.1** - The HTML document must contain a valid lang attribute or must correspond to a valid lang code for multilingual screen reader users who may prefer a different language.
- **WCAG 4.1.1** - Elements must only use allowed ARIA roles. Some aria roles are misused on certain elements, potentially causing screen readers to misinterpret content.
- **WCAG 4.1.1** - ID attribute values must be unique. Some ID values are duplicated in this page.
- **WCAG BP** - Elements should have tabindex values set to 0 or -1 only. Positive integers should be avoided to facilitate navigation using the keyboard.

### Additional manual findings using NVDA screen reader

- **WCAG 2.1.1** - While clicking on any of the elements in the table of content on the left moves the user to the corresponding page in the resource, doing so with the keyboard yields no results.



- **WCAG 2.4.7** - The visible focus is often lost in this page, when tabbing only with the keyboard. As a result, sighted keyboard only users are struggling to find where they are in the page. This makes navigation more difficult.
- **WCAG 3.2.4** - Several features have been added to the viewer to help screen reader users navigate to the ebook resource, but it is still difficult for someone who can't see to operate the navigation efficiently.
- **WCAG 1.3.1** - Once inside the ebook viewer, it is possible to go through the document linearly, but efficient navigation is also difficult, because the document does not appear to be tagged. Its content appears to be conveyed as plain text, meaning that none of the documents semantics are conveyed back to users. Headings are not conveyed as such, neither are lists, etc. This makes navigation and consulting the resource more difficult than it should.

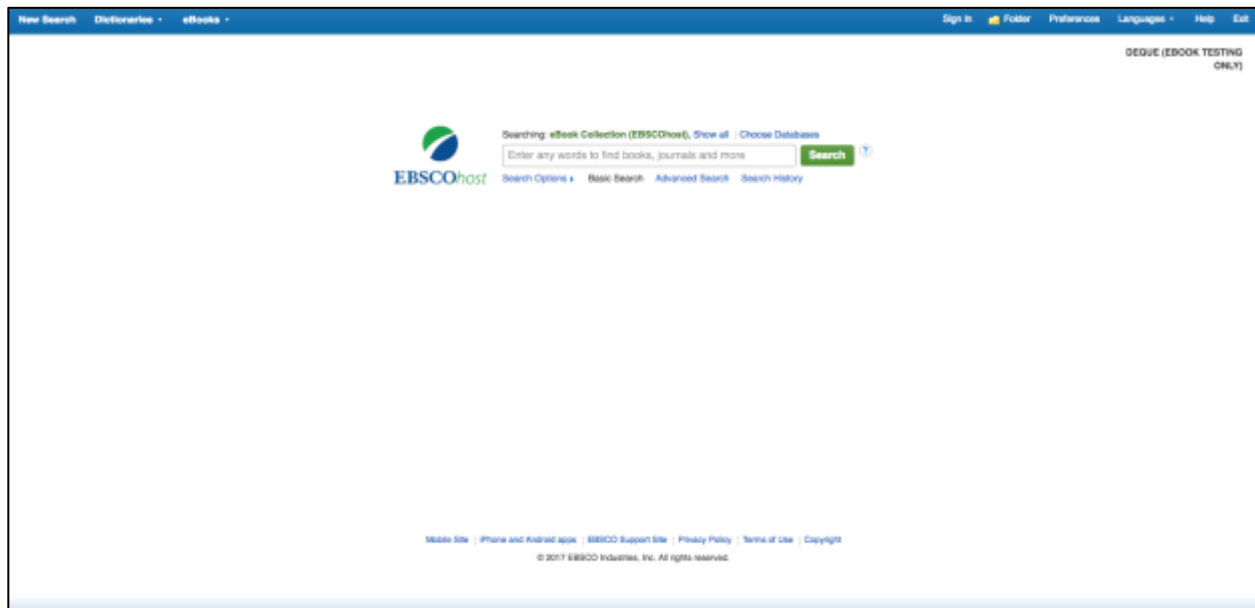
## Notes

ePub resource tested:

<http://web.b.ebscohost.com/ehost/ebookviewer/ebook/bmxlYmtfXzI3NjczNF9fQU41?sid=539a3520-7152-4350-b1e0-2f535879a004@sessionmgr120&vid=12&format=EB&rid=1>

Instructions provided for testing were followed on the page shown above for individual ebook. While the entire page was quickly considered, specific attention was given to the ebook itself. The findings above (as well as those found in the “Project-wide” section) reflect low hanging fruits identified in the time allocated for testing. On MacOS/Firefox, it was also very difficult to make the get the book to appear in the viewer, as the page would only partially load.

## 6. Basic search



## Automated findings using Axe

- Nothing beyond what has been reported under “Project-wide issues”.

**Additional manual findings using NVDA screen reader**

- **WCAG 1.1.1** - All images must have alternate text to convey their purpose and meaning to screen reader users. The EBSCO Host image has poor alt text value assigned to it.
- **WCAG 3.3.2** - Keyboard has a tab stop between the search button and the help icon that is announced as “clear button” yet, no buttons are displayed. This makes it very confusing for anyone using a screen reader, or navigating using only the keyboard.

**Notes**

Instructions provided for testing were followed on the page shown above for basic search. The findings above (as well as those found in the “Project-wide” section) reflect low hanging fruits identified in the time allocated for testing.