This readme.txt file was generated on <20240119> by <Curtis Bailey / Helen de Klerk>

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GENERAL INFORMATION

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1. Title of Dataset

In the Climate Change Fight: Open Access GIS and Earth Observation is might: Literature Review (LitRev) and Tools and application survey results.

2. Author Information

Bailey, C.J., De Klerk, H.M.

Principal Investigator Contact Information

Name: Bailey, C.J.

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Associate or Co-investigator Contact Information

Name: De Klerk, H.M.

Institution: Stellenbosch University, Department of Geography and Environmental Studies

Address: Chamber of Mines Building, Stellenbosch University, ℅ Merriman and Ryneveld Streets, Stellenbosch, South Africa

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ORCID: 0000-0003-1628-352X

3. Date of data collection (single date, range, approximate date) 20231130

4. Geographic location of data collection (where was data collected?): Internet. Compiled at Stellenbosch

5. Information about funding sources that supported the collection of the data: Stellenbosch University

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SHARING/ACCESS INFORMATION

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1. Licenses/restrictions placed on the data: None

2. Links to publications that cite or use the data: Bailey, C.J., Simango, S.M., De Klerk, H.M.. In the Climate Change Fight: Open Access GIS and Earth Observation is might. Submitted

3. Links to other publicly accessible locations of the data:

4. Links/relationships to ancillary data sets: N/A

5. Was data derived from another source? N/A

If yes, list source(s):

6. Recommended citation for the data: Bailey et al. (2024) In the Climate Change Fight: Open Access GIS and Earth Observation is might: Literature Review (LitRev) and Tools and application survey results

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DATA & FILE OVERVIEW

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1. File List

A. Filename: Open\_Access\_GIS&RS\_Survey Google sheet, tab ‘LitRev’

Short description: Bailey et al. In the Climate Change Fight: Open Access GIS and Earth Observation is might: Literature review results (https://docs.google.com/document/d/1AHJNuKf4HQwFu2MhnxH8Fpjo5fbyVE-b/edit)

B. Filename: Open\_Access\_GIS&RS\_Survey Google sheet, tab ‘Tools\_Applications’

Short description: Bailey et al. In the Climate Change Fight: Open Access GIS and Earth Observation is might: Tools and application survey results

2. Relationship between files: Single excel file with 2 sheets. There is no relationship between the sheets

3. Additional related data collected that was not included in the current data package: N/A

4. Are there multiple versions of the dataset?no

If yes, list versions:

Name of file that was updated:

i. Why was the file updated?

ii. When was the file updated?

Name of file that was updated:

i. Why was the file updated?

ii. When was the file updated?

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METHODOLOGICAL INFORMATION

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1. Description of methods used for collection/generation of data:

<Include links or references to publications or other documentation containing experimental design or protocols used in data collection>

1.1 Bibliometric analysis on research - Open\_Access\_GIS&RS\_Survey Google sheet, tab ‘LitRev’

A bibliometric analysis was conducted on Scopus on all forms of English language literature (including conference proceedings, reports and books) as we were interested in the production of OA knowledge on climate change and climate justice derived using GIS and RS. The following search keywords were used for: (i) GIS or RS (Geographical Information System OR GIS OR remote sensing OR earth observation OR Landsat OR Lidar OR MODIS OR SPOT OR Radar), AND (ii) climate change and justice topics (climate change OR climate monitoring, OR climate vulnerability OR climate shift OR climate justice). This search ran from 1 January 2010 to 17 August 2022 and yielded 362 pieces of literature. The 50 most recently published pieces of literature were surveyed as they were all produced within the last two years (2021 and 2022) and provide the most recent picture. Of these pieces of literature we asked (i) whether the study used OA GIS/RS data or tools; (ii) whether the GIS/RS data or tools produced by the publication is accessible through a live link; and (iiii) whether the first author’s correspondence address is within the study area, which we take to be an indication of whether the research is locally produced.

1.2. OA GIS/RS platforms - Open\_Access\_GIS&RS\_Survey Google sheet, tab ‘Tools\_Applications’

We evaluated OA GIS/RS platforms or software packages that can speak to climate change and climate justice issues that we knew of, or found from searches on Google or on re3data.org (search terms used: “climate AND GIS”, or “climate AND geospatial”). Of the platforms and software packages found, we posed the following questions to evaluate their utility in this regard: (i) whether the data or tool address issues relevant to both climate change and climate justice (for instance is socio-economic data included along with environmental data); (ii) what the geographical coverage is (i.e. local, regional (including continental), global), and (iii) the type of user targeted defined as person on the street (who can use Google maps or equivalent - e.g. Greenbook), citizen scientist (with a basic knowledge of geographical information systems) and advanced user (with advanced GIS skills and coding abilities, such as specialists, academics, researchers, post-graduate students).

2. Methods for processing the data: <describe how the submitted data were generated from the raw or collected data> MS Excel?

3. Instrument- or software-specific information needed to interpret the data: N/A

4. Standards and calibration information, if appropriate: N/A

5. Environmental/experimental conditions: N/A

6. Describe any quality-assurance procedures performed on the data: Use of drop-down lists to prevent typological errors. Classifications used were clearly described before data collection was initiated such that criteria are applied consistently.

7. People involved with sample collection, processing, analysis and/or submission:

Bailey, C.J., De Klerk, H.M.

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DATA-SPECIFIC INFORMATION FOR: [Open\_Access\_GIS&RS\_Survey Google sheet, tab ‘LitRev’]

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<create sections for each dataset included>

1. Number of variables:10

2. Number of cases/rows: 51

3. Missing data codes:

Code/symbol N/A Definition Not available

4. Variable List

A. Name: Author

Description: Lead author

free text

B. Name: Date

Description: Year of publication

free text

C. Name: Author affiliation (primary)

Description: Country of lead author primary affiliation

free text

D. Name: Study area

Description: Country or region of study area

free text

E. Name: Locally produced research

Description: first author correspondence address in study region

Y: Author affiliation = study area;

N: Author affiliation <> study area;

N/A: study area regional or global such that author affiliation by country can't match (these instances are not counted for statistics on whether research is produced locally)

F. Name: Publication type

Description: Publication type

Journal Article: Peer reviewed internationally accredited journals;

Conference Proceedings: published conference proceedings;

Books: published books;

N/A: none of the aforementioned

G. Name: Used Open Access data or tools

Description: Used Open Access data or tools

Y: used Open Access data or tools,

N: did not use Open Access data or tools,

N/A: Not specified or not applicable

H. Name: Comment on output GIS/RS data/tools used available

Description: Comment on output GIS/RS data/tools used available

free text

I. Name: Results Open Access

Description: Are results Open Access or not, where Open Access is defined as being available via a live link, given that FAIR stipulates 'machine findable and readable'. Access to method documents or statistic figures rather than georeferenced output data and images is not sufficient for OA or FAIR

Y: results are Open Access,

N: results are not use Open Access,

N/A: Not specified or not applicable

J. Name: Overall comment

Description: General comments on the piece of literature in respect to the research. If code is not available with a live link, then it is considered that this is not available for addressing wider issues or geographical areas. This information is not used in analyses.

free text

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DATA-SPECIFIC INFORMATION FOR: [Open\_Access\_GIS&RS\_Survey Google sheet, tab ‘Tools\_Applications’]

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<create sections for each dataset included>

1. Number of variables:10

2. Number of cases/rows: 35

3. Missing data codes:

Code/symbol N/A Definition Not available

4. Variable List

A. Name: Title

Description: Name of tool or application evaluated

free text

B. Name: Owner / Funder

Description: Owner or funder of tool or application evaluated

free text

C. Name: Type

Description: Type of tool or application evaluated

Online: tool or application available to users via a web platform;

Installation: tool or application available to users via an installation to a personal hard drive;

Both: available as an online platform or stand alone installation;

Pdf: only available as a description in a pdf

D. Name: Analysis Type

Description: whether the data or tool address issues relevant to both climate change and climate justice

Environmental: only environmental aspects of climate change and justice considered;

Socio-economic and environmental: socio-economic data included along with environmental data;

Application specific: can be applied to a wide variety of research questions and is not necessarily focussed on climate change or justice;

N/A: information not accessible

E. Name: Data Extent

Description: What the geographical coverage is

local: one country or part of a country,

regional: portion of a continent, including continental,

global: global

F. Name: Comment on Data Extent

Description: Detail on Data Extent (e.g. extent of regional coverage)

free text

G. Name: Analysis Level

Description: The type of user targeted

person on the street: who can use Google maps or equivalent - e.g. Greenbook,

citizen scientist: with a basic knowledge of geographical information systems,

advanced user: with advanced GIS skills and coding abilities, such as specialists, academics, researchers, post-graduate students

H. Name: Climate Justice information need met

Description: Informal comment on whether the tool or application meets a Climate Justice information need. Not analyzed

free text

I. Name: Description

Description: Informal description of the tool or application

free text

J. Name: weblink

Description: weblink for the tool or application.

free text