

ASSESSING NASA'S OPEN SCIENCE OUTLOOK FOR ENVIRONMENTAL JUSTICE AND RESILIENCE OF THE LOUISIANA GULF COAST (OSO-LOGIC)

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INTRODUCTION

Environmental injustice persists because it too often goes unobserved. Individual complaints and marginalized voices too often lack scientifically valid processes that can aggregate evidence for sustainable and consequential action.

Open Science broadens participation in the scientific process with tangible benefits of increased value for money, faster innovation, and equitable policy response. Open Science inclusion of the **private sector, public entities, academia and citizens** builds common trust in the evidence that informs decisions and policy dialogues.

The resilience of the Louisiana Gulf Coast with a broad diversity of communities facing a wide-range of environmental challenges could potentially benefit the most as well as provide real world assessment of opportunities for value addition to NASA investments with greater inclusive and equitable engagement in Open Science.



The OSO-LOGIC is part of the NASA's newest initiative element of the Earth Sciences Division (ESD) to advance equity by focusing programmatically on underserved communities, redoubling efforts to understand domestic impacts of environmental and climate change, and intentionally promote diversity, inclusion and accessibility.

OBJECTIVE

To assess the focus points of environmental justice, climate justice, economic justice, and racial justice peer reviewed literature over time. We compare multiple databases to make detailed review of database differences when searched with the same criteria

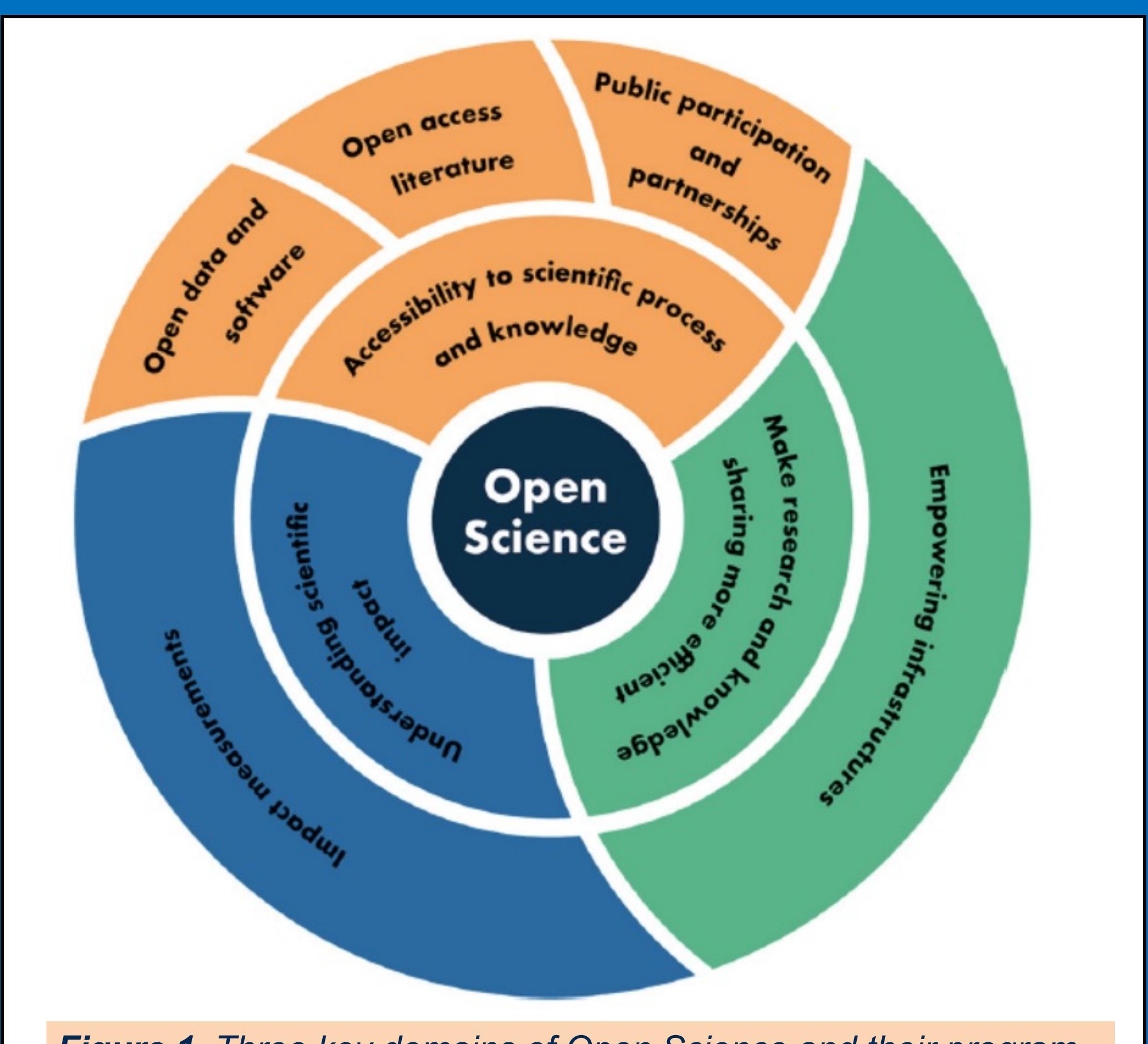


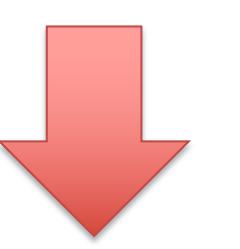
Figure 1. Three key domains of Open Science and their program elements from Ramachandran, Bugbee & Murphy "From Open Data to Open Science" in Earth and Space Science Volume 8(5) 2021

OVERVIEW METHOD

Literature Review

Remote sensing of Louisiana Gulf Coast Resilience with NASA products

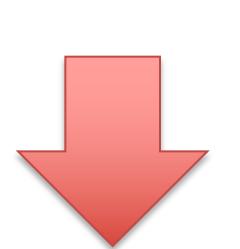
Open science for Equity & Environmental justice in Louisiana Gulf Coast



Stakeholder Mapping

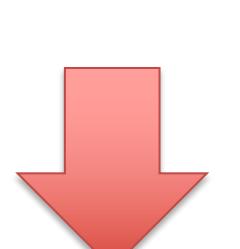
Environmental justice initiatives, organizations, communities in LA

Open Science initiatives in LA



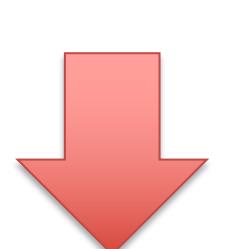
Open Science Capacity Assessment

Survey, Interview, Conference



Strategy Analysis

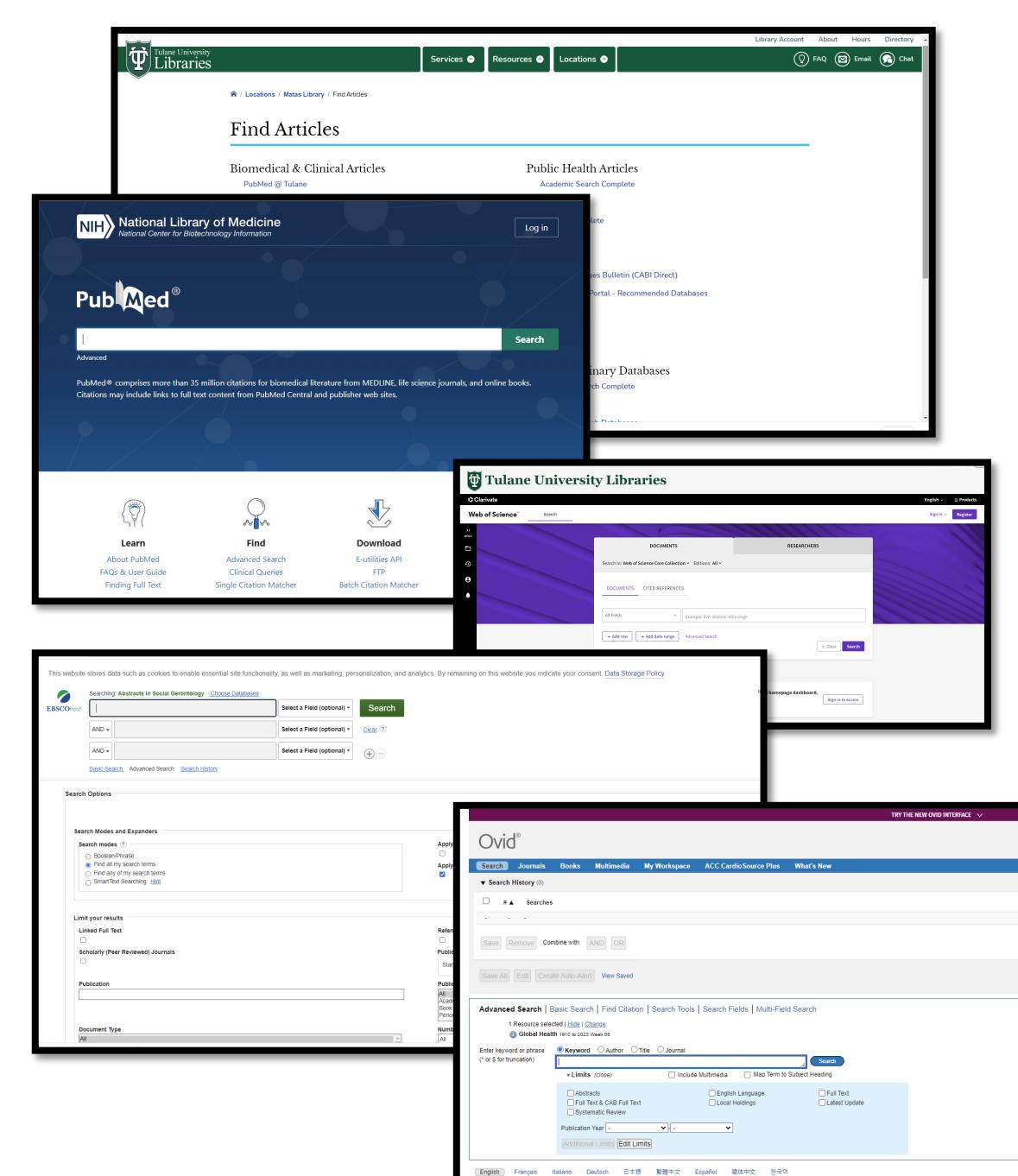
Synthesis of Open Science capacity Assessment and Environmental Justices Information



Presentation to NASA HQ & Publication

LITERATURE REVIEW METHOD

1. Select database services from Rudolph Matas Library of the Health Sciences



2. Select keyword combinations: [Peer-Reviewed Filter]

(TS = ("Gulf Coast") AND TS = ("Louisiana") AND TS = ("Justice Term"))

Search 1:

(Gulf Coast) AND (LOUISIANA) AND (Environmental Justice)

Search 2:

(Gulf Coast) AND (LOUISIANA) AND (Climate Justice)

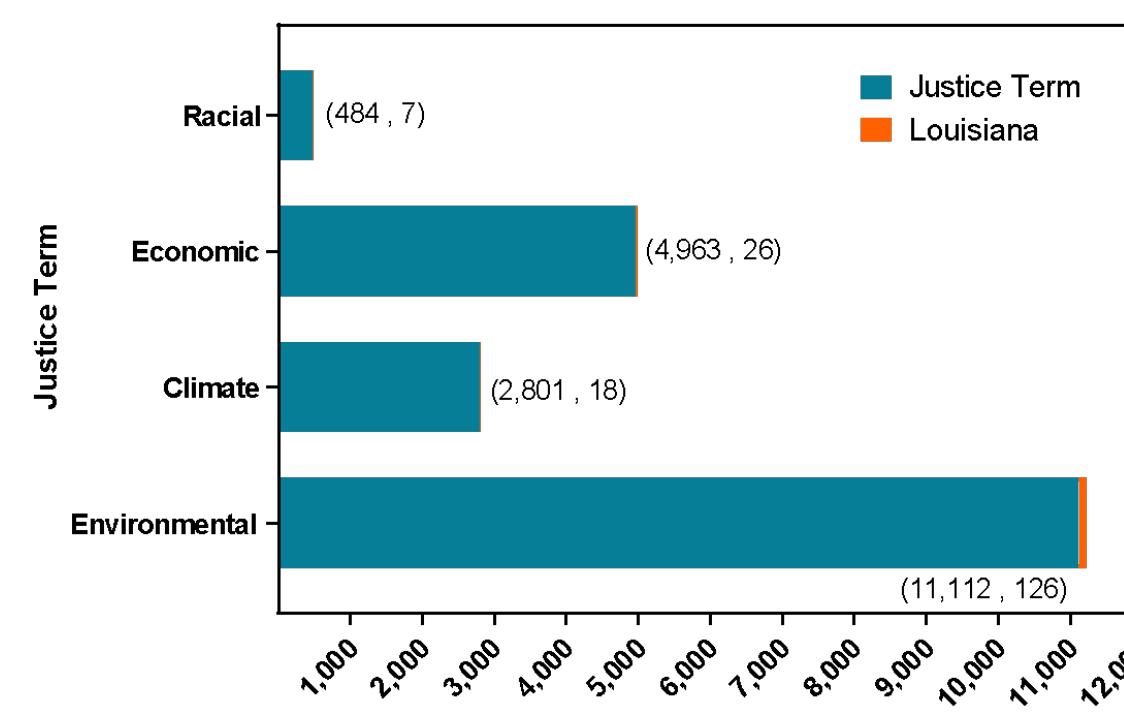
Search 3:

(Gulf Coast) AND (LOUISIANA) AND (Economic Justice)

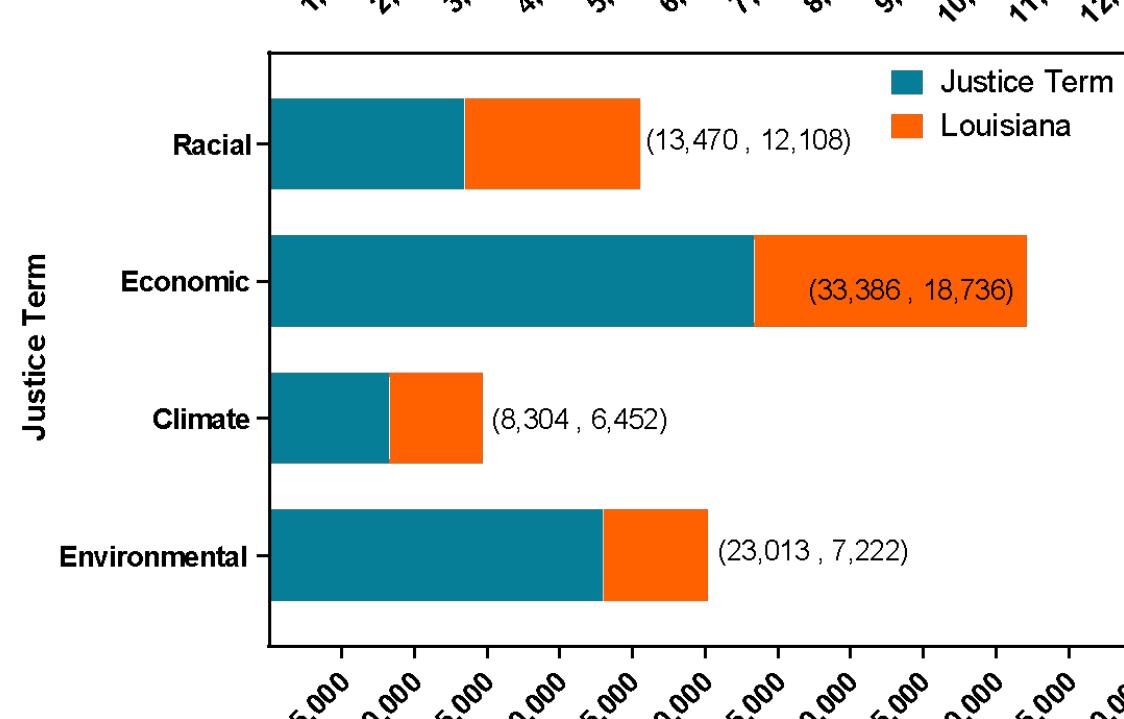
Search 4:

(Gulf Coast) AND (LOUISIANA) AND (Racial Justice)

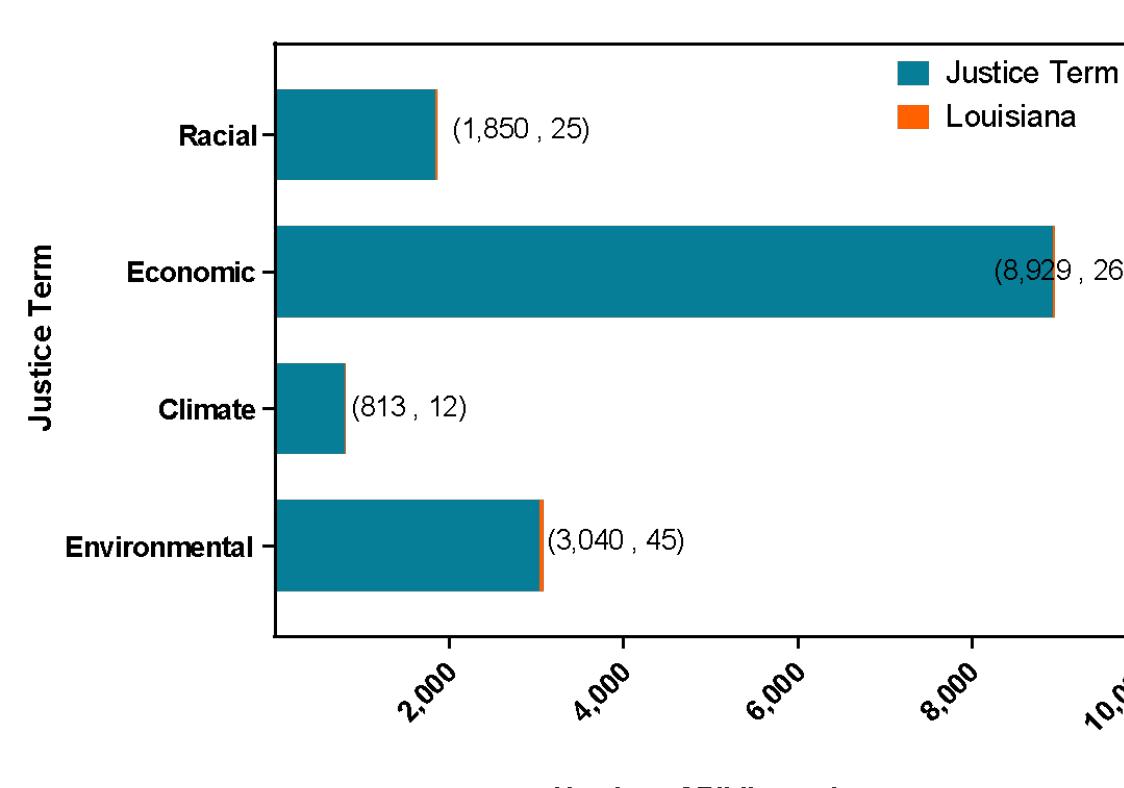
RESULTS



EBSCO



Pro Quest



PubMed

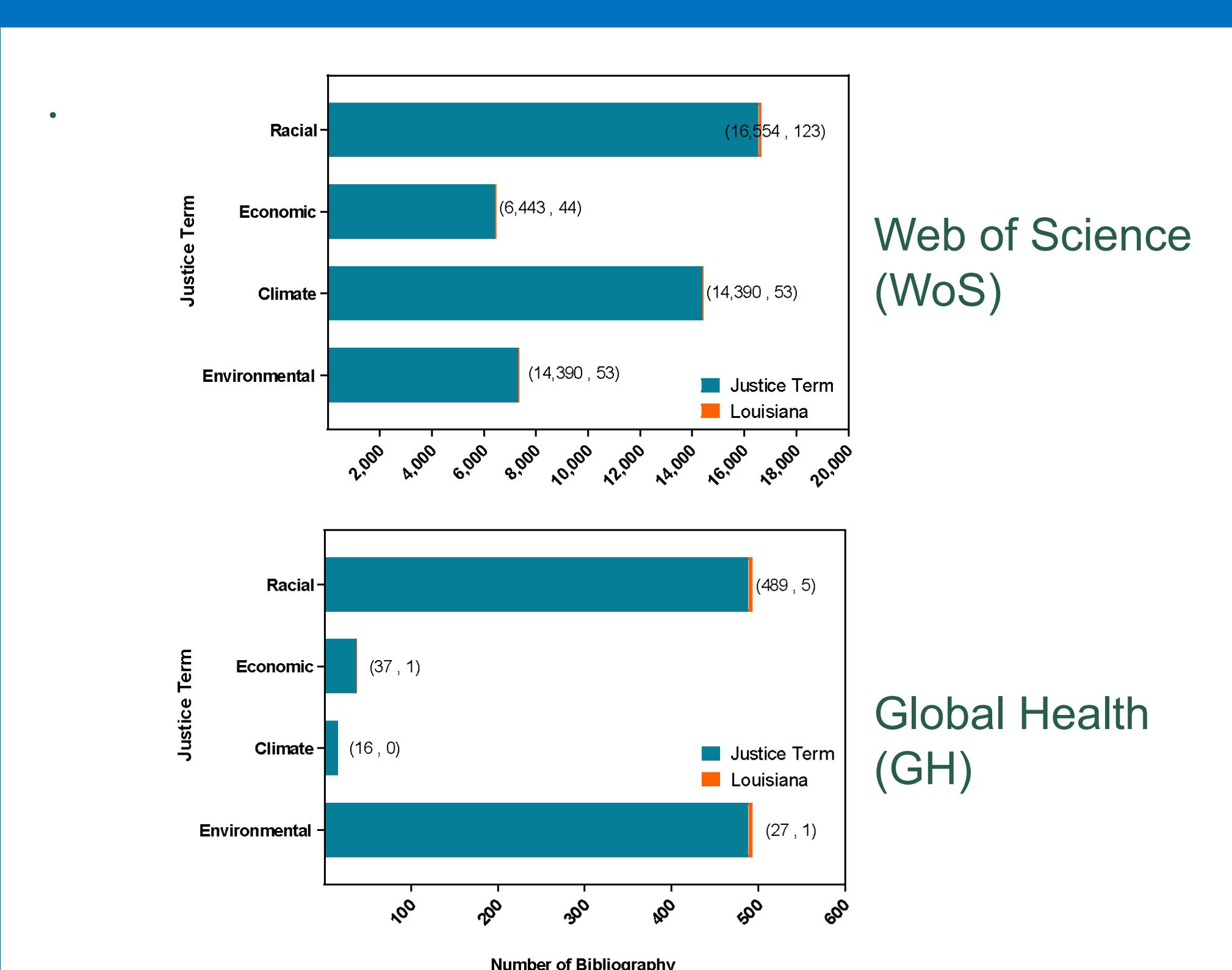


Figure 2. Results from database search using keywords Gulf Coast and Louisiana and Justice term retrieved from database service: a) EBSCO, b) Pro-Quest, c) PubMed, d) Web of Science, and e) Global Health
Note: Environmental Justice (EJ); Economic Justice (ECONJ); CMJ (Climate Justice); Racial Justice (RJ)

Search 1:

- Yielded 7, 13, 3, 3, and 12 results in PubMed, WoS, GH, EBSCO, and ProQuest, respectively.

Search 2:

- Yielded 3 and 1 results in WoS and ProQuest, respectively, zero result found in GH and EBSCO

Search 3:

- Yielded 3, 5, and 1 results in PubMed, WoS, and ProQuest, zero result found in GH and EBSCO

Search 4:

- Yielded 1, 2, and 3 results in PubMed, WoS, and ProQuest, zero result found in GH and EBSCO

CONCLUSIONS

- Based on the literature review results, comparing between five scientific database services, we found that the results of "Economic Justice" peer-reviewed articles were the highest rate compared to other terms.
- "Environmental Justice" peer-reviewed articles were the lowest rate (0-0.3%).
- The peer-reviewed articles in "EJ, ECONJ, CMJ and RJ" in respective databases contributed to roughly 0.3% - 1.5% in Louisiana's Gulf Coast. Therefore, more studies are necessary.

ACKNOWLEDGEMENTS

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