

Overcoming the paper publication bias – Increasing your research impact

Pairing dataset and tool citations with standard publication citations using EDX™



Research & Innovation Center

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Abstract

Research products are not just about publications and presentations anymore. Following a Nature study in 2013 that documented loss of over 80% of scientific data underlying journal publications, there has been a growing and persistent shift in the value and importance placed on data products derived from R&D. As data science and computing capabilities from social media and commercial online systems have evolved, major institutions and entities such as the journals Science and Nature, the American Geophysical Union, DataCite.org, CODATA's Committee on Data of the International Council for Science, and all U.S. federal agencies have all mandated preservation and improved accessibility of data products stemming from research. In just a little over five years time, the value of research data products has increased, gaining recognition as significant products worthy of DOI and citations of their own to accompany more conventional publication and presentation related research products. In this poster we present examples, on NETL's Energy Data eXchange (EDX), of how data products from FE R&D have been made accessible with their own citations, complementing associated, but separate written publications. EDX offers R&D data products with a full DataCite.org formatted citation, including DOI number, and ensures long-term preservation of the data. These data citations can be referenced in publications, presentations, and other products. Publication of these research data products ensures their accessibility for use in future research efforts, provides more credibility and potential for review of the research. Finally, authors of data products are seeing these resources integrated as part of their impact factor for tenure, promotion, and research stature purposes

Traditional Approach to Publishing R&D



Journal manuscripts, books, reports, written results

2018 Approach to Publishing R&D



Journal manuscripts, books, reports, written results + software, tools, models, datasets

...and NETL is developing resources to refine it.

DATA is the new oil...



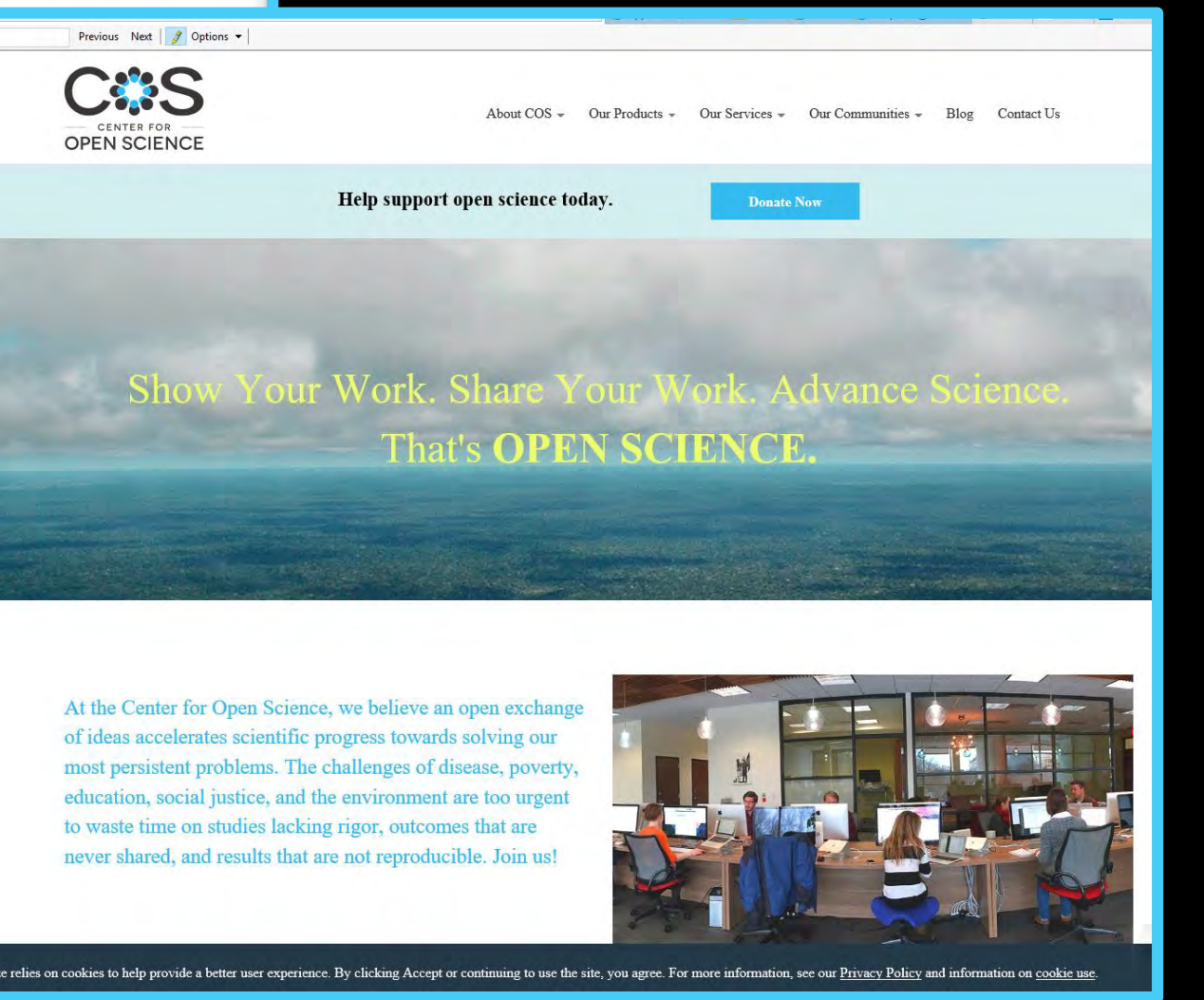
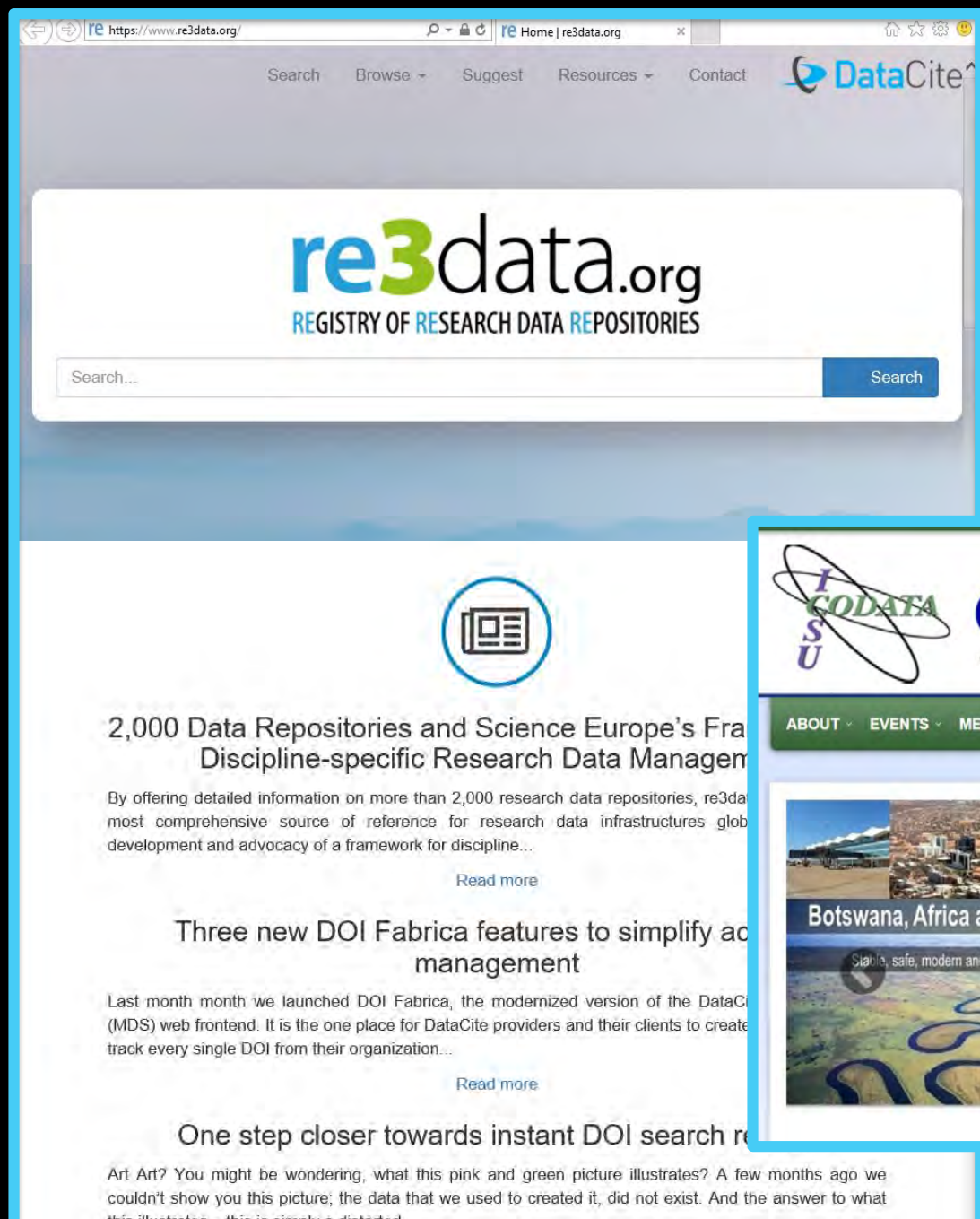
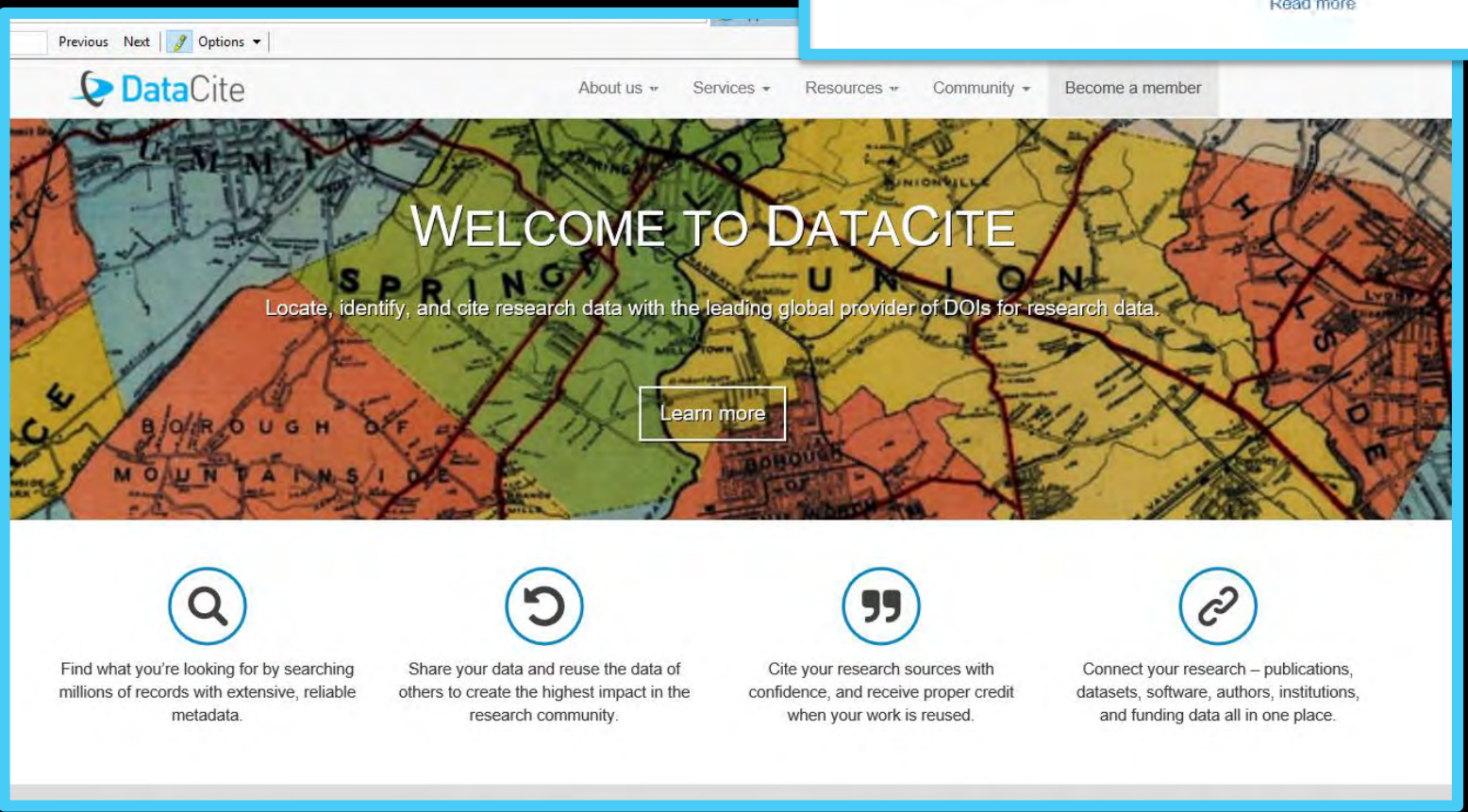
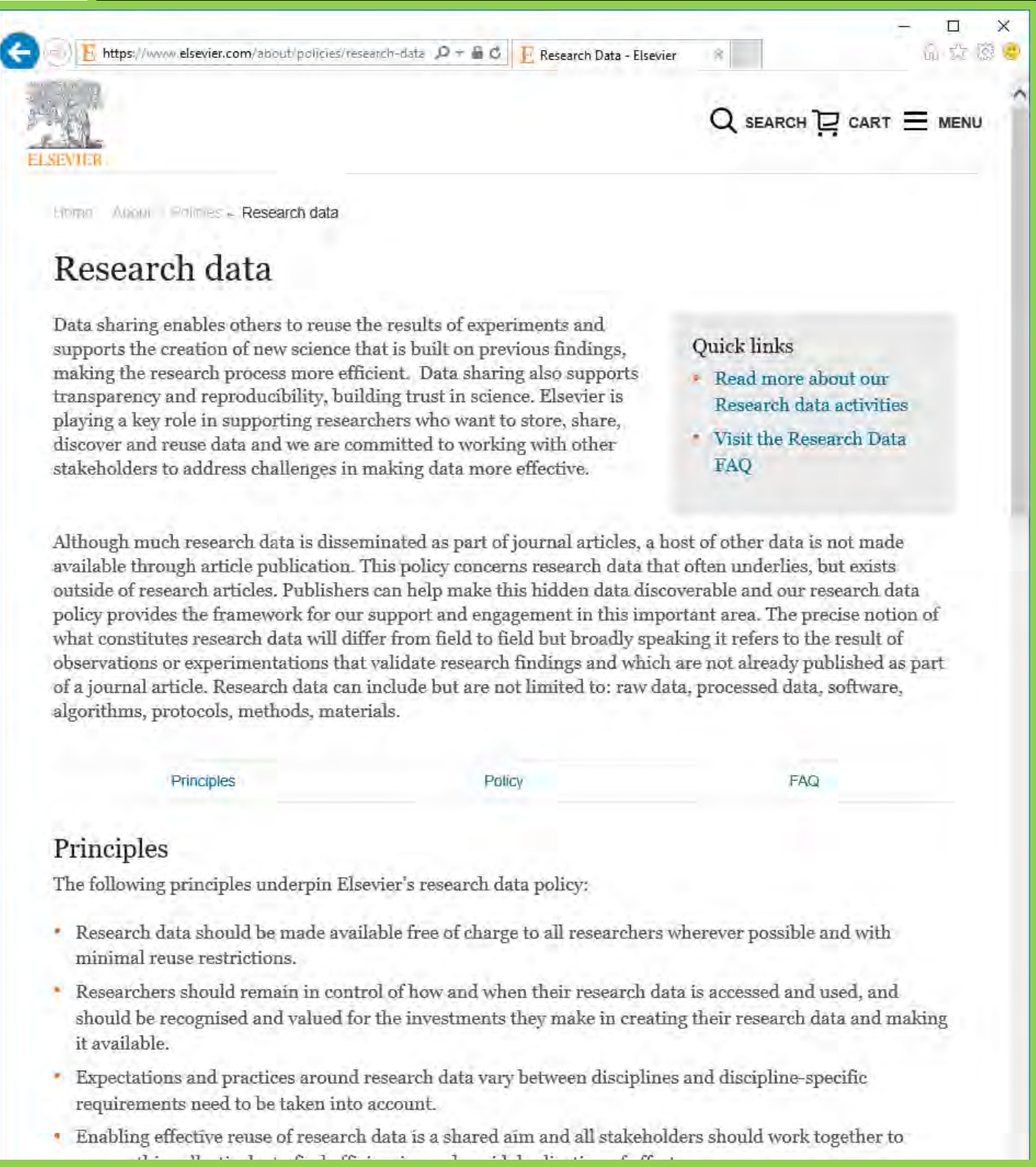
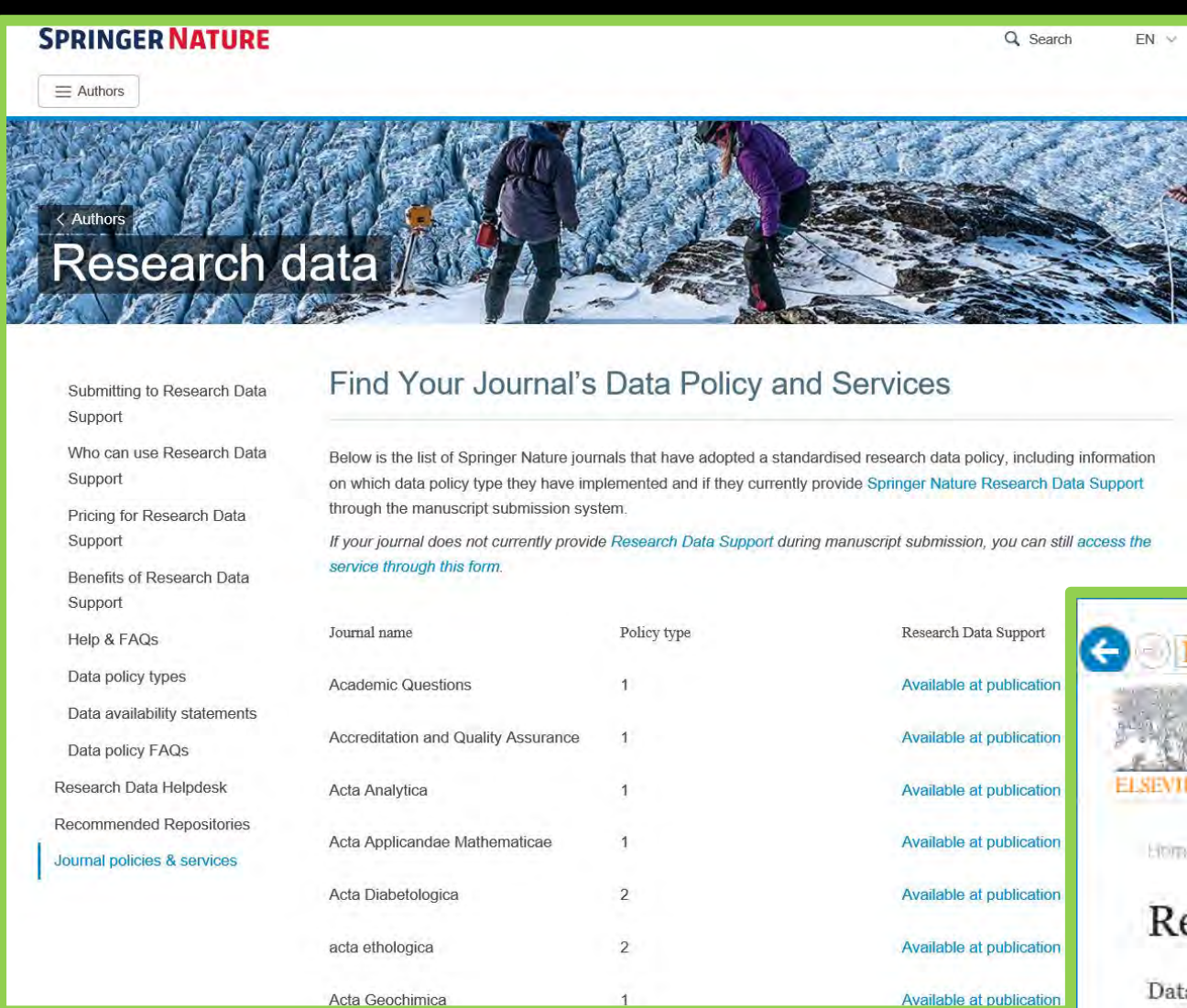
Publish your research "data", tools, models, datasets, etc via EDX and get a DOI citation to go with your conventional journal publication

Why:

Major journals, governments, & international research entities have recognized over the past decade that

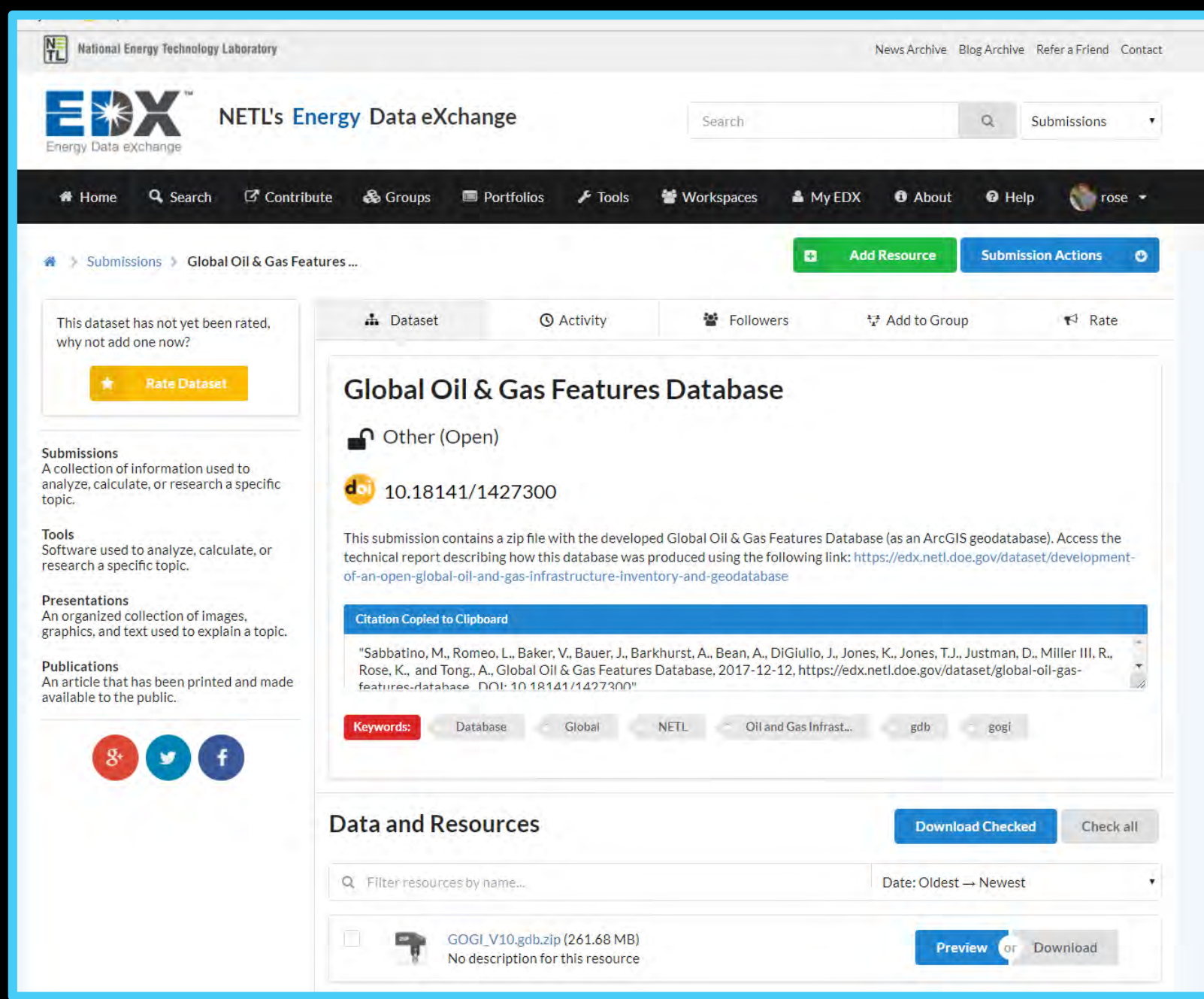
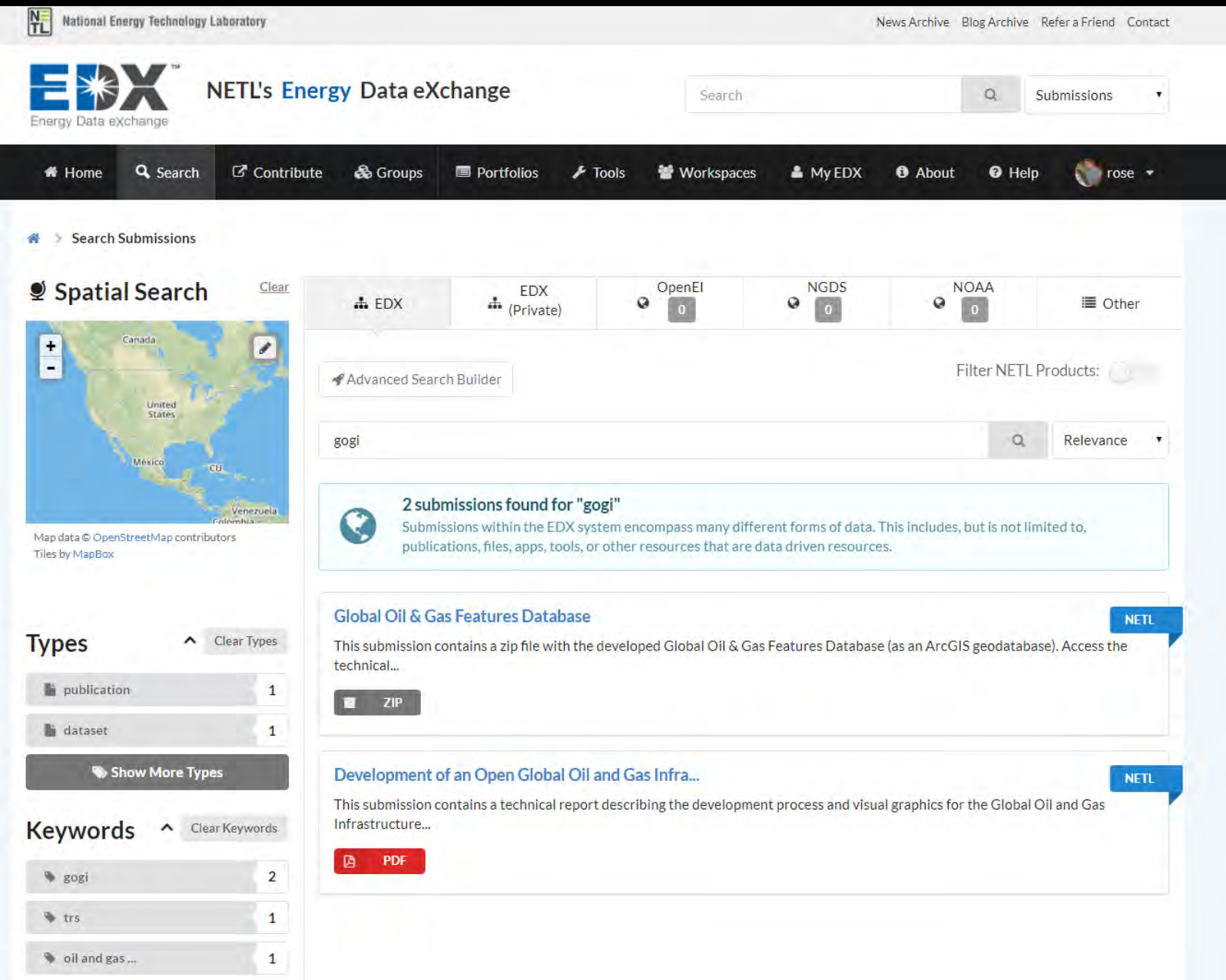
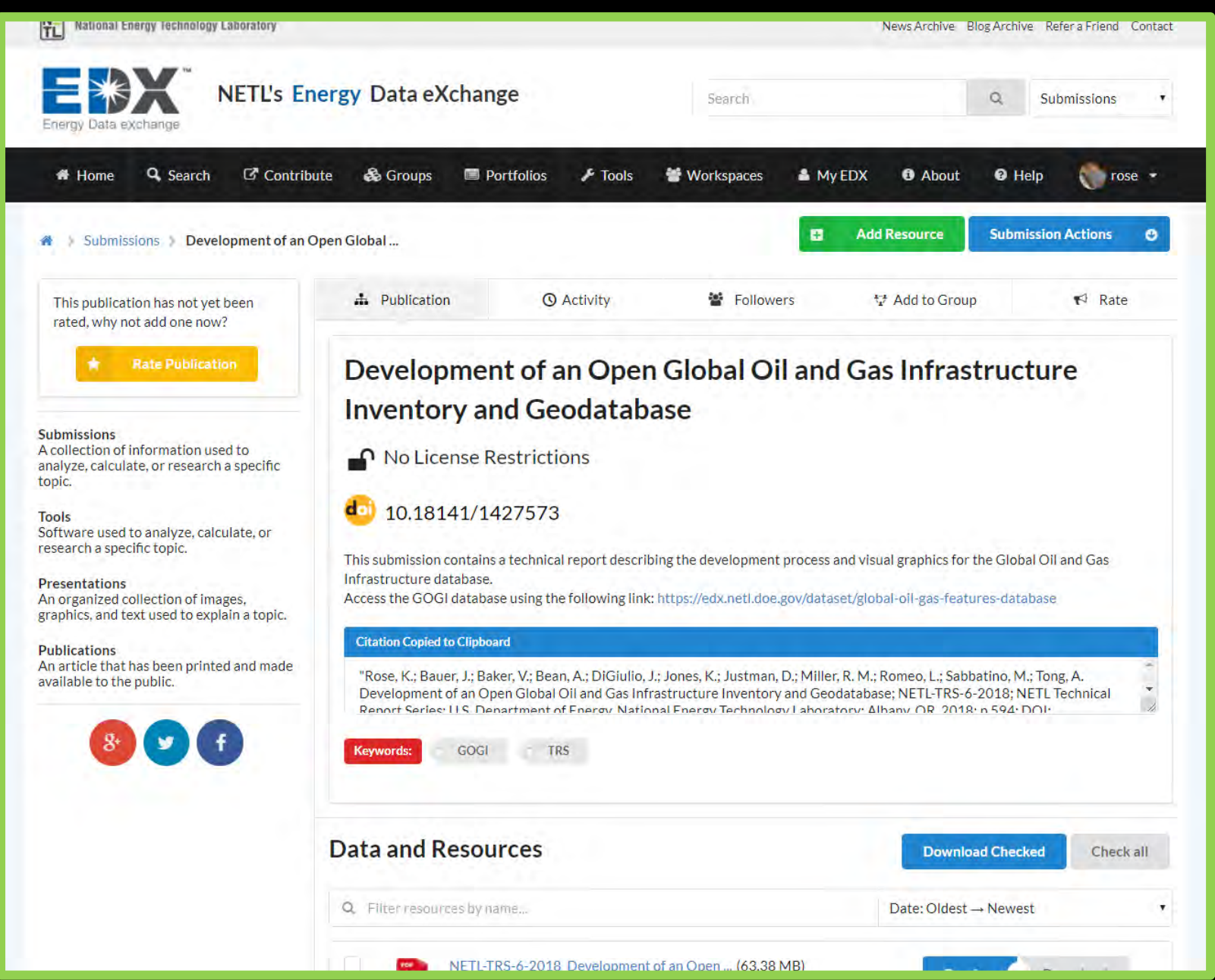
- Scientific integrity requires reproducibility of results
- The ability to build off of prior studies

Publishing of scientific data products is now required and encouraged worldwide



Example Data & Report Publications Via EDX

One study, multiple citable products: 1) Database (left), 2) Technical Report (right), and 3) Online digital map collection (see GOGI poster). Journal publication is in prep.



Rose, K.; Bauer, J.; Baker, V.; Bean, A.; DiGiulio, J.; Jones, K.; Justman, D.; Miller, R. M.; Romeo, L.; Sabbatino, M.; Tong, A. Development of an Open Global Oil and Gas Infrastructure Inventory and Geodatabase; NETL-TRS-6-2018; NETL Technical Report Series; U.S. Department of Energy, National Energy Technology Laboratory: Albany, OR, 2018; p 594; DOI: 10.18141/1427573.



View full technical report here

<https://edx.netl.doe.gov>



Download GOGI geodatabase here

Science & Engineering To Power Our Future



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