



# Open Access and Open Science in the Global South

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New Delhi, India

**Online Workshop on  
"Research Ethics and Quantitative  
Techniques for Research and  
Publications"**

**April 25 - 30, 2020**

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# Content of the Presentation

- Open Access definitions
- Open Access initiatives in developing countries
- Open Access initiative in India

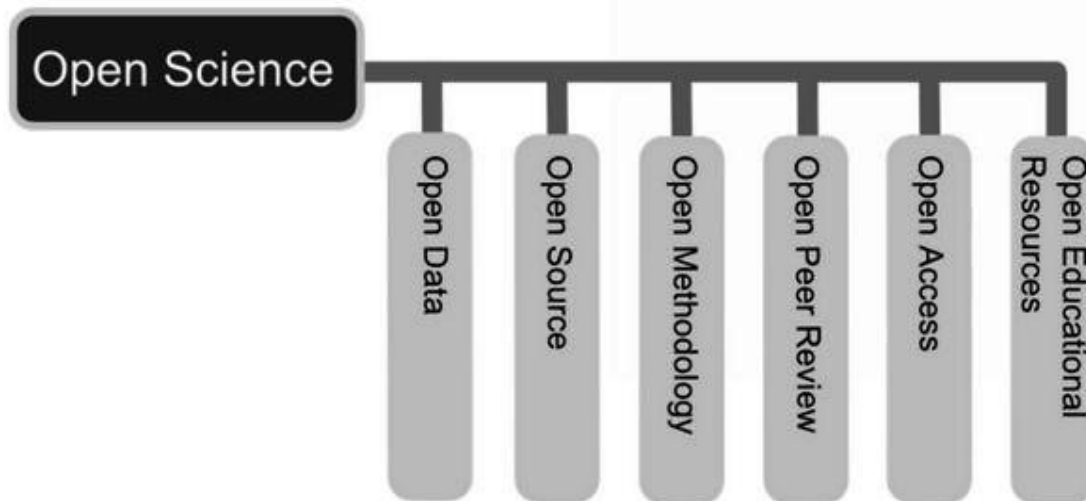
# Definitions

- **Open Access (OA)** refers to free, unrestricted online access to research outputs such as journal articles and books. OA content is open to all, with no access fees. There are two main routes to making research outputs openly accessible.
- **Green Open Access** is where an author publishes their article in any journal and then self-archives a copy in a freely accessible institutional or specialist online archive known as a repository, or on a website. Also refers to the self-archiving of an article in a non-commercial subject repository or non-commercial institutional repository (usually after an embargo period).
- **Gold Open Access** is where an author publishes their article in an online open access journal.
- **Platinum Open Access** means permanent and free access to published scientific works for readers with no publication fees for the authors – 100% free. Authors are not charged article processing fees or publication fees – no fees whatsoever.

# Definitions

- **Open Access Publishing**: While OA is a newer form of scholarly publishing, many OA journals comply with well-established peer-review processes and maintain high publishing standards.
- **Self-archiving** is the act of depositing a free copy of an electronic document online in order to provide open access to it.
- **Open Science** represents a new approach to the scientific process based on cooperative work and new ways of diffusing knowledge by using digital technologies and new collaborative tools (European Commission, 2016)
- “to make the primary outputs of publicly funded research results – publications and the research data – publicly accessible in digital format with no or minimal restriction” (OECD, 2015:7)
- **Open Science** is about extending the principles of openness to the whole research cycle, fostering sharing and collaboration as early as possible thus entailing a systemic change to the way science and research is done.  
(Source: [www.fosteropenscience.eu/content/what-open-science-introduction](http://www.fosteropenscience.eu/content/what-open-science-introduction))

“Open Science represents an approach to research that is collaborative, transparent, and accessible. A wide range of activities comes under the umbrella of Open Science including Open Access publishing, Open Data, Open Notebook, Open Peer Review, and Open Education.”



# Open Science

- Open Science is the movement to make scientific research and data accessible to all.
- It includes practices such as:
  - Publishing Open Scientific Research,
  - Campaigning for Open Access & generally making it easier to publish, and
  - Communicate Scientific Knowledge.
  - Other ways to make science more transparent and accessible during the research process. This includes
    - Open Science Notebook,
    - Citizen Science,
    - Aspects of Open Source Software,
    - Crowdfunded Research Projects.

Source: Global Open Access Portal, UNESCO

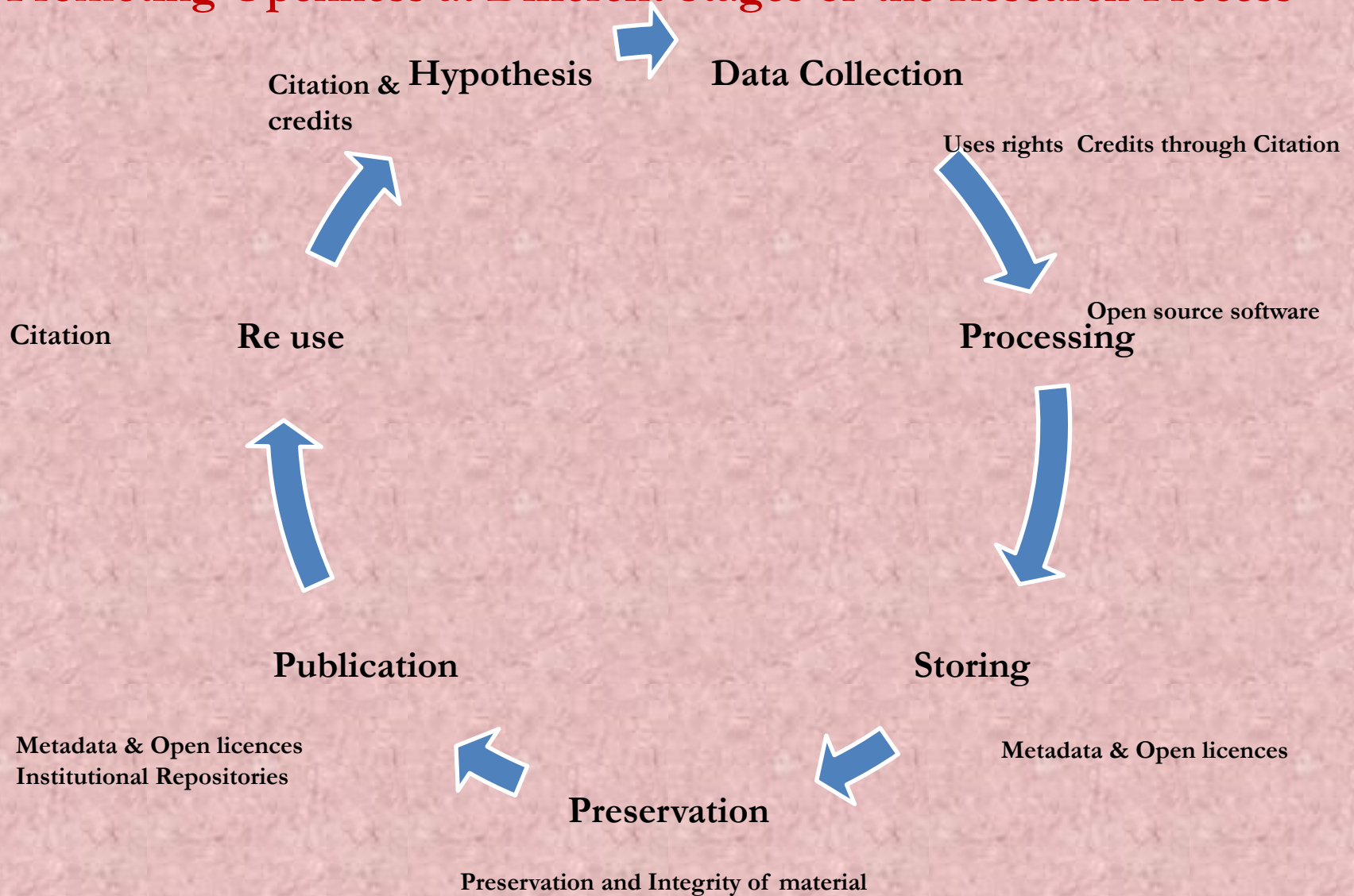
# Open Science: Importance

- To overcome the knowledge divides, we need more cooperation across disciplines and across borders to help governments develop more effective and inclusive policies, North and South. International networks, open data sources, co-creation of knowledge, open access to publishing and software – these are all vital to achieving this.

**Irina Bokova | Director-General of UNESCO**

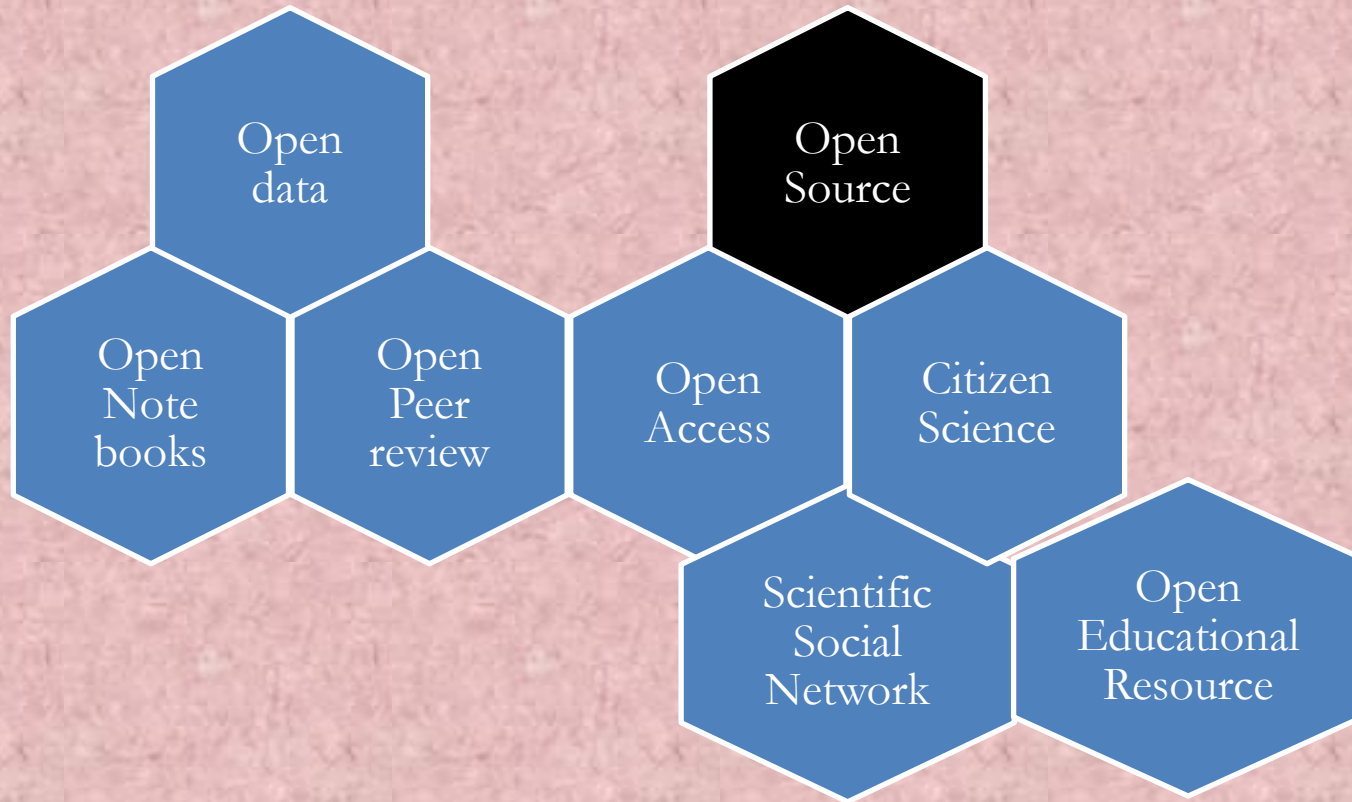
*World Social Science Report 2016: Challenging Inequalities: Pathways to a  
Just World*

# Promoting Openness at Different Stages of the Research Process

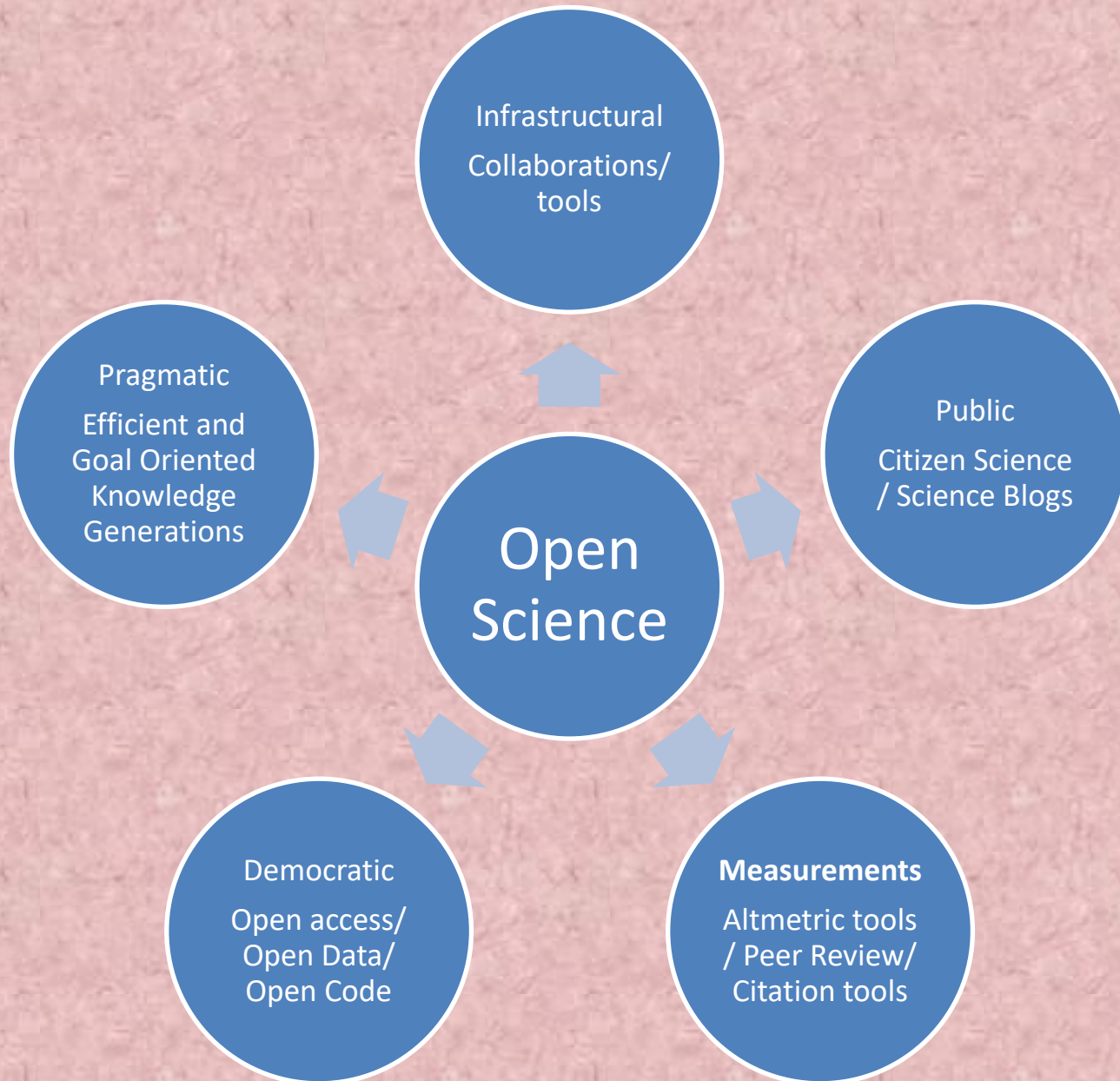




# Open Science Facets



# Open Science School of Thoughts





# Why

OPEN IN ORDER TO



FACILITATE COLLABORATION



[whyopenresearch.org](http://whyopenresearch.org)

#OAweek

OPEN IN ORDER TO



ACCELERATE DISCOVERY



[whyopenresearch.org](http://whyopenresearch.org)

#OAweek

OPEN IN ORDER TO



INCREASE ACCESS  
TO EDUCATION



[whyopenresearch.org](http://whyopenresearch.org)

#OAweek

OPEN IN ORDER TO



STIMULATE INNOVATION



[whyopenresearch.org](http://whyopenresearch.org)

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EXCHANGE KNOWLEDGE



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OPEN IN ORDER TO



IMPROVE  
REPRODUCIBILITY



[whyopenresearch.org](http://whyopenresearch.org)

#OAweek

## WHY OPEN ACCESS TO SCIENTIFIC PEER-REVIEWED PUBLICATIONS?



### GOOD FOR SCIENCE

allows scientists to build on previous research results and avoids unnecessary duplication of effort  
improved quality and greater efficiency



### GOOD FOR THE ECONOMY

speeds up innovation  
faster progress to market



### GOOD FOR SOCIETY

makes research available to individual citizens and to non-profit organisations  
greater transparency

# OPEN ACCESS: BENEFITS

## Unique visitors



Increased  
Visibility



Increased  
Citation Rates

## Citation Rates



Open access articles    Subscription access articles

"Jack Andraka, a 15 year old from USA, used free articles from Google Scholar to develop a highly innovative method of detecting a rare type of pancreatic cancer."



Drives  
Innovation



Global  
Impact

"Piya Sorcar, founder of Teach Aids made materials & research about HIV available for free globally. The material is now available in 15 languages and has reached over 70 countries, including numerous educators, governments and NGOs."

Open Access brings new audiences to scholarly content, such as educators, business owners, support workers and so on by removing barriers of affordability and access.



Public  
Access



Comply with  
Funder Policies

Funders, such as the Research Councils, European Commission and the Wellcome Trust, mandate for open access publication of research outputs.



**Visibility**

wider dissemination of research undertaken in Austria

**Media**

higher quality of information services

**Democratisation**

access independent of income

**Public**

transparent spending of tax money

**Knowledge Transfer**

diffusion of knowledge into all societal areas

**Publisher**

market entrance for providers from Austria

**Education**

teaching and learning according to the scientific state of the art

**Developing Countries**

self-help based on current scientific knowledge

**Citizen Science**

participation of citizens in the research process

**Reproducibility**

simplifying the verification of research results

**Politics**

making better decisions based on current scientific knowledge

**Knowledge Networks**

new potentials via data and text mining

**Health**

up-to-date information for doctors and patients

**Interdisciplinarity**

enhances exchange between disciplines

**Open Innovation**

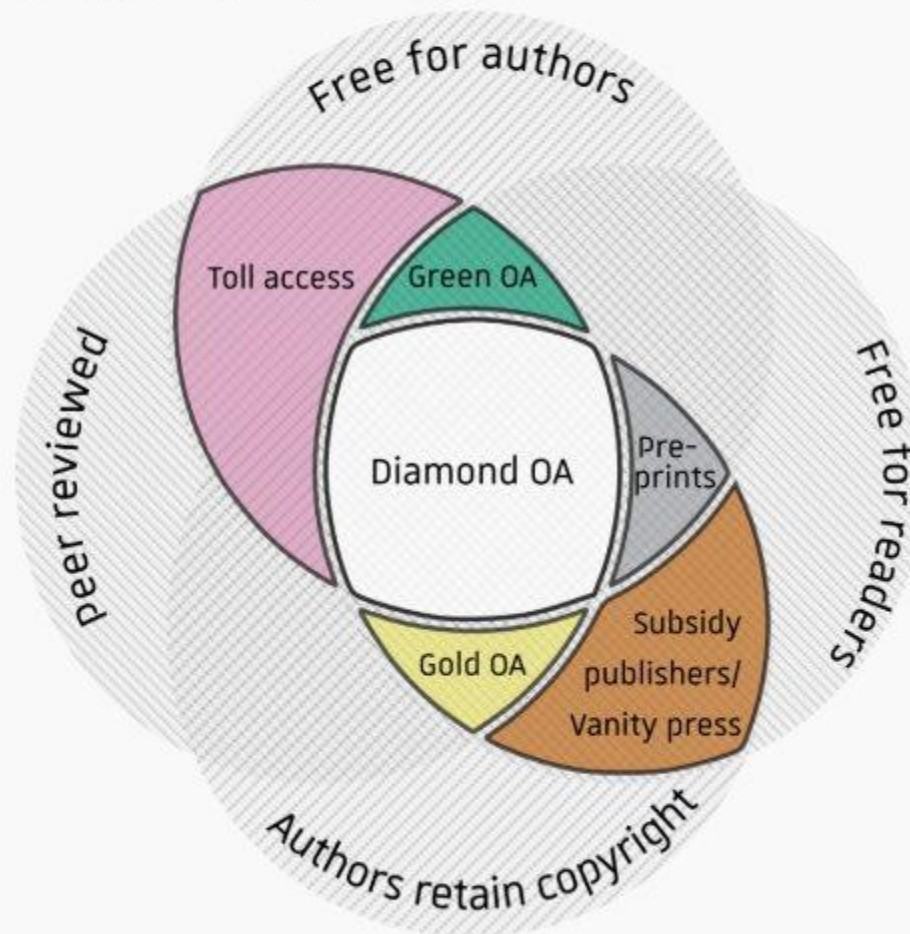
access to cutting-edge research encourages innovation

**Research Efficiency**

avoiding duplication and double funding

✧ *Where do we fit in?*

**The distinction between types of publishing and access can often seem complex. Nevertheless, most of the salient points can be summed up in one simple diagram:**





# THE IMPACT OF OPEN ACCESS

## Demonstrating Achievements

Open access for Institutions

Building Reputation	Garnering Funding	Developing Alumni Connections
Strengthening Recruiting	Demonstrating Learning Outcomes	Professionalizing Students
Contributing Stories for Public Relations	Aiding Accreditation	Boosting Operational Efficiency

## Reputation Building

Open access for Authors

Amplifying Scholarly Expertise	Preserving Scholarly Legacy	Developing Niche Field
Forging Business & Government Partnerships	Popularizing Research in Mainstream Outlets	Finding Collaborators
Modeling Innovative Teaching	Launching Scholarly Career	Improving Quality

## Advancing Knowledge

Open access for Readers

Affecting Public Policy	Advancing Innovation	Linking Global Experts
Building Local Community	Improving Access to Education	Datamining Research
Updating Practitioners	Connecting Cultures	Informing Prospective Applicants

**Table 2.1: Indicative Open Access Timeline<sup>7</sup>**

1991	2000			2001	2002			2003		2006	2007	2008				
arXiv.org Repository Launched	PubMed Central Repository Launched	EPrints software Released	PLOS journals Launched	BioMed Central journals Launched	OJS (Open Journal Systems) Software Released	SPARC Launched	DSpace software Released	Creative Commons Licenses Released	Budapest OA Initiative (Declaration)	OAIster Database Launched	Berlin, Bethesda Declarations	WSIS Action Lines Launched	DOAJ (Directory of Open Access Journals) Launched	OpenDOAR (Directory of Open Repositories) Launched	Celebration of Open Access Week Started	OA Scholarly Publishers Association (OASPA) Launched

# HOW TO MAKE YOUR RESEARCH OPEN ACCESS

FOR FREE AND LEGALLY

 Check  
thinkchecksubmit.org  
The DOAJ

Do you know a free Open Access journal?


Publish via 'gold' route

 Most Open Access journals do not have publishing charges

 Check  
Your library  
Your university  
Your funders

Do you have funding for Open Access?


Publish via 'gold' route

 Note: Some publishers impose embargo periods on post-print publication

 Check  
sherpa.ac.uk/romeo

Can you publish the post-print?


Publish your post-print

 Post-print: manuscript after it has been peer reviewed, but before type-setting by the publisher

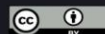
 Check  
sherpa.ac.uk/romeo

Can you publish the pre-print?

Publish your pre-print

 Pre-print: manuscript that has not yet been subject to formal peer review, distributed to receive early feedback on research from peers

Choose a different journal



# HOW TO ACHIEVE OPEN ACCESS IN HORIZON 2020



## SELF-ARCHIVING 'GREEN' OPEN ACCESS

deposit the final peer-reviewed manuscript  
in a repository of your choice.

*Researchers must ensure open access to the  
publication within at most 6 months  
(12 months for publications in the social  
sciences and humanities).*



## OPEN ACCESS PUBLISHING 'GOLD' OPEN ACCESS

publish in open access journals or  
in hybrid journals.

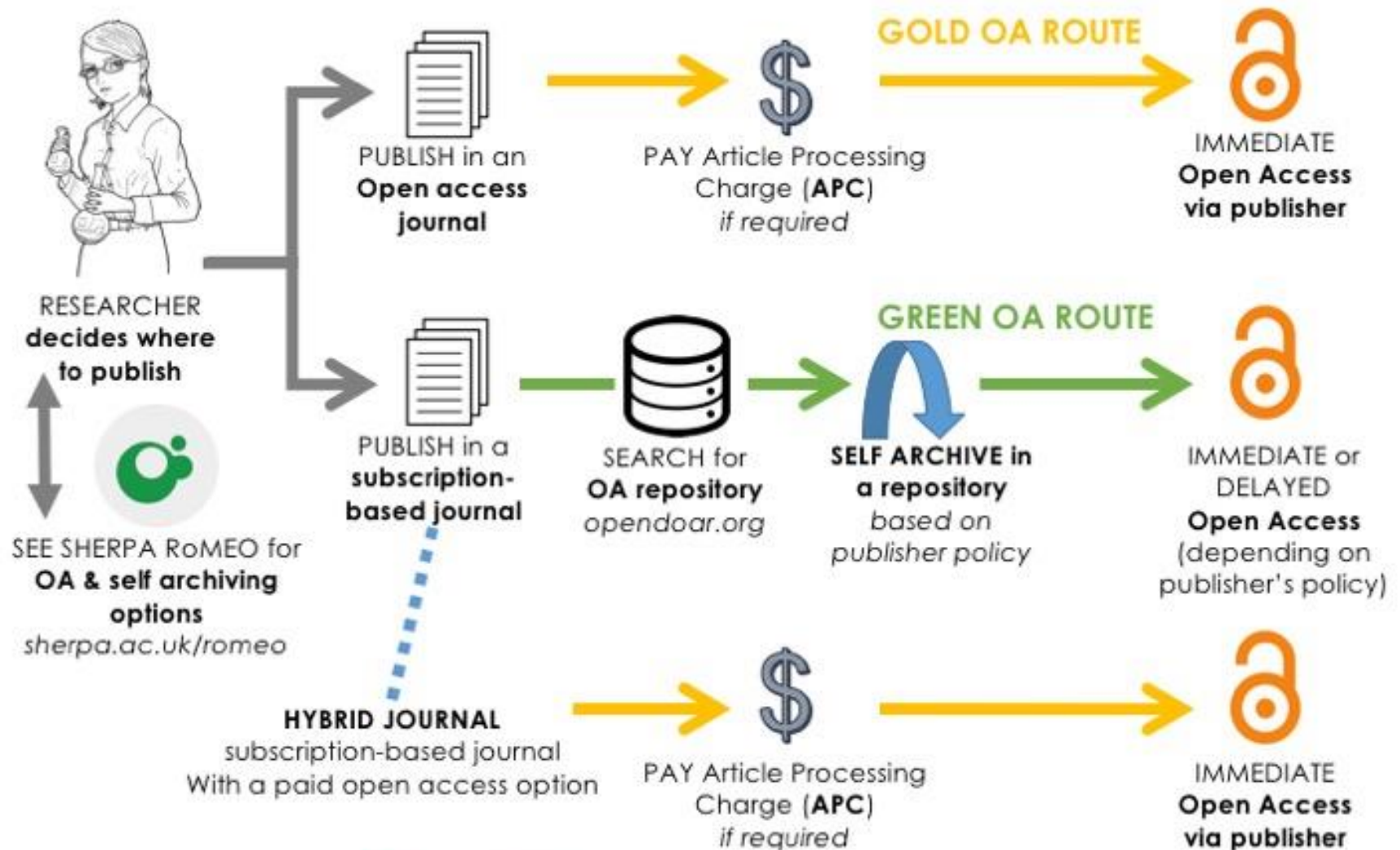
*Article processing charges are eligible for  
reimbursement during the duration of your  
project. Hybrid journals sell subscriptions (i.e.  
closed access) AND offer the option of making  
some individual articles open access.*

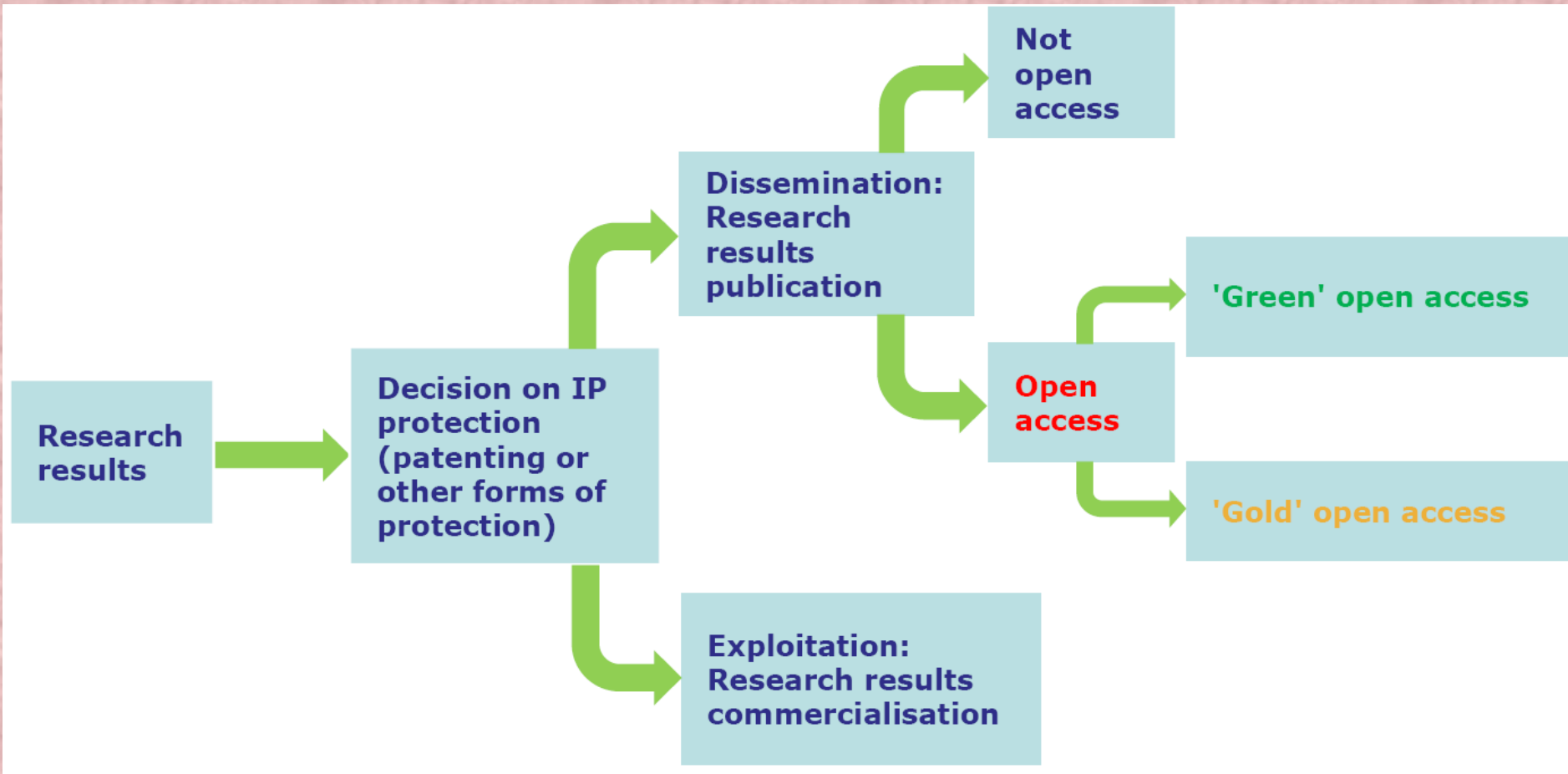


## BOTH OPTIONS ARE POSSIBLE

if the gold route is chosen the article must  
also be deposited in a repository to comply  
with Article 29.2.

# Open Access Publishing





- Do Open Access models have an impact on intellectual property rights?
- **No. OA** will not affect the IP generated by research results, because the decision on whether to publish **OA** documents comes after the more general decision.

# Open Science Movement

- The many advantages of Open Science Movement include:
  - Greater availability and accessibility of publicly funded scientific research outputs;
  - Possibility for rigorous peer-review processes;
  - Greater reproducibility and transparency of scientific works;
  - Greater impact of scientific research.

Source: Global Open Access Portal (GOAP), UNESCO

# Celebration of Promotional Weeks for Open Science

- International Open Access Week | 19-25 October 2020 | Everywhere [<http://www.openaccessweek.org>]
- International Open Education Week | 1-5 March 2021 | Everywhere [<https://www.openeducationweek.org>]
- International Data Week | 8–11 November 2021 [<http://www.internationaldataweek.org>]: The theme of IDW 2018 and IDW 2016 were respectively ‘Digital Frontiers of Global Science’ and ‘From Big Data to Open Data: Mobilising the Data Revolution’. IDW 2018 edition was held at Gaborone, Botswana in African region during 5-8 November.



**ROARMAP**  
Registry of Open Access Repository Mandates and Policies

**re3data.org**  
REGISTRY OF RESEARCH DATA REPOSITORIES

**OpenDOAR**

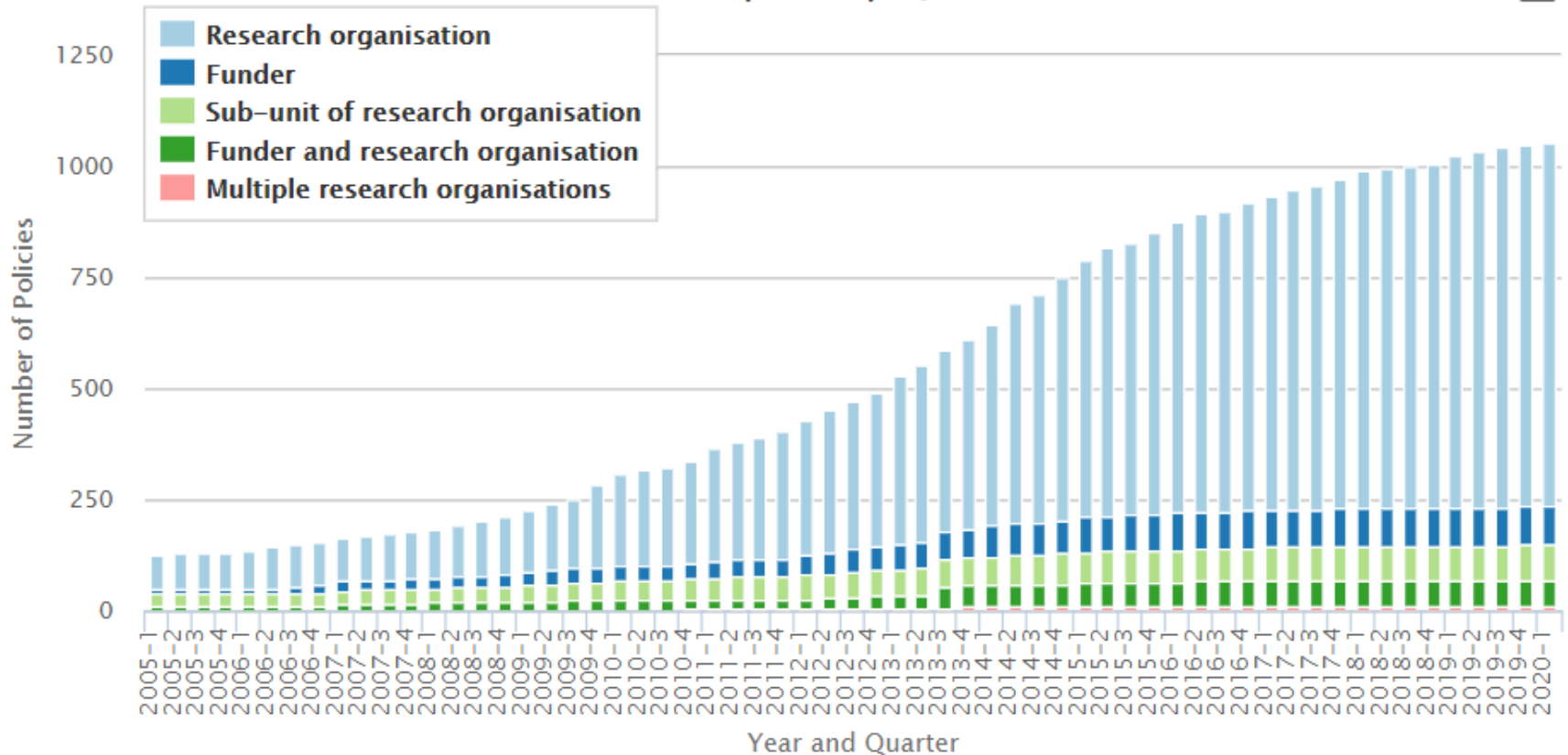
*The Directory of  
Open Access Repositories*

**ROAR- Registry of Open Access  
Repositories**

**DOAJ** DIRECTORY OF  
OPEN ACCESS  
JOURNALS

# Growth of OA Policies Adopted Worldwide, 2005-2020

Policies Adopted by Quarter



Highcharts.com

Source: Registry of Open Access Repository Mandates and Policies (ROARMAP), <http://roarmap.eprints.org/>

# BRICS Nations on ROARMAP

Registry of Open Access Repository Mandates and Policies

Name of the Country	Available Policy Instruments
Brazil	26
Russia	8
India	16
China (including Hong Kong)	8
South Africa	11
Total from BRICS Economies	69 (6.56%)
Global Total	1051

# Global Mapping of OA Movements

UNESCO | Education | Natural Sciences | Social and Human Sciences | Culture | Communication and Information | Media Services

Press F11 to exit full screen

About us | Themes | Intergovernmental Programmes | Events | Resources

UNESCO  
United Nations  
Educational, Scientific and  
Cultural Organization

**GOAP**  
GLOBAL OPEN ACCESS PORTAL

## Global Open Access Portal

UNESCO » Communication and Information » GOAP

**GOAP**

- Access by Region
- Funding Mandates
- Key Organizations
- Thematic Areas
- Open Access Community
- Open Science Movement
- Contributors and Disclaimer

 The Global Open Access Portal (GOAP) funded by the Governments of Colombia, Denmark, Norway, and the United States Department of State, presents a current snapshot of the status of Open Access (OA) to scientific information in 158 countries worldwide. For countries that have been more successful in implementing Open Access, the portal highlights critical success factors and aspects of the enabling environment. For countries and regions that are still in the early stages of Open Access development, the portal identifies key players, potential barriers and opportunities.

The Global Open Access Portal is designed to provide necessary information for policy-makers to:

- Learn about the global Open Access environment;
- View their country's status; and
- Understand where and why Open Access has been most successful.

At a glance, the portal provides an overview of the framework surrounding Open Access in UNESCO Member States by focusing on:

- The critical success factors for effectively implementing Open Access;

**ROAD** DIRECTORY OF OPEN ACCESS SCHOLARLY RESOURCES

**VIDEO**

Open Access Expl. RE-USE RIGHTS

...so people can do interesting things in new ways with the materials.

Nick Stockey and Jonathan Eisen

**RELATED INFORMATION**

Instagram  
Twitter  
Google Plus  
YouTube  
Facebook  
LinkedIn  
RSS  
Accessibility

<http://www.unesco.org/new/en/communication-and-information/portals-and-platforms/goap/>

# Open Science Proliferation in BRICS Nations

Open Science Channel/ Country	No. of items in Directory of Open Access Journals (DOAJ)*	No. of items in Directory of Open Access Scholarly Resources (ROAD)#	No. of items in Directory of Open Access Repositories (OpenDOAR)*	No. of items in Registry of Research Data Repositories (RE3Data.org)#
<b>Brazil</b>	1081	1184	97	7
<b>Russia</b>	186	670	28	21
<b>India</b>	198	2175	79	31
<b>China</b>	102	29	40	37
<b>South Africa</b>	63	145	33	6
<b>Total</b>	1630 (15.96%)	4203 (16.78%)	277 (8.03%)	95 (5.0%)
<b>Global Total</b>	10213	25047	3448	2036

*# Data as on 16<sup>th</sup> March 2018 | \* Data as on 10<sup>th</sup> October 2017 .*



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all of the words

exact phrase

at least one of the words

without the words

find those words

Author

Publisher

Repository

DOI

Year  -

Simple Search

Refine your search

Showing results for (Open AND Access AND India) (210,946 articles found)

Sort by: Relevance

Publication type

with fulltext only

Year



1998 - 2017

Languages

- English 43,345
- German 140
- French 85
- Spanish 76



India

By Stefano Chairlone and Saibal Ghosh

Repository: Munich RePEc Personal Archive | 2009

...Archive India Stefano Chairlone and Saibal Ghosh January 2009 Online at http://mpa.ub.uni-muenchen.de/17402/ MPRA Paper No. 17402, posted 19 September 2009 17:12 UTC INDIA



Open access journals and institutional repositories: practical need and present trends in India

By Mohammad Nazim and Maya Devi

Repository: FIS 12008

[http://core.ac.uk/search?q=\(Open%20AND%20Access%20AND%20India\)](http://core.ac.uk/search?q=(Open%20AND%20Access%20AND%20India))

CORE Advanced Search

# Data Providers

CORE aggregates research papers from data providers from all over the world including institutional repositories, subject-repositories and journal publishers. This process, which is called harvesting, allows us to offer search, text-mining and analytical capabilities over not only metadata, but also the full-text of the research papers making CORE a unique service in the research community.

CORE currently contains 134,356,349 open access articles, from over tens of thousands [journals](#), collected from over 3,698 [repositories](#) around the world.

[Learn more about becoming a data provider](#)



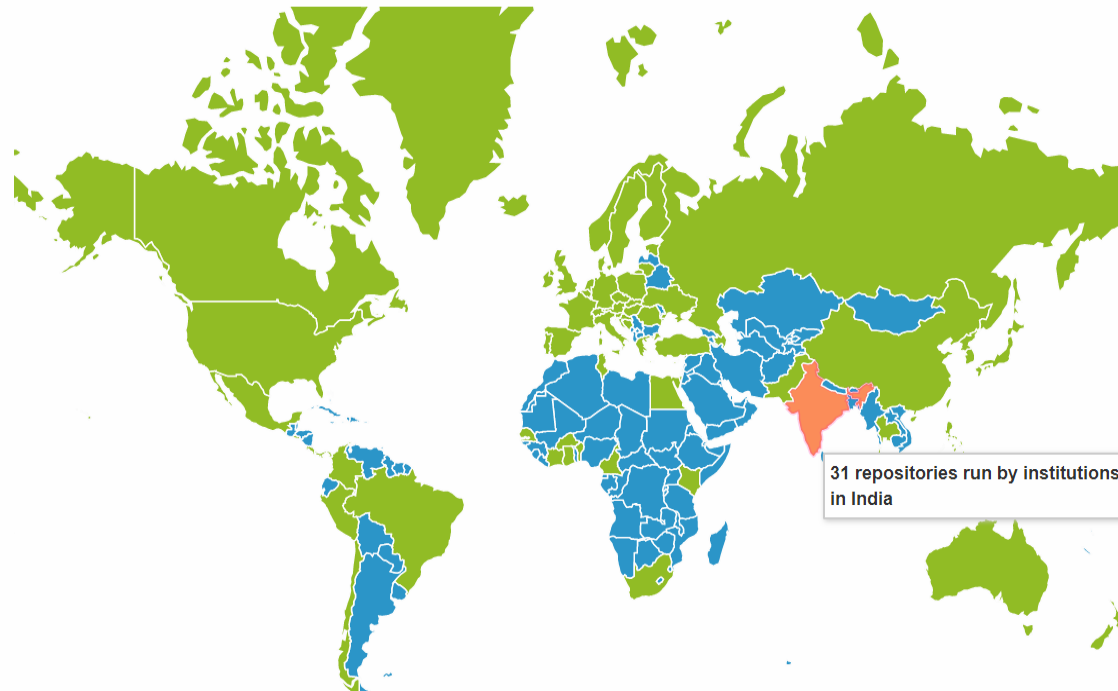


# **Open Research Data Repositories**

## Browse by country

Graphical

Text



- <https://www.re3data.org/browse/by-country/>
- Brazil : 9 Open Data Repositories
- Russia : 22 Open Data Repositories
- India: 51 Open Data Repositories
- China : 44 Open Data Repositories
- South Africa: 11 Open Data Repositories

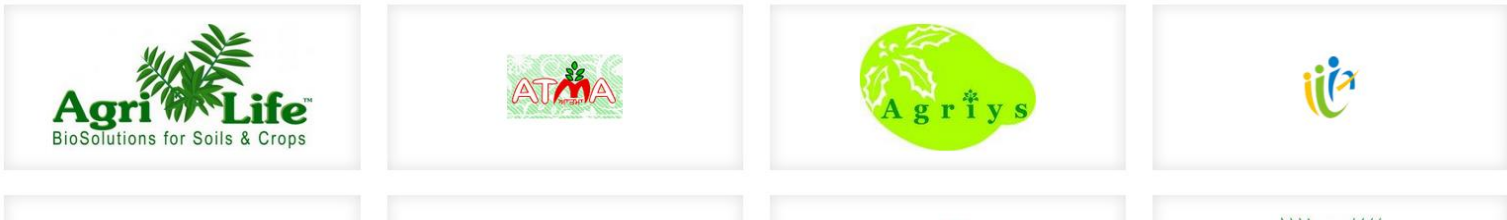


Country

### Partners

GODAN is a rapidly growing network of over **363** partners from government, international and private sector organisations all committed to making data relevant to agriculture and nutrition available, accessible and usable worldwide.

[BECOME A PARTNER](#)



**GODAN.info (Global Open Data for Agriculture and Nutrition):** Challenging global poverty and promoting food security through opening up data in agriculture and nutrition for everyone. #OpenData #ICT4AG #SDG2

**#GODAN** is a rapidly growing network of over 656 partners from government, international and private sector organisations all committed to making data relevant to agriculture and nutrition available, accessible and usable worldwide.

# **Open Access Scholarly Resources**

› Road in a  
nutshell

› About us

› Data sources

› For scholars and  
researchers

› For publishers

› Open Access  
publishing

› Statistics about  
Open Access

## ↗ SEARCH ROAD DIRECTORY

E.g. : ISSN, title, subject...

OK

> [Advanced search](#)



## No. of Publication Titles

- India 2609
- Brazil 1306
- Russia 800
- South Africa 162
- China 57

• As on 16<sup>th</sup> March  
2018

# **Indian National Initiatives**

# Open Access India

## Indian Civil Society Actor for Open Science Movement

### Open Access India

Advocating Open Access, Open Data and Open Education in India

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## Home

Welcome to Open Access India!

The [Budapest Open Access Initiative](#) defined “Open Access” as making it freely available on the public Internet, permitting any users to read, download, copy, distribute, print, search, or link to the full texts of these articles, crawl them for indexing, pass them as data to software, or use them for any other lawful purpose, without financial, legal, or technical barriers other than those inseparable from gaining access to the Internet itself.

For creating awareness among the graduate students, early career researchers, professors, research managers and the policy makers on opening up of the access to the publicly funded research in India, ‘[Open Access India](#),’ a community of practice advocating [Open Access](#), [Open data](#), [Open education](#) in India has been formed initially as an online [Facebook group](#) on 8th July 2011.



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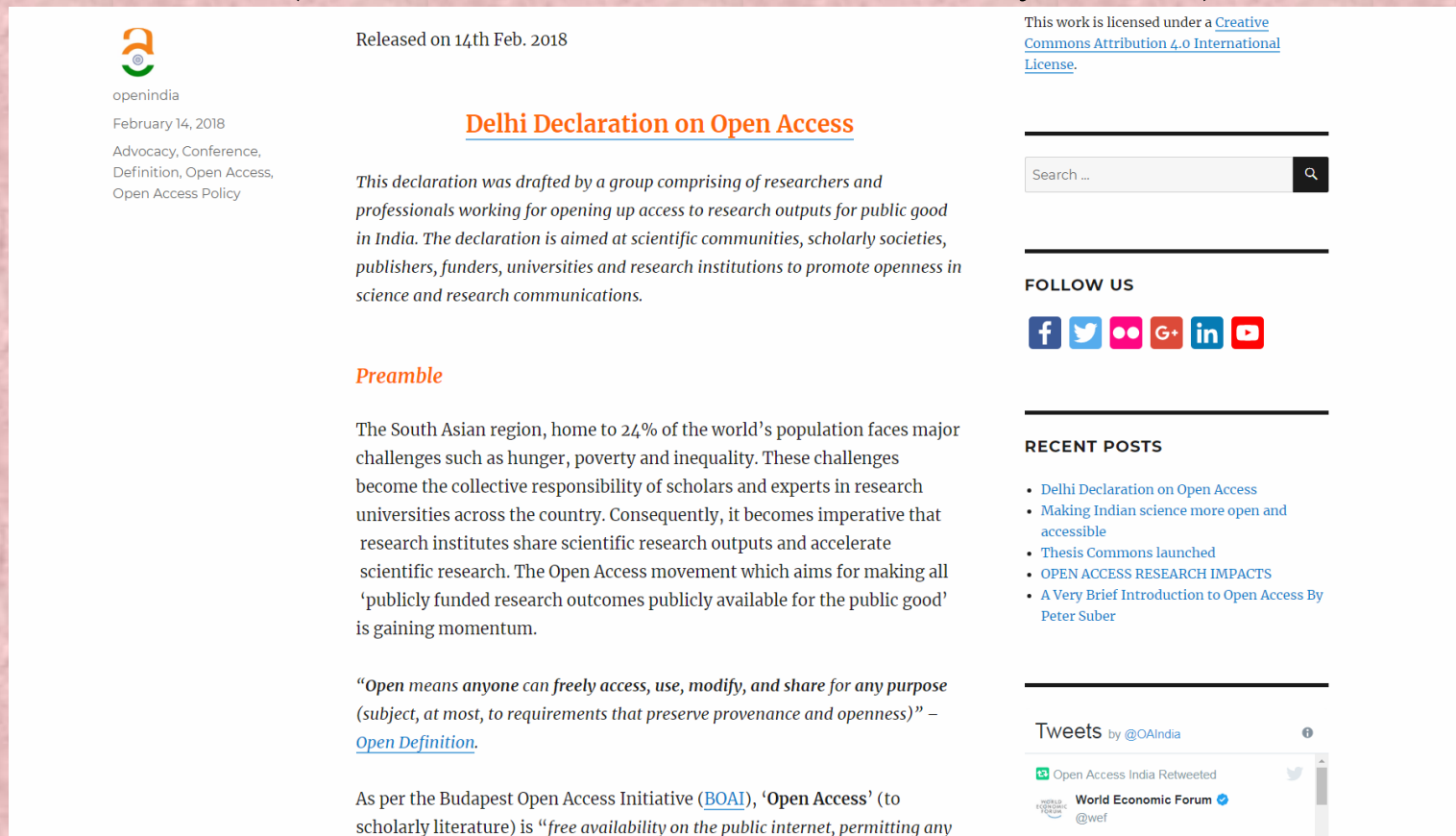


Sign up or log in to bookmark your favorites and sync them to your phone or calendar.

Saturday, November 12

# Delhi Declaration on Open Access

(Released on 14<sup>th</sup> February 2018)



The screenshot shows the official webpage for the Delhi Declaration on Open Access. On the left, there is a logo for 'openindia' and text indicating the date (February 14, 2018) and the event (Advocacy, Conference, Definition, Open Access, Open Access Policy). The main content area features the title 'Delhi Declaration on Open Access' in orange, followed by a paragraph stating that the declaration was drafted by a group of researchers and professionals. Below this is a 'Preamble' section, which discusses the challenges in the South Asian region and the importance of open access. A quote from the 'Open Definition' is also included. At the bottom of the main content, it states that the declaration is in line with the Budapest Open Access Initiative (BOAI). On the right side of the page, there is a search bar, a 'FOLLOW US' section with social media icons for Facebook, Twitter, YouTube, and LinkedIn, and a 'RECENT POSTS' section listing several related articles and reports.

Released on 14th Feb. 2018

**Delhi Declaration on Open Access**

*This declaration was drafted by a group comprising of researchers and professionals working for opening up access to research outputs for public good in India. The declaration is aimed at scientific communities, scholarly societies, publishers, funders, universities and research institutions to promote openness in science and research communications.*

**Preamble**

The South Asian region, home to 24% of the world's population faces major challenges such as hunger, poverty and inequality. These challenges become the collective responsibility of scholars and experts in research universities across the country. Consequently, it becomes imperative that research institutes share scientific research outputs and accelerate scientific research. The Open Access movement which aims for making all 'publicly funded research outcomes publicly available for the public good' is gaining momentum.

*"Open means anyone can freely access, use, modify, and share for any purpose (subject, at most, to requirements that preserve provenance and openness)" – [Open Definition](#).*

As per the Budapest Open Access Initiative ([BOAI](#)), 'Open Access' (to scholarly literature) is "free availability on the public internet, permitting any

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- [OPEN ACCESS RESEARCH IMPACTS](#)
- [A Very Brief Introduction to Open Access By Peter Suber](#)

Tweets by @OAIIndia

Open Access India Retweeted

World Economic Forum @wef

- Marked the 16<sup>th</sup> Anniversary of Budapest Open Access Initiative (BOAI)
- 120+ Signatories from the Global South
- Supported by the Knowledge Societies Division of UNESCO; IFLA RSCAO; Forum for Open Access in SAARC, etc.
- Online: <http://openaccessindia.org/delhi-declaration-on-open-access/>



# Advocacy for Open Science: Some Recent Success Stories

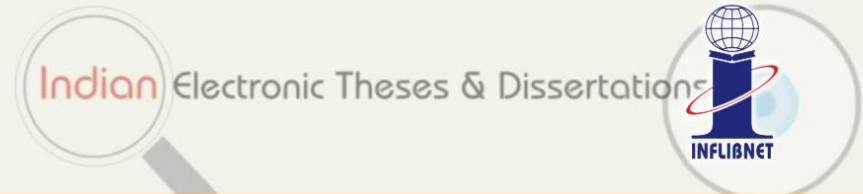
- In 2011, *Shodhganga: A Reservoir of Indian Theses* was launched by INFLIBNET Centre, to serve the mandates of the UGC Notification (Minimum Standards & Procedure for Award of MPhil/PhD Degree, Regulation, 2009) dated 1 June 2009, to facilitate open access to Indian theses and dissertations for global dissemination to the academic community world-wide.
- In December 2014, the Department of Biotechnology (DBT) and the Department of Science and Technology (DST), Government of India had jointly adopted the *DST/DBT Open Access Policy*.



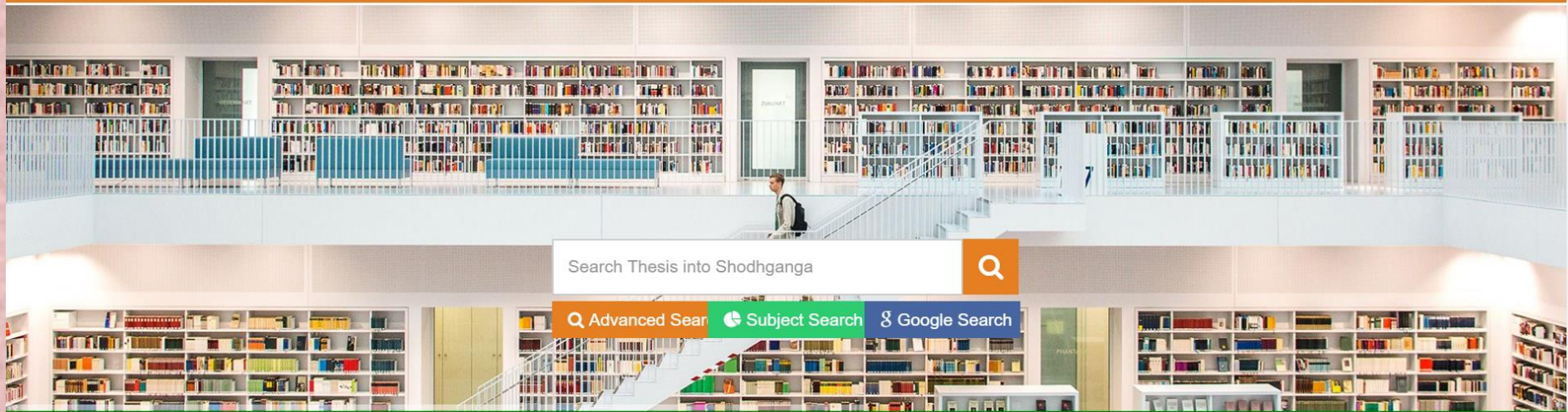
Central Platform for Open Archive Repository and Harvester  
for Department of Science and Technology  
& Department of Biotechnology  
Ministry of Science & Technology, Government of India



<http://shodhganga.inflibnet.ac.in>



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- » URKUND URSA minor Accounts are created for UCs.
- » Three Days National Workshop on Ethical Issues and Use of Anti-Plagiarism for Research Integrity scheduled to be held at INFLIBNET Centre, Gandhinagar from 26th March - 28th March, 2018. [Workshop Pics](#)

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**438 Contributing Universities**

# UNESCO Open Access (OA) Curriculum for Researchers | Library Schools



- In March 2015, UNESCO and CEMCA (Commonwealth of Learning) jointly launched an *Open Access Curriculum for Researchers*, and an *Open Access Curriculum for Library Schools*.
- 9 modules are freely available and downloadable online.

About NDL India

Learning Resource Type

Subject Domain

Featured Sources

News and Events

Repository integrates contents from different Indian Institutional Repositories

Activity Area

Hello, Anup Kumar Das

Welcome to National Digital Library of India

You may like to explore NDL India through following activities

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Search




- National Digital Library of India
- <https://ndl.iitkgp.ac.in>
- Integrates contents from different Indian OA repositories | A kind of Metadata Harvesting Service
- 47,914,824 items indexed/ hosted in NDL India (as on 20-04-2020)

The screenshot displays the NPTEL website interface. On the left, there are three filter sections: 'List By Discipline' with options like Aerospace Engineering, Agriculture, Architecture, Atmospheric Science, Automobile Engineering, and Basic courses; 'List By content type' with Video Course and Web Course; and 'List By Institutions' with IIT Bangalore, IIT Bombay, IIT Delhi, IIT Guwahati, IIT Kanpur, and IIT Kharagpur. Below these is a 'Search by Keyword' section with a search box containing 'ex: Course Introduction' and a 'GO' button. At the bottom left, there is a 'Search within Video' dropdown. The main area is titled 'Results' and shows a grid of video thumbnails. Each thumbnail includes a 'VIDEO' label, a 'New' badge, a title, and links for 'Syllabus' and 'Course Content'. The thumbnails are arranged in a 3x3 grid, with the first row containing 'NOC:Non-Conventional Energy Resources', 'NOC:Experimental Stress Analysis: An Overview', and 'NOC:Semiconductor Optoelectronics'. The second row contains 'NOC:Nuclear and Particle Physics', 'NOC:Advanced Condensed Matter Physics', and 'NOC:Integrated Circuits, MOSFETs, Op-Amps and their Applications'. The third row contains 'NOC:Probability Foundations for Electrical Engineers', 'NOC:Electronics Enclosures Thermal Issues', and 'NOC:Mathematical Methods and Techniques in Signal Processing'. A navigation bar at the top of the results section shows 'Prev 1 2 3 4 5 Next'.

- NPTEL (National Programme on Technology Enhanced Learning) offers OpenCourseware and Open Educational Resources (OER) | [www.nptel.ac.in](http://www.nptel.ac.in)
- An Initiative by seven Indian Institutes of Technology (IIT Bombay, Delhi, Guwahati, Kanpur, Kharagpur, Madras & Roorkee) and Indian Institute of Science (IISc) for creating course contents in engineering and science subjects.
- Accessible Worldwide, very popular in the Global South
- English Language Contents – Video Lectures and Textual Resources



**Table 3.1: Various Author Rights Regime**

	<b>Symbol</b>	<b>Rights Statement</b>
Copyright		All rights reserved.
Copyleft		All wrongs reserved.
Creative Commons		Some rights reserved.

## LICENSES



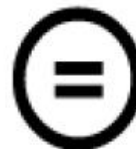
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Others can only copy, distribute, display or perform verbatim copies of your work



SA

### Share Alike

Others can distribute your work only under a license identical to the one you have chosen for your work



NC











### Non-Commercial

Others can copy, distribute, display, perform or remix your work but for non-commercial purposes only.

Figure 3.1: Understanding Creative Commons Licenses<sup>20</sup>



**Table 3.2: Understanding Fully Open Access Resources from the  
“Open Access Spectrum”**

Access	Reader Rights	Reuse Rights	Copyrights	Author Posting Rights	Automatic Posting	Machine Readability	Access
 <p>OPEN ACCESS</p>	<p>Free readership rights to all articles immediately upon publication</p>	<p>Generous reuse &amp; remixing rights (e.g., CC BY license)</p>	<p>Author holds copyright with no restrictions</p>	<p>Author may post any version to any repository or website</p>	<p>Journals make copies of articles automatically available in trusted third-party repositories (e.g., PubMed Central) immediately upon publication</p>	<p>Article full text, metadata, citations, &amp; data, including supplementary data, provided in community machine readable standard formats through a community standard API or protocol</p>	 <p>OPEN ACCESS</p>
	<p>Free readership rights to all articles after an embargo of no more than 6 months</p>	<p>Reuse, remixing, &amp; further building upon the work subject to certain restrictions &amp; conditions (e.g., CC BY-NC &amp; CC BY-SA licenses)</p>	<p>Author holds copyright, with some restrictions on author reuse of published version</p>	<p>Author may post final version of the peer-reviewed manuscript (“postprint”) to any repository or website</p>	<p>Journals make copies of articles automatically available in trusted third-party repositories (e.g., PubMed Central) within 6 months</p>	<p>Article full text, metadata, citations, &amp; data, including supplementary data, may be crawled or accessed through a community standard API or protocol</p>	
	<p>Free readership rights to all articles after an embargo greater than 6 months</p>	<p>Reuse (no remixing or further building upon the work) subject to certain restrictions and conditions (e.g., CC BY-ND license)</p>	<p>Publisher holds copyright, with some allowances for author and reader reuse of published version</p>	<p>Author may post final version of the peer-reviewed manuscript (“postprint”) to certain repositories or websites</p>	<p>Journals make copies of articles automatically available in trusted third-party repositories (e.g., PubMed Central) within 12 months</p>	<p>Article full text, metadata, &amp; citations may be crawled or accessed without special permission or registration</p>	
	<p>Free and immediate readership rights to some, but not all, articles (including “hybrid” models)</p>	<p>_____</p>	<p>Publisher holds copyright, with some allowances for author reuse of published version</p>	<p>Author may post submitted version/draft of final work (“preprint”) to certain repositories or websites</p>	<p>_____</p>	<p>Article full text, metadata, &amp; citations may be crawled or accessed with permission</p>	
 <p>CLOSED ACCESS</p>	<p>Subscription, membership, pay-per-view, or other fees required to read all articles</p>	<p>No reuse rights beyond fair use/limitations &amp; exceptions to copyright (all rights reserved copyright) to read</p>	<p>Publisher holds copyright, with no author reuse of published version beyond fair use</p>	<p>Author may not deposit any versions to repositories or websites</p>	<p>No automatic posting in third-party repositories</p>	<p>Article full text &amp; metadata not available in machine-readable format</p>	 <p>CLOSED ACCESS</p>

# CREATIVE COMMONS LICENSES



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COPY & PUBLISH	ATTRIBUTION REQUIRED	COMMERCIAL USE	MODIFY & ADAPT	CHANGE LICENSE
✓	✗	✓	✓	✓
✓	✓	✓	✓	✓
✓	✓	✓	✓	✗
✓	✓	✓	✗	✓
✓	✓	✗	✓	✓
✓	✓	✗	✓	✗
✓	✓	✗	✗	✓



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- **Article Level Metrics (ALM)** - comprehensive and multidimensional suite of established metrics at the article level. <http://article-level-metrics.plos.org/alm-info/>
- **Altmetrics** – creation and study of new metrics based on the social web for analyzing, and informing scholarship. Altmetrics Manifesto, <http://altmetric.org/about>

# Impact



**usage**

downloads  
views



**peer-review**

expert opinion

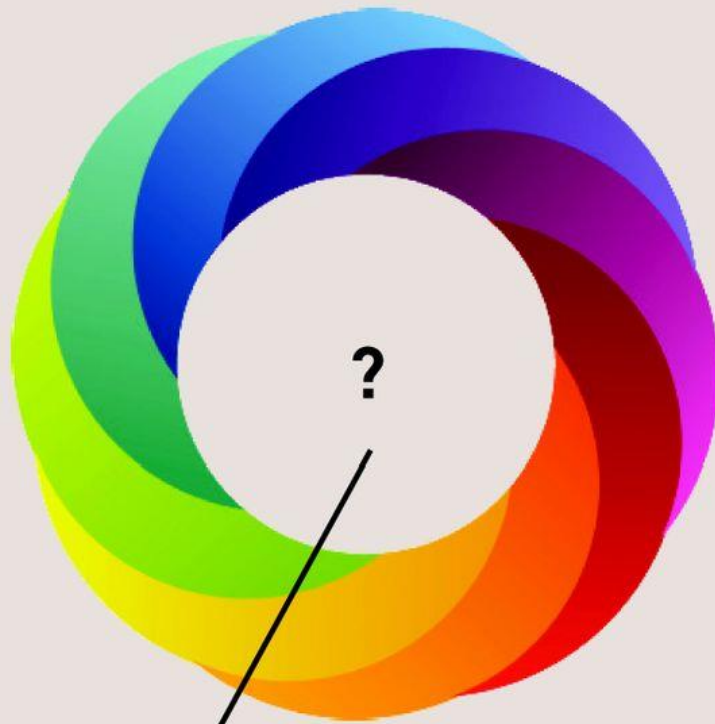


**citations**

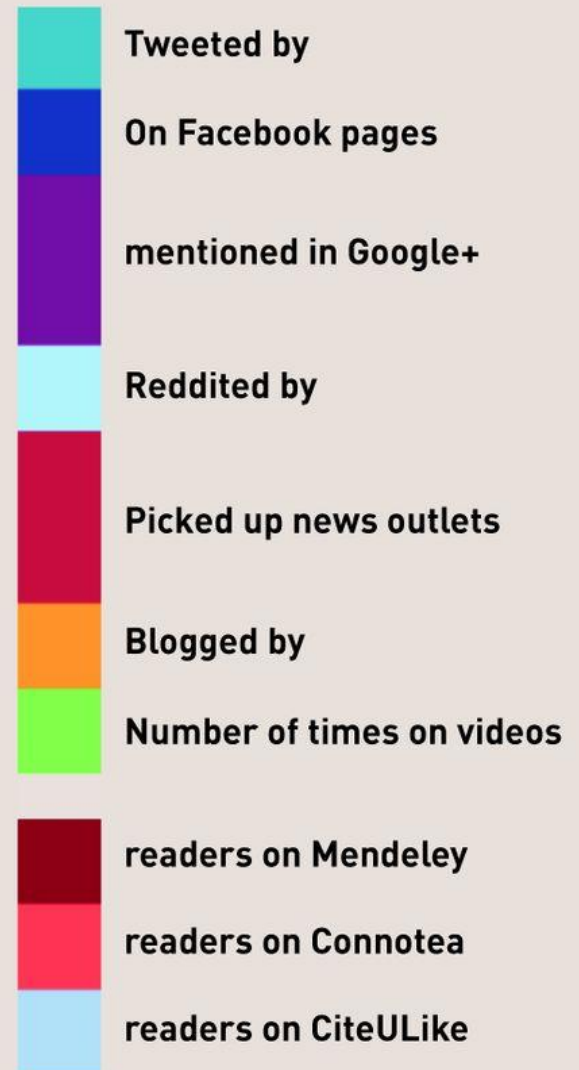


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**2913**

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-  59 blogs
-  2289 tweeters
-  10 weibo users
-  164 Facebook pages
-  3 Wikipedia pages
-  77 Google+ users
-  1 research highlight platform
-  1 Q&A thread
-  3 video uploaders

# Substantial undocumented infection facilitates the rapid dissemination of novel coronavirus (SARS-CoV2)

Overview of attention for article published in Science, March 2020



- 270 news outlets
- 42 blogs
- 18740 tweeters
- 3 Dimensions
- 14 Facebook pages
- 1 Wikipedia page
- 16 Redditors

Two weeks after its publication in @ScienceMagazine, our research on COVID-19 has risen to #1 in Altmetric score among all 65K outputs from Science, and #3 among tracked 14.5M research outputs from all sources so far. Our work is making an impact.

## ALL RESEARCH OUTPUTS

#3

of 14,545,878 outputs

## OUTPUTS FROM SCIENCE

#1

of 64,761 outputs

## OUTPUTS OF SIMILAR AGE

#2

of 176,237 outputs

## OUTPUTS OF SIMILAR AGE FROM SCIENCE

#1

of 593 outputs

Altmetric has tracked 14,545,878 research outputs across all sources so far. Compared to these this one has done particularly well and is in the 99th percentile: it's **in the top 5% of all research outputs ever tracked** by Altmetric.



# THE 2019 ALTMETRIC TOP 100

In the past 12 months, Altmetric has tracked over **62.5 million** mentions of **2.7 million** research outputs. Here, we've highlighted the 100 most-discussed works of 2019 – those that have truly captured the public imagination

About the Top 100

The Future of the Top 100



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<https://www.altmetric.com/top100/2019/>





Thank you for your kind attention.

<http://anupkumardas.blogspot.in>