

# Open Access Developments in Korea

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# Preface

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❖ History

❖ Current status of OA

# Preface

## Brief History of World OA

Unrestricted access to research for all through "self-archiving"



1991 e-print  
(First preprint server)



2000 free archive of journal papers  
(First post-print IR/SR)

Green Road

OpenDOAR

Launched in 2006 by University of Nottingham and Lund University



Omnibus Appropriations Act, 2009

cOAlition S, 2018



1998  
(First independent OA journal)



2001 open access licenses



SHERPA project (2002-2006)



2001 OA science journal publisher  
(First non-profit OA publisher)



Launched in 2003 at Lund University

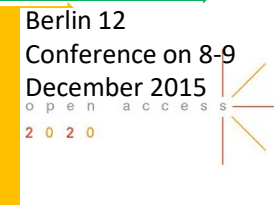
Gold Road



2000 OA bio/med journal publisher  
(최초 민간 OA 학술지 출판사)



In 2002 Budapest OA Initiative (BOAI)  
In 2003 Bethesda Statement on OA, Berlin Declaration on OA



SCOAP3 Phase I(2014~16)

"Flipping" the system from "Back End Paid Access" to "Front End Paid Access"

# Preface



## Brief History of OA in Korea



### Open Access Korea Project (2009~)

- Operation of Open Access Forum,
- XML construction of articles of open access journal,
- Establishment of institutional repositories, and
- Performing open access legalization research.
- KISTI > NLK



open access  
2020

SCOAP3 participation (2014~)  
OA2020 EOI (2018, KISTI, SNU, CODE)



### Digitization and Archiving of Society Information (1996~, KISTI)

- Digitization print journals
- Provision of websites, e-mail domains, editorial processing system for learned societies

### KPubS & Science Central (2014~)

- Open access S&T journal services
- JATS XML web editors
- KISTI & KCSE/KOFST

### Synapse (2007~)

- Open access Medical journal services
- KAMJE



### Science Attic (2003)

- First pilot project on Institutional Repository
- KISTI & SNU

### KOASAS (2007~), S-Space (2008~)

- Construction of Institutional Repository
- KAIST, SNU

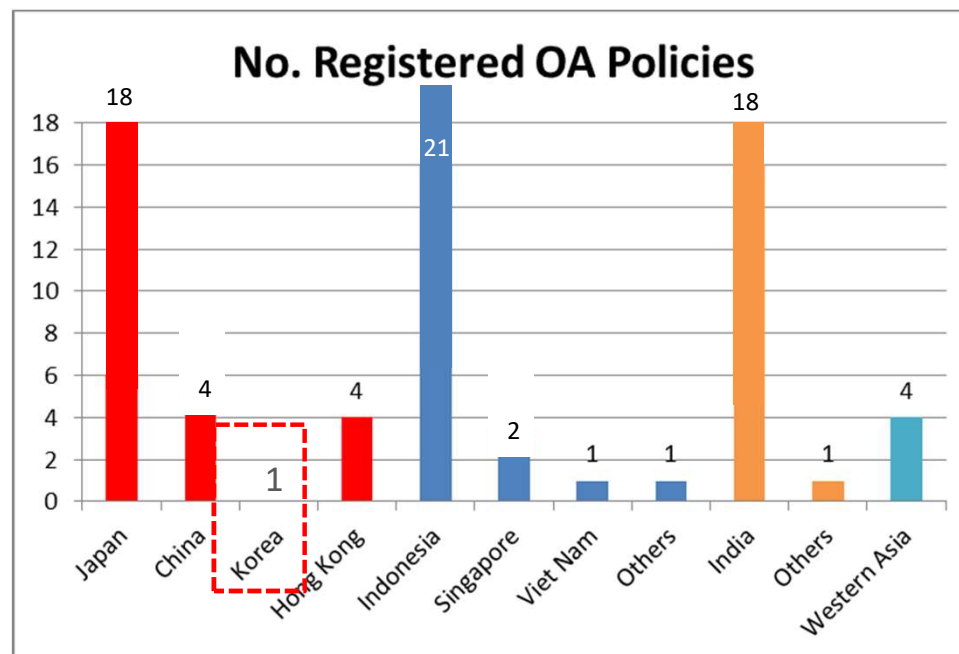
### KISTI Repository(2017~)

# Preface



## OA policy of Korea

- ROARMAP registers 81 institutional OA policies from Asia
  - Eastern Asia : 28
  - South-Eastern Asia : 26
  - Southern Asia : 21
  - Western Asia : 5
  - Central Asia : 1



- ROARMAP is a Registry of Open Access Repository Mandates and Policies showing OA policies by country, continent, continental region.
- Europe and North American are leading OA policy continent.
- India and Indonesia are dominant among Asian countries.
- **KISTI has registered our OA policy to ROAMAP in 2018.**

# Preface



## OA policy of Korea

### General

Country: [Asia > Eastern Asia > Republic of Korea](#)

Policy maker type: Research organisation (e.g. university or research institution)

Policy maker name: Korea Institute of Science and Technology Information

Policy maker URL: <https://www.kisti.re.kr/eng/>

Policy URL: <http://repository.kisti.re.kr/open-access.jsp>

Repository URL: <http://repository.kisti.re.kr/>

Policy adoption date: 17 October 2018

Policy effective date: 17 October 2018

Source of policy: Administrative/management decision

- [Countries \(UN Geoscheme\)](#) (28)
  - [Asia](#) (28)
    - [Eastern Asia](#) (28)
      - [China](#) (4)
      - [China, Hong Kong Special Administrative Region](#) (4)
      - [Japan](#) (18)
      - [Republic of Korea](#) (1)
      - [Taiwan](#) (1)

### Policy Terms

Deposit of item: Required

Locus of deposit: Institutional Repository

Date of deposit: Not Specified

Content types specified under the mandate: Peer-reviewed manuscripts, Books, Oth

Journal article version to be deposited: Published edition (version of record)

Can deposit be waived?: Yes

Making deposited item Open Access: Required

Can making the deposited item Open Access be waived?: Not Specified

Date deposit to be made Open Access: As soon as the deposit is completed

Number of items at this level: 0.

### Other Details

Is deposit a precondition for research evaluation (the 'Liège/HEFCE Model')?: No

Rights holding: Author grants key rights to institution

Can rights retention be waived?: Not specified

Can author waive giving permission to make the article Open Access?: Yes

Policy's permitted embargo length for science, technology and medicine: Not Specified

Policy's permitted embargo length for humanities and social sciences: Not Specified

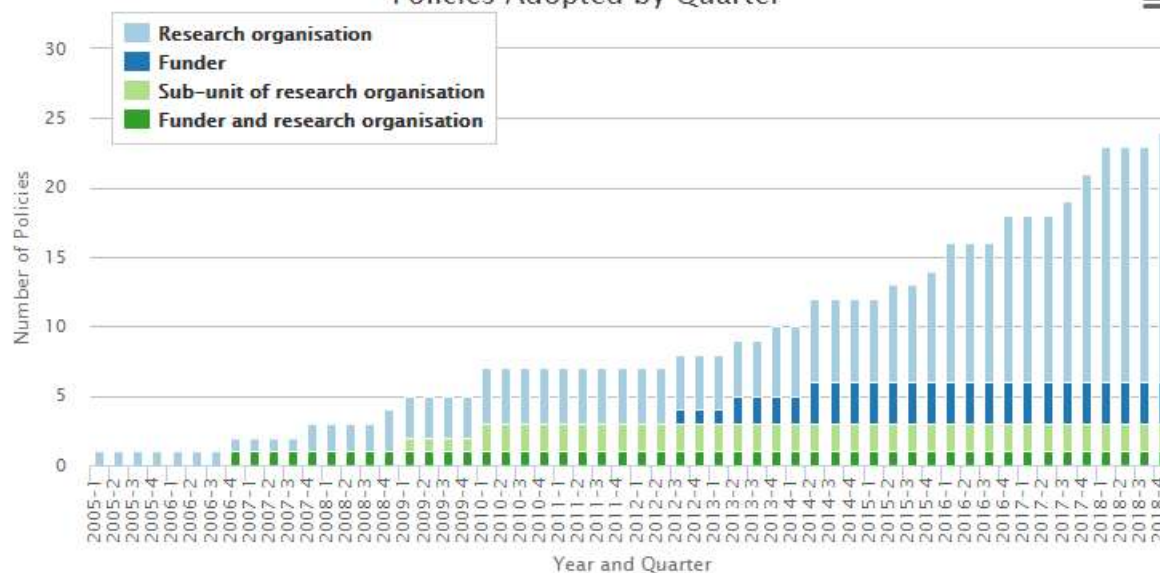
Can maximal allowable embargo length be waived?: Not specified

Open licensing conditions: Requires CC-BY-NC or equivalent

Gold OA publishing option: Not Specified

Funding for APCs where charged by journals: Institution provides funding

Policies Adopted by Quarter



# Preface

## Domestic OA Journals & Repositories

- Number of OA journals is rapidly increasing.
  - 136 open access journals are being registered to DOAJ.
- Number of IRs is relatively small.
  - Korean share in OpenDOAR is only 1% while Japanese share over 6%.

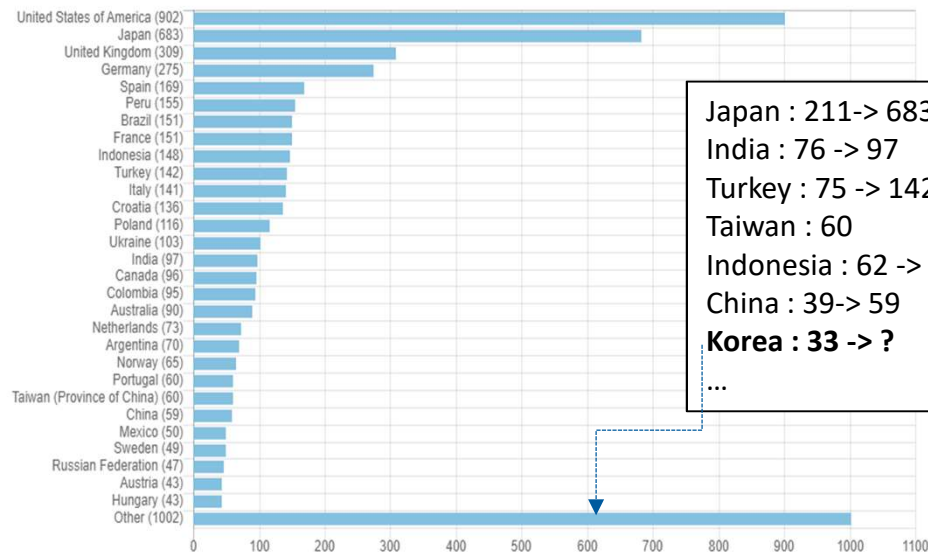
**DOAJ** DIRECTORY OF  
OPEN ACCESS  
JOURNALS

### PUBLISHERS' COUNTRIES

- France (241)
- Serbia (203)
- Canada (175)
- Mexico (151)
- Korea, Republic of (136)
- Chile (135)
- China (134)
- Portugal (130)

OpenDOAR

### Repositories by Country



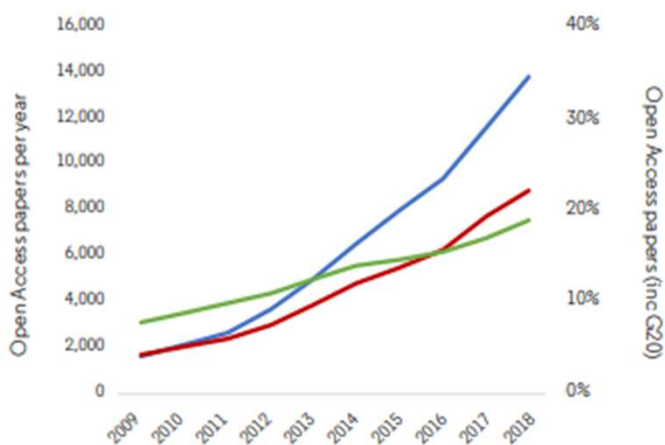
Japan : 211 -> 683  
India : 76 -> 97  
Turkey : 75 -> 142  
Taiwan : 60  
Indonesia : 62 -> 148  
China : 39 -> 59  
**Korea : 33 -> ?**  
...



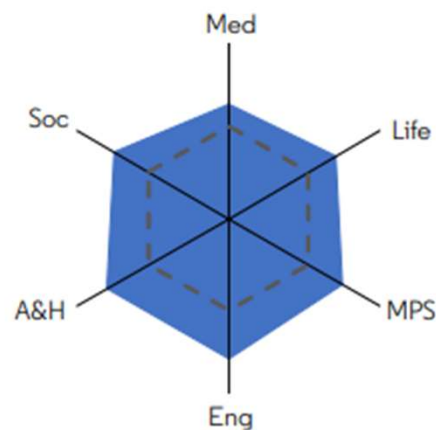
# Preface

## OA publication status of Korean authors

Output and Open Access



Output and Open Access



GERD/GDP (4.5%) is exceptionally high. This has not yet been translated into output, where productivity is well below G20 averages, or citation impact. The latter may partly be due to lower international collaboration than the G20 average. Female researchers are a relatively small part (20%) of the workforce. **OA is rising and is already above G20 benchmarks.**

Source: Adams, J. and Szomszor, M. (2019) The Annual G20 Scorecard-Research Performance 2019

# OA Policies in Korea

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❖ Government & Funder

❖ Society

# OA Policies in Korea



## Research on Public Access Policy

- KISTI studied on 'open access to research outcomes funded by government' for two years from 2010-2011
  - Investigated Korean policy and legislative system for the public access to research outcomes
  - Investigated public access policies of foreign countries
  - Analyzed interest and relationship among stakeholders including researchers, universities, learned societies, and DB companies.
  - Prepared a draft bill for public access in Korea
- The study was discontinued till recently because
  - Open access awareness in the field was not matured and
  - Unrelenting opposition of domestic DB companies.

# OA Policies in Korea

## ▶ Considering Public Access Policy as Way of R&D Outcome Management

- Ministry of Science and ICT considers to adopt PA in near future.
  - Korean government has successfully operated National Science and Technology Information Service (NTIS), which is a research outcome management system for increasing the effect of R&D.
  - Technical Reports and Patents are deposited but journal articles and research data are not deposited.
  - A proposal on mandatory OA to research articles has been submitted.
- Korea Center for Disease Control and Prevention (KCDC) has adopted PA policy.
  - Researchers received fund from KCDC must deposit the final manuscript in 12 months after determination of publication.

[Forum on OA policy regulation, 2019]



# OA Policies in Korea

## ▶ OA Policies on Society Journals

- National Research Foundation of Korea (NRF) and Korean Federation of S&T (KOFST)
  - Favor to learned societies publishing OA journals when evaluating to subsidize societies.
- Korean Societies
  - Most domestic journals have been freely accessible since 2000.
  - Some companies began to sell journal articles based on contracts with societies.
  - Some journals adopts OA policy by attaching CCL to each article in order to get favor in evaluation.
  - Resultantly, FA, TA, and OA journals are coexist in Korea.

# OA Activities in Korea

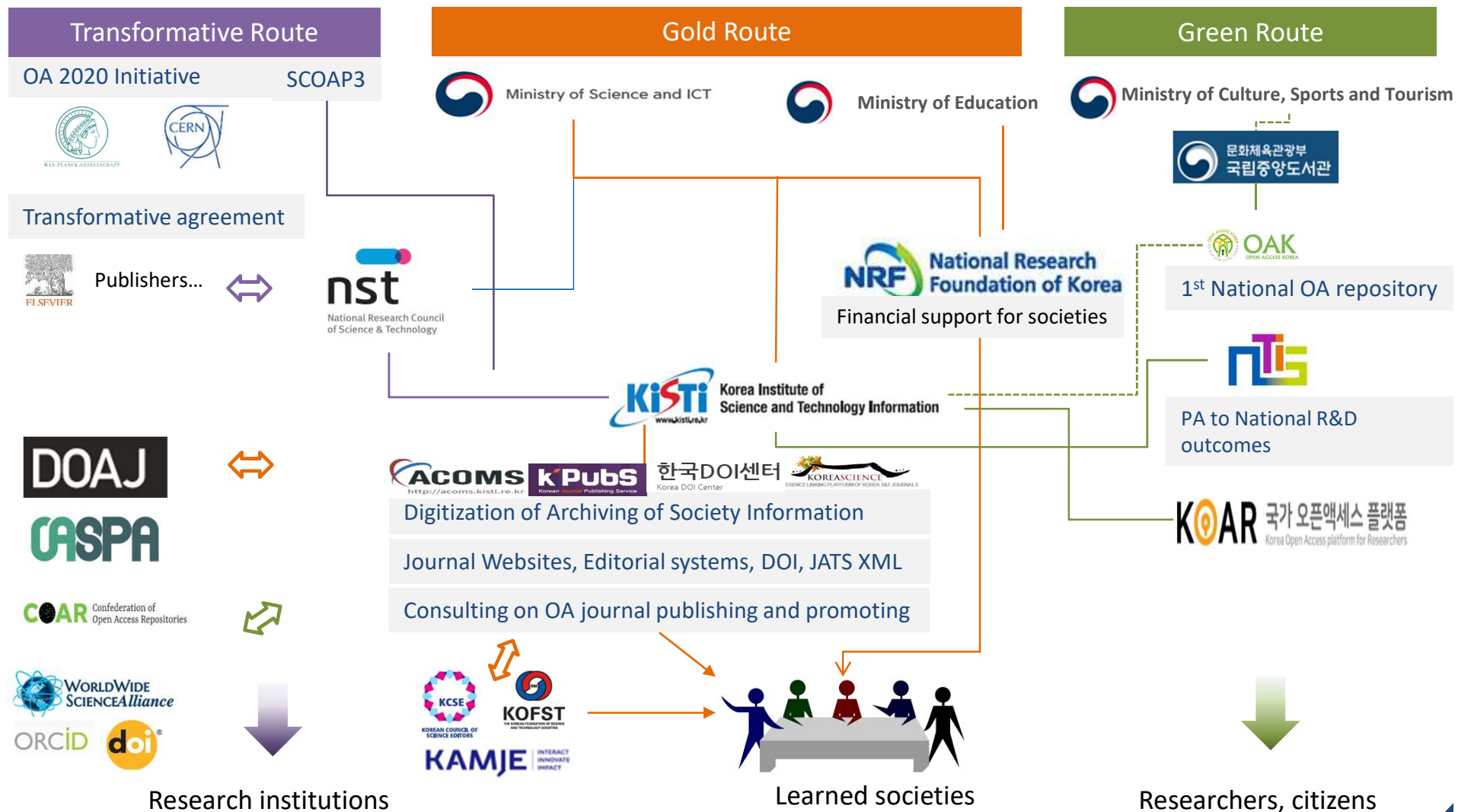
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❖ Overview

❖ OA Implementation

# OA Activities in Korea

## Overview of OA Activities in Korea



# Transformative Route

## ▶ Participation in International OA Initiative

- KISTI has led SCOAP3 project in Korea.
  - KISTI participates in SCOAP3 as NCP
  - KISTI played its role in completion of phase 1 (2014-2016) and 2 (2017-2019) despite of low participation rate of libraries.
  - In order to promote SCOAP3, 'Korean SCOAP3 Council' has been organized with libraries and some HEP research organizations.



- KISTI, SNU, NLK, and CODE signed EOI of OA2020
  - Four organizations cooperate in promoting OA in Korea
  - Hosting OA seminars.





# Transformative Route

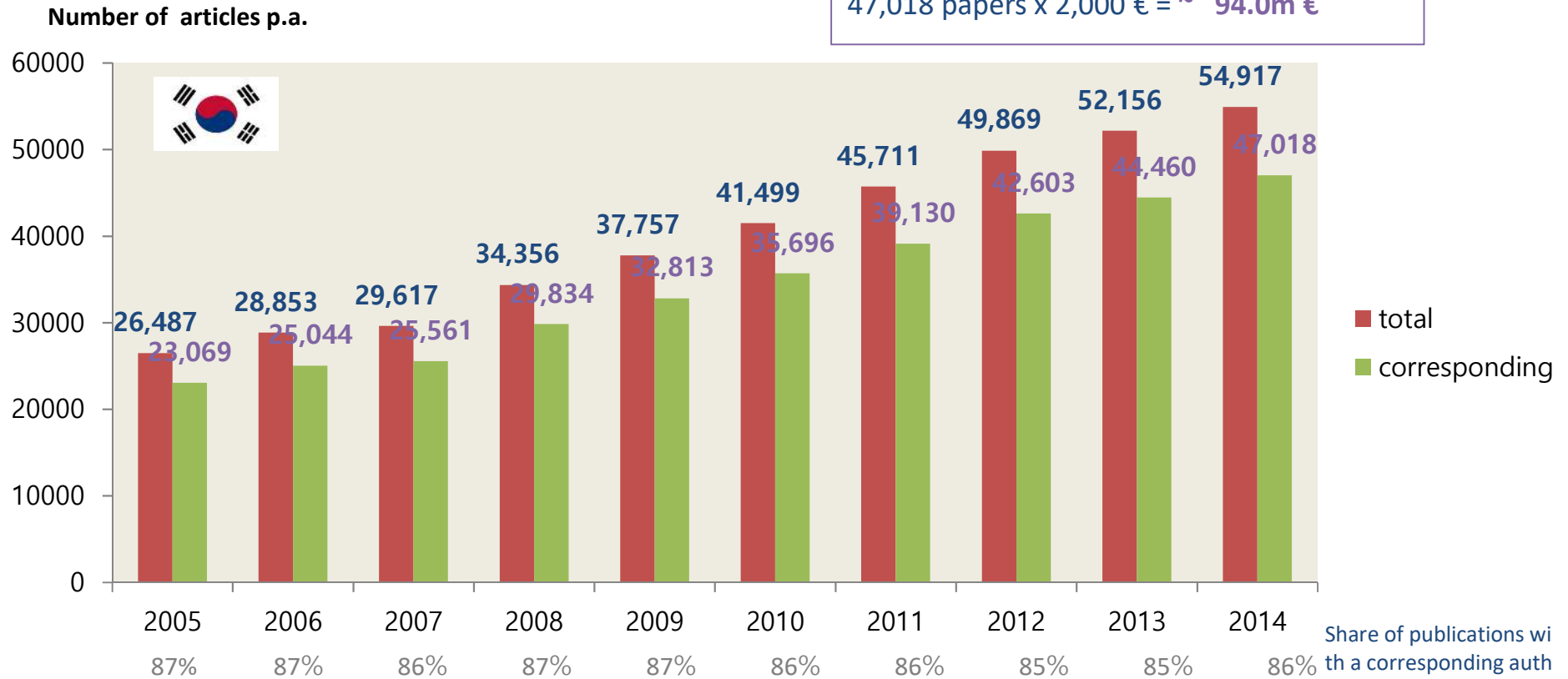
## OA Transformation of Subscription Journals

Publication volumes and corresponding author shares  
Articles and reviews in Web of Science

OA Transformation, 2014 calculation span

47,018 papers x 1,300 € = ~ **61.1m €**

47,018 papers x 2,000 € = ~ **94.0m €**



Data according to Palzenberger, M. (2015). Number of Scholarly Articles per Country. <http://dx.doi.org/10.17617/1.2>

Share of publications with a corresponding author or from S. Korea

# Transformative Route

## OA Transformation of Subscription Journals

### Pilot TA between National Research Council of Science and Technology (NST) and Elsevier

- Its 25 member institutions has subscribed e-journal packages individually
- NST is leading the first transformative agreement on behalf of its members with Elsevier for the next 3 years(2021-2023)
- A working group is organized from the representatives of each library and led by KESLI secretariat (KISTI)



Still most research libraries remain with subscription contracts

\* KESLI(Korean Electronic Site License Initiative) is a nation-wide library consortium and cooperates with more than 300 libraries in S. Korea since 1997

# Gold Route



## KISTI's Activities for Korean Learned Societies

- **National project for digitizing and archiving learned society information (since 1996)**
  - Provision of homepage + e-mail service for domestic learned societies
  - Support for digitization of print journals and construction of Korean journal article database (Society Village -> KoreaScience)
- **Provision of Online Peer-review system (since 1997)**
  - First implementation and provision of online peer-review system (ACOMS)
  - Provision of computing resources, back-up, security SW (cloud service)
- **Support for DOI registration (since 2007)**
  - Financial and technical support for DOI registration to Crossref (400 titles)
  - Direct management of DOI assignment as a DOI RA (since 2015)
- **XML full-text construction (since 2015)**
  - Manual construction of full-text XML
  - Support for semi-automatic construction of XML (KPS)
- **Provision of Journal Publishing platform (KPubS)**
  - Scholarly open access journal publishing platform (KPubS)
- **Support for Distribution and Assessment**
  - English landing pages for Korean OA journals (KoreaScience)

The society has agreed their journal content freely available via KISTI systems and some of them flipped to Open Access

Discrepancy of KISTI systems has not fully satisfied the need of learned societies.

# Gold Route

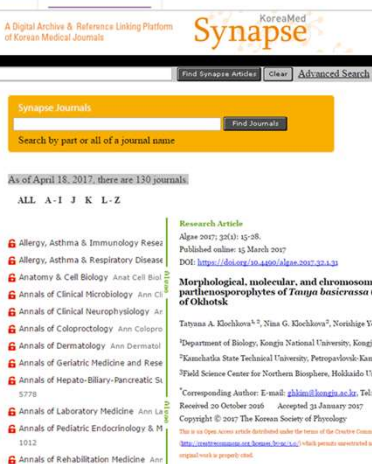


## OA Activities for Korean Learned Societies

- KISTI with the representatives of learned societies such as KAMJE, KCSE, and KOFST have supported Korean journal publishers to flip their journals to open access.
  - Operating OA journal platforms
  - Providing a guidance on how to publish OA journals and be indexed in DOAJ

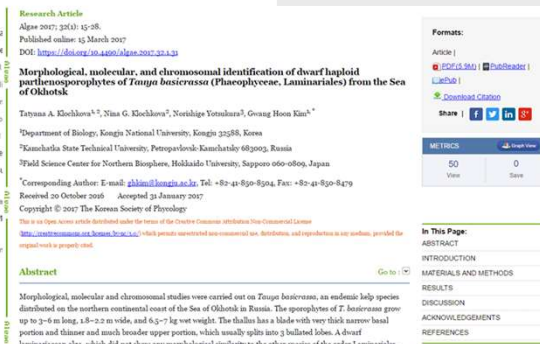


116 journals



114 journals

ScienceCentral



216 journals

# Gold Route



## OA Activities for Korean Learned Societies

- National Research Foundation(NRF) has monitored and supported learned societies by
  - Providing scholarly journal assessment system (1998~)
    - Incentives are given to journals who agree and provide their journal contents free access
  - Supporting domestic journals financially as to leaping up to internationally qualified journals (2010 ~ )
    - 70 titles (as of 2009) -> 120 titles (as of 2019.8)
- Korea Foundation of Science and Technology(KOFST) has supported learned societies financially with similar activities

<source>

- Sim, K.(2010) A Strategic report for the world-class scientific journal promotion project

- Clarivate (2019.8) Thomson Reuters Master Journal List(<http://mjl.clarivate.com/>)

Incentives to open access (Not Open Access) have allowed financially supported journals to contract with global publishers under paywall

Department		Budget	Number of titles
MoSICT	Support for international scholarly journal (pub. by domestic societies)	1,972,000 euro	305
MoE	Support for international scholarly journal (pub. by domestic societies)	1,928,000 euro	106
	Support for internalization of domestic journals	136,000 euro	6
Total Sum		4,036,000 euro	

<source> KOFST (2019.3) Scholarly Journal Support Systems

# Green Route

## Institutional Repositories

- National open access projects performed by KISTI (then NLK).
  - Software : DSpace
  - Number of records : 593,588
  - Type of records : Journal paper, Thesis, Technical report, Book, Patent
  - Number of IRs : 35



					<i>No more growth in quantity Some of the IRs are not sustainable</i>		

# Challenges & Perspectives

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- ❖ OA Transition (Transformative Route)
- ❖ OA Repository (Green Route)
- ❖ OA Publishing (Gold Route)

# Overview

## Perspectives of OA practices in Korea

### 1. OA Transition

#### Transition to OA

- Call for Transformative Agreement by KESLI (2020)
- Pilot transformative agreement between NST-Elsevier (2021~)
- More comprehensive and rapid transition is required
- Implementation of subscription and publication analysis system
- Development of OA Transition Model

Overseas journals are dominant in subscription and publication by Korean researchers

Subscription Journals  
(Overseas)

G  
O  
A

Domestic  
Journals

Journals having self-archiving  
policy

### 2. OA Repository

#### OA Repositories

- OA for Research Outcomes
- National level OA repository linked to globally

### 3. OA Publishing

#### Support for OA Publishing

- Guidelines of OA Publishing
- Implementation OA Publishing Platform which supports full life cycle

Vulnerable publishing infrastructure of domestic journals

According to SHERPA/RoMEO, 80% of publishers have allowed self archiving



# Challenges and Perspectives

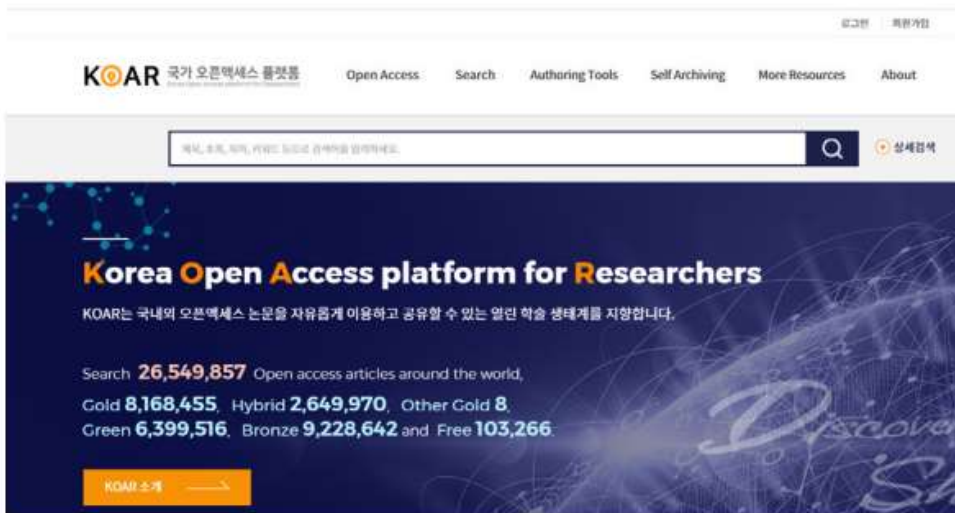
## ▶ National Repository

- ❖ National OA repository KOAR(Korea Open Access Repository) launched on Mar, 2020.
- ❖ KOAR provides OA article search, repository for self archiving(researcher, journal), collaborative co-authoring tool and predatory journal/conference list.



# Challenges and Perspectives

## ▶ National Repository linked to World



<KOAR Main page>



<KOAR in WorldWideScience.org>

# Challenges and Perspectives

## Full Life-Cycle Management Platform for Scholarly Publishing

- facilitate branding & marketing of journal
- expedite indexing by discovery services

- enable efficient & effective workflow
- facilitate rigorous peer review



### Promotion

website hosting  
marketing & PR



### Preservation

data hosting  
long-term storage

- provide robust storage/backup
- support digital curation



- easy to use
- flexible
- extensible
- interoperable

한국DOI센터  
Korea DOI Center

### Publication

formatting/display  
print & disseminate

### Editorial Management

submission  
peer review



### Production

copyedit, layout  
indexing

- support quality production
- enhance discoverability



- offer various document formats
- enhance article dissemination




ZO

# Challenges and Perspectives

## International Collaboration

## Domestic Collaboration





# Q&A