

# オープンデータと学術基盤政策 Strategy of Scholarly Information Infrastructures in MEXT, Japan

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MEXT Office for Science Information Infrastructure



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- 2 Discussion of Open Access to  
Scholarly Information  
学術情報のオープン化に係る議論
- 3 Publish Underlying Research Data  
エビデンスデータの公開
- 4 Summary  
まとめ

# 1 Open Access

The 4th Science and Technology Basic Plan of Japan (August 2011, Cabinet Decision,)

- Create institutional repositories in universities and public research institutions
- Collect digitalized various types of data which are results of education and research, also archive and make them accessible.

## Activities of funding agencies

JSPS:   · Recommend making publicly funded research results open  
          · Support publications of open access journals by Grants-in-Aid for Scientific Research, etc.

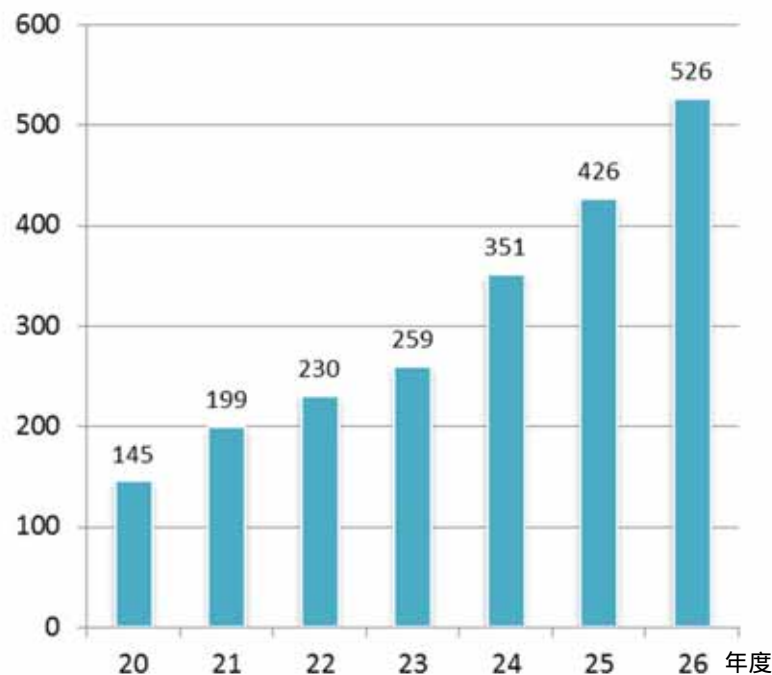
JST:    “JST Policy on Open Access” (April 2013)

- Recommend making publicly funded research results open in institutional repositories within 12 months
- Digital publication support “J-STAGE”
- Promote giving a DOI to scholarly information (by managing Japan Link Center)

# Institutional Repositories

## Numbers of institutional that have established public repositories

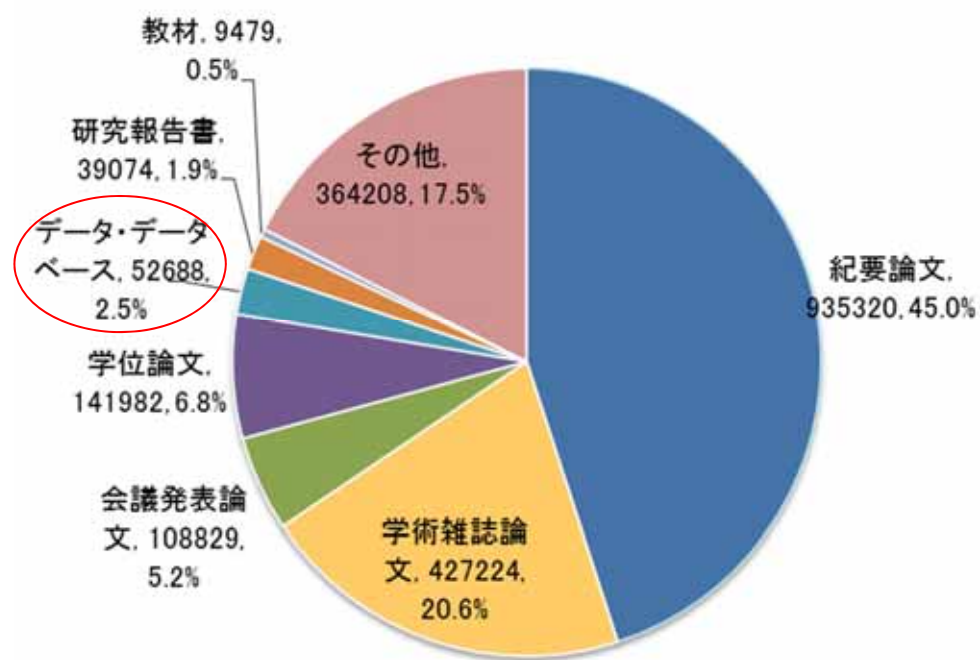
At the end of each fiscal year



Source: National Institute for Informatics, Institutional Repositories Program, "Statistics on Institutional Repositories" and "IRDB Content Analysis System"

## Contents of institutional repositories

Numbers of contents (as of the end of May 2015) (Total: 2,078,804)



Others: Also includes technical reports and resource materials for conference presentations

- The number of repositories as Green OA infrastructure has been increasing. <sup>4</sup>
- Data and databases account for 2.5% of the contents.



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## 2 Discussion of Open Access to Scholarly Information

### “Promoting Open Access to Scholarly Information” (Summary)

Science Information Committee, Council for Science and Technology,  
11 September, 2015

#### Basic Concepts

**What can be expected from promoting utilization of research results:**

- Creating new knowledge beyond disciplines  
分野を越えた新たな知見の創出
- Promoting efficient research  
効率的な研究の推進
- Making research results more widespread  
研究成果の更なる普及

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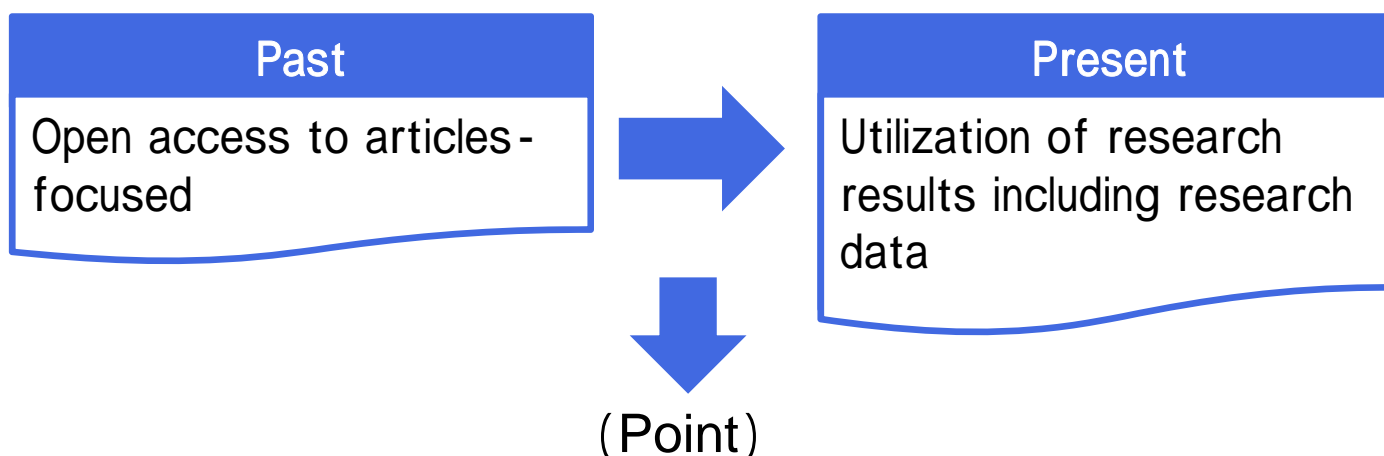
## 2 Discussion of Open Access to Scholarly Information

**The outcomes of publicly funded research, such as published results and underlying data, should be accessible**

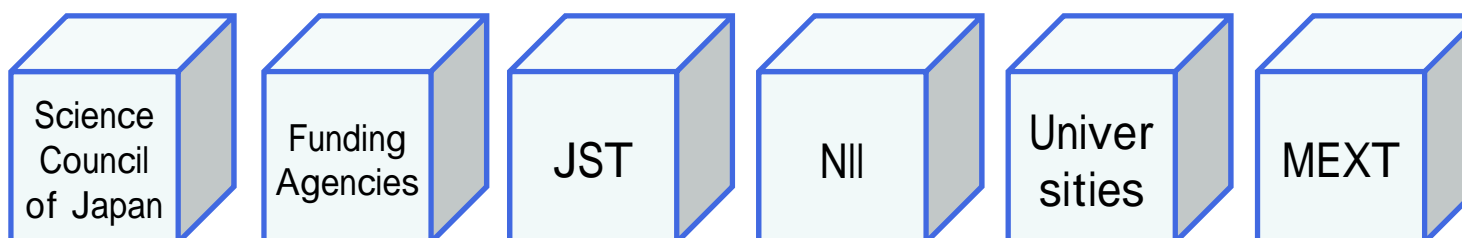
公的研究資金による研究成果のうち、論文及び論文のエビデンスとしての研究データは、原則公開とすべきである。

# “Promoting Open Access to Scholarly Information” (Report)

Coverage of discussion of open access to scholarly information

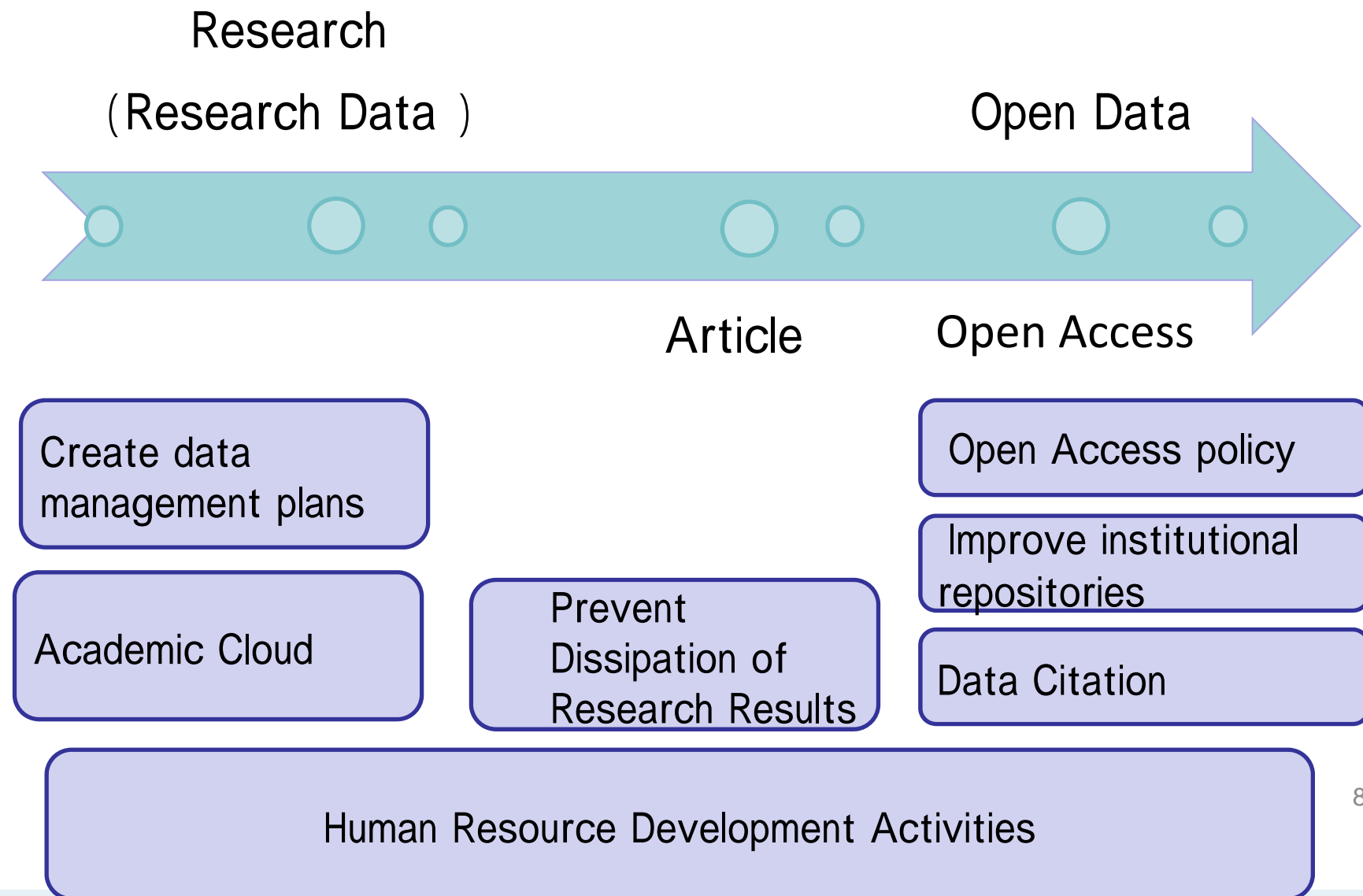


The outcomes of publicly funded research, such as published results and underlying data, should be accessible



The report shows what relevant organizations are expected to do for “Promoting Open Access to Scholarly Information”

# What universities are expected to do (Summary)



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# Open Access Activities

## Report Trend

Scientific papers arising from publicly funded research must be made open in principle

論文のオープンアクセス 第5期科学技術基本計画期間中に実行

### 【What funding agencies should do】

- Formulate policies on open access to articles and make them well known to researchers

### 【What universities are expected to do】

- Improve institutional repositories as Green OA infrastructure
- Formulate policies on open access and make them public

### 3 Publish Underlying Research Data

- ❑ The policy-level discussion has just started
- ❑ First, we are discussing on open access to underlying research data

#### (Why Open Access?)

**New value creation by utilizing research data  
across disciplines**

研究データを利活用することにより、新たな価値を創造

**Contributions to effective research by avoiding  
too much similar research**

過度に同様の研究を繰り返すことを避け、研究を効率的に推進

**Securing transparency of research**

研究の透明性の確保

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## **Premise 1 : Differences among scientific disciplines**

Various situation of data publishing and sharing in each discipline

(Examples)

- Case 1: Astronomy, Particle physics
- Case 2: Life sciences
- Case 3: Humanities, Social sciences

## Premise 2:

- Data must be stored properly by researchers
- The scope of underlying research data that should be open or not, or the way of making them accessible should be discussed by societies and Science Council of Japan

Report Trend

- Consideration by societies
- Community consensus by Science Council of Japan

公開すべき論文のエビデンスとしての研究データの範囲とその様式について、国際的な動向や原則公開とする趣旨を踏まえ、学協会等において検討を行い、日本学術会議で研究者コミュニティのコンセンサスを形成していくことが求められる。

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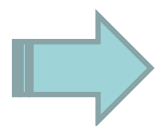
“Underlying data of publicly funded research articles must be made open unless it is restricted because of maintaining confidentiality”

公開に制限がある研究データは公開適用対象外とする

【What funding agencies should do】

- Show how to publish data and promote open research data based on a community consensus

研究コミュニティのコンセンサスを踏まえつつ、研究データの公開について推奨



Will a top down approach work?

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How should we proceed creating a rule?



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## Basic Measures (1)

### Research Data Management

- **Keep research data available**  
研究データを活用可能な状態で管理
- **Create data management plans**  
必要に応じたデータ管理計画の作成
- **Use academic cloud for research data infrastructures**  
研究データの保管に係る基盤としてアカデミッククラウドを活用

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## Basic Measures (2)

### Ways of Publishing Research Data

- **Public databases, Subject repositories**

分野別の公的なデータベースへの登載を促進

- **Institutional repositories**

公的データベースがない分野については機関リポジトリを活用  
(アカデミッククラウドの構築・活用)

## Basic Measures (3)

### Prevent Dissipation of Research Results

- **Preserve and store research results as intellectual assets**

大学等において、研究成果を知的資産として保管・蓄積

- **Formulate regulations on publication and research data management**

大学等において、論文及び研究データの管理に係る規則を制定

- **Give publications and research data a permanent DOI<sup>16</sup>**

DOIを付与し管理する仕組みを確立、JaLCとの連携(データの粒度など)





# Publish Underlying Research Data

## Basic Measures (4)

### Specify Guidelines for Use

- Universities and societies should show copyright policies for their journals

大学及び学協会は、著作権ポリシーを明示する

- Societies should create terms of use for promoting utilization of publications

著作権を持つ学協会は、利活用を促進する利用条件を設ける

- Researchers should show terms of use of their articles by Creative Commons license

著作権を持つ研究者は、クリエイティブ・コモンズ・ライセンスで利用条件を明示

**Not only articles, but also research data!**

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研究データについても利活用のルールを明示することが必要



## Basic Measures (5)

### Data Citation and Evaluation Activities

- **Data users must cite research data properly**

アクセス可能となった研究データの利用者は、論文などの引用と同じく引用元を明らかにする義務がある

- **Data citation should be rated as evaluation**

研究データの被引用を業績として評価することを、大学及び研究者コミュニティにおいて共通に認識し、実行する必要がある。

## Basic Measures (6)

### Human Resource Development Activities

- **Develop data curators with collaboration among universities**

研究データの公開を促進するため、複数の大学等が共同してデータキュレーター等の育成を推進する。

## Summary

- **Scientific papers arising from publicly funded research must be made open in principle**

公的研究資金による論文については、オープンアクセスを実行(第5期科学技術基本計画期間中)

- **Proceed making scientific papers and underlying data accessible**

オープンデータを促進するため、論文とそのエビデンスデータの公開を着実に進める。

## Summary

- The scope of underlying research data that should be open or not, or the way of making them accessible should be discussed by societies and Science Council of Japan

エビデンスデータの公開とその様式等については、学協会や日本学術会議による検討を踏まえ対応。

- Societies, universities and funding agencies need to discuss on open data and advance efforts, and MEXT supports creating open data infrastructures

学協会、大学、研究資金配分機関等は、オープンデータに関する議論を深め取組を進める。国は、データの公開等に係る基盤の構築を支援。

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