

## 9. Research

### 9-1. Trends across Kyushu University as a Whole Based on Field Classification of Journals

# Kyushu University | 2017 to 2021 Articles & Reviews

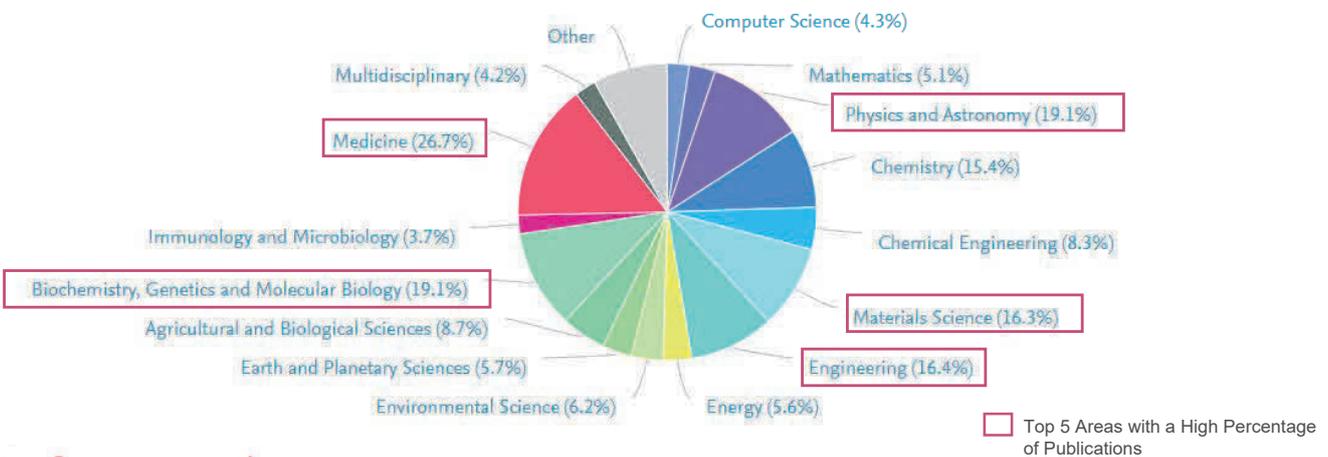
[View Publication Set definition](#)

\* The pie graph reflects the percentage of papers published by researchers affiliated with Kyushu University from 2017 to 2021, by subject area in Scopus.

2017 to 2021  All subject areas  ASJC

#### Overall research performance

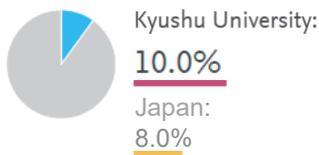
<b>21,437</b> Scholarly Output ⓘ	<b>92,398</b> Authors	<b>1.14</b> FWCI (*1) Field-Weighted Citation Impact ⓘ
<b>269,613</b> Citation Count ⓘ	<b>12.6</b> Citations per Publication ⓘ	



#### Performance indicators

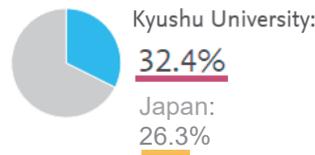
**Outputs in Top Citation Percentiles ⓘ**  
Publications in top 10% most cited worldwide

Show as field-weighted



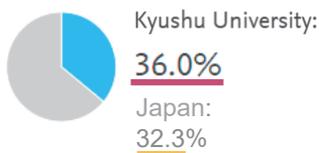
**Publications in Top Journal Percentiles ⓘ**  
Publications in top 10% journals

by **CiteScore Percentile**



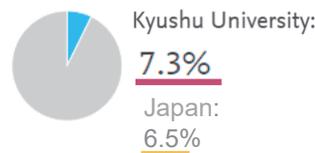
**International Collaboration ⓘ**

Publications co-authored with Institutions in other countries/regions



**Academic-Corporate Collaboration ⓘ**

Publications with both academic and corporate affiliations



■ Kyushu University  
 ■ National average

(\*1) FWCI (Field-Weighted Citation Impact) is the number of citations received by the publication, divided by the world average for the same type of publications in the same field and same publication year. An FWCI of 1 or higher means that the average impact is higher than the world average.

#### Metrics Details

Publication Type: Articles and Reviews; Journal Metric: CiteScore Percentile; Self-Citations: included; Field-Weighted (output in top 10% citation percentiles): yes; Field-Weighted (international collaboration): no

Source: Elsevier's "SciVal" (as of September 2022)

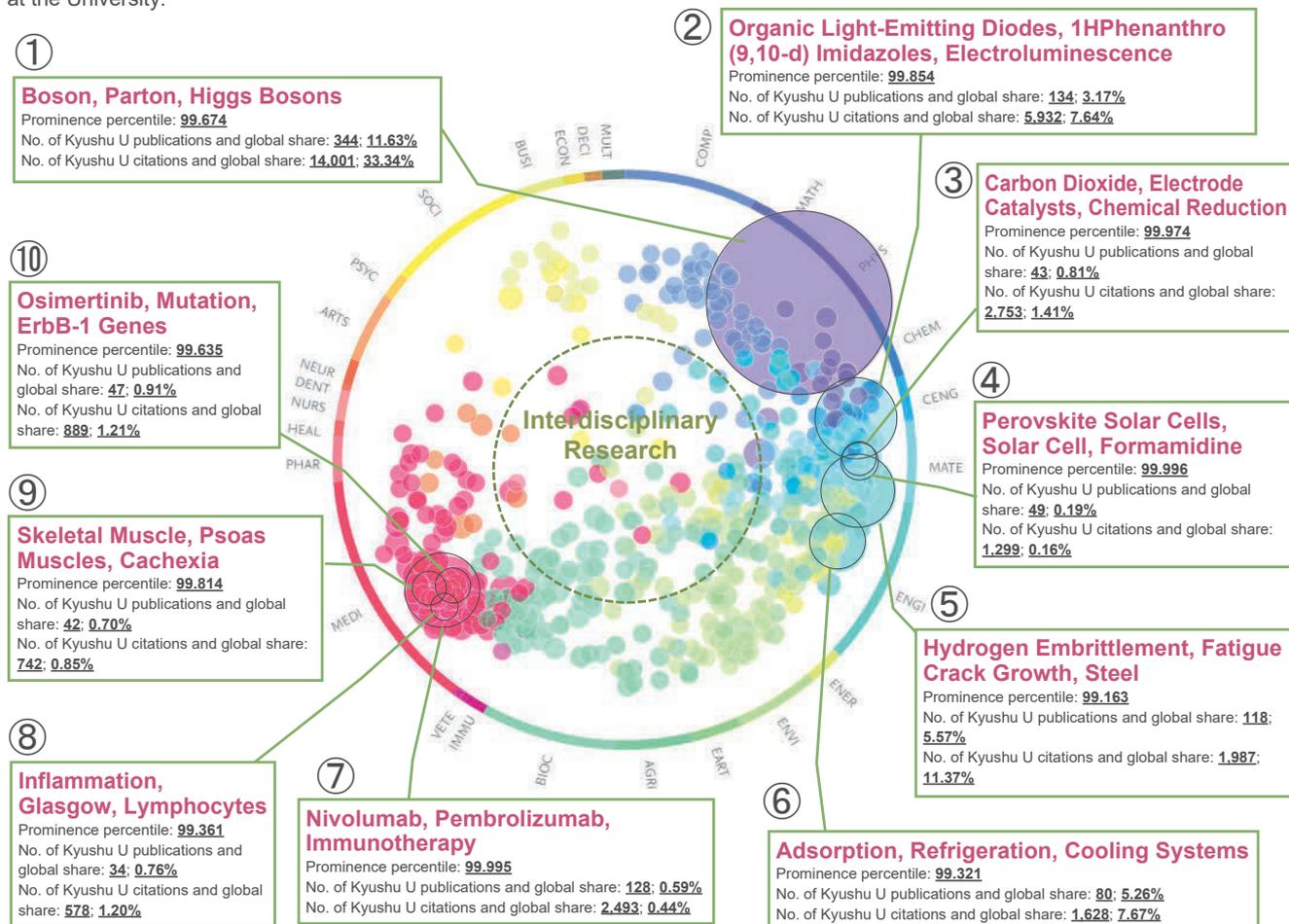
## 9-1. Trends across Kyushu University as a Whole Based on Field Classification of Journals (Continued)

### Topic Prominence: Analysis of University Strengths Based on Co-citation of Publications

#### The Most Prominent 1% of Topics (2017-2021)

Out of the top 1% prominent topics, 1-10 are those with the top 10 highest number of publications

Kyushu university has a high number of publications in these fields, so these can be considered some of the most active research fields at the University.



#### • An Overview of the Topic Prominence Function

Scopus Publications were clustered in to 97,000 topics based on citation links, and rankings were added using "Prominence". New indicator "Prominence" shows the number of references, the number of views and the level of interest. "Prominence" has a correlation with grants, and helps to support more grants for researchers and research managers. The more central the topic in the circle, the more interdisciplinary. (Excerpted from Elsevier Quick Reference Guide, January 2018)

Between 2017 and 2021, of all Kyushu University publications, 7,945 research fields emerged as high-profile topics.

#### ◆Perspectives◆

- Circumference indicates research fields used in Scopus (ASJC 27 major subject areas) by color.
- Each circle represents a topic.
- Color of circle: For the fields of the publications that make up the topics, the fields that make the highest proportion of the total are displayed in the color of the fields located around the circumference.
- Size of circle indicates the output of the entity in the topic.
- Position of the circle is based upon the ASJC categories of the journals in which the scholarly output is published. Topics closer to the center of the wheel are more likely to be multidisciplinary.

#### Metrics Details

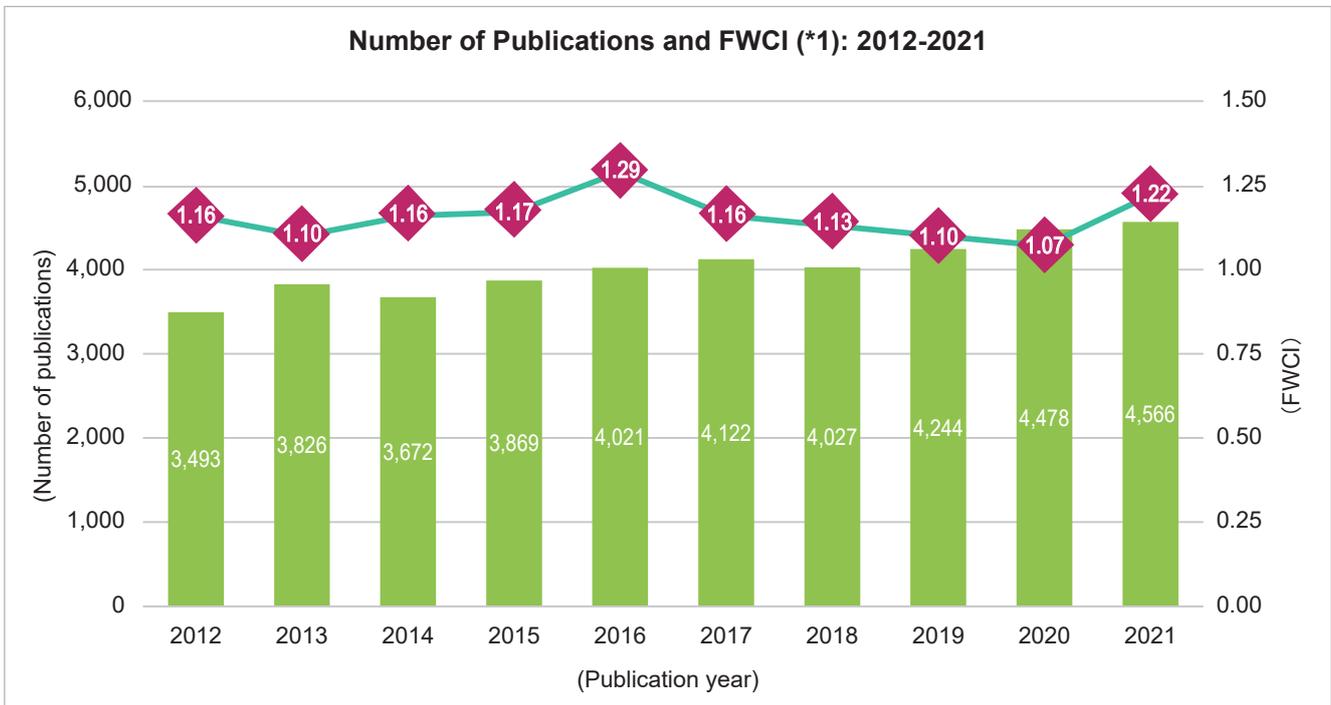
Publication Type: Articles and Reviews; Self-Citations: included

Source: Elsevier's "SciVal" (as of September 2022)

## 9-2. Comparisons of Publication Quantity and Quality

### ■ Number of Publications and FWCI

#### ◆ Kyushu University ◆



#### ◆ Comparison of RU11 (\*2) ◆

##### Scholarly Output

Rank	University	Number
1	The University of Tokyo	51,683
2	Kyoto University	36,404
3	Osaka University	28,140
4	Tohoku University	27,253
5	Nagoya University	21,492
<b>6</b>	<b>Kyushu University</b>	<b>21,437</b>
7	Hokkaido University	20,131
8	University of Tsukuba	15,224
9	Tokyo Institute of Technology	14,448
10	Keio University	13,807

(2017-2021)

##### Citation Count

Rank	University	Citation Count	Average Citations per Publication
1	The University of Tokyo	807,340	15.6
2	Kyoto University	557,477	15.3
3	Osaka University	354,865	12.6
4	Tohoku University	342,360	12.6
5	Nagoya University	284,374	13.2
<b>6</b>	<b>Kyushu University</b>	<b>269,613</b>	<b>12.6</b>
7	Hokkaido University	237,871	11.8
8	University of Tsukuba	206,821	13.6
9	Tokyo Institute of Technology	185,604	12.8
10	Keio University	180,812	13.1

(2017-2021)

##### FWCI

Rank	University	FWCI
1	The University of Tokyo	1.36
2	Kyoto University	1.31
3	University of Tsukuba	1.29
4	Keio University	1.23
5	Nagoya University	1.18
<b>6</b>	<b>Kyushu University</b>	<b>1.14</b>
6	Waseda University	1.14
8	Osaka University	1.11
9	Tohoku University	1.09
9	Tokyo Institute of Technology	1.09

(2017-2021)

(\*1) FWCI (Field-Weighted Citation Impact) is the number of citations received by the publication, divided by the world average for the same type of publications in the same field and same publication year. An FWCI of 1 or higher means that the average impact is higher than the world average.

(\*2) RU11 (Research University 11) is a consortium that aims to develop academia via eleven universities: Hokkaido University, Tohoku University, University of Tsukuba, The University of Tokyo, Waseda University, Keio University, Tokyo Institute of Technology, Nagoya University, Kyoto University, Osaka University, and Kyushu University. RU11 is composed of both national and private universities.

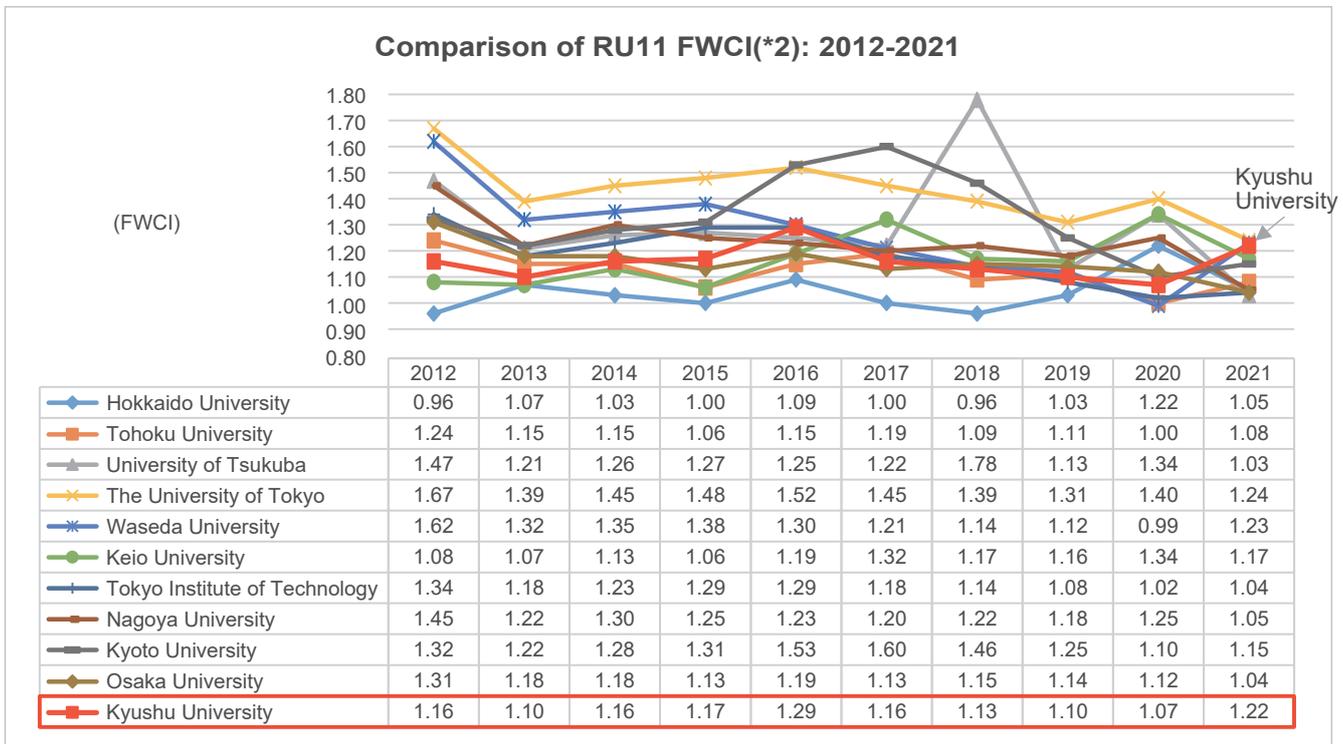
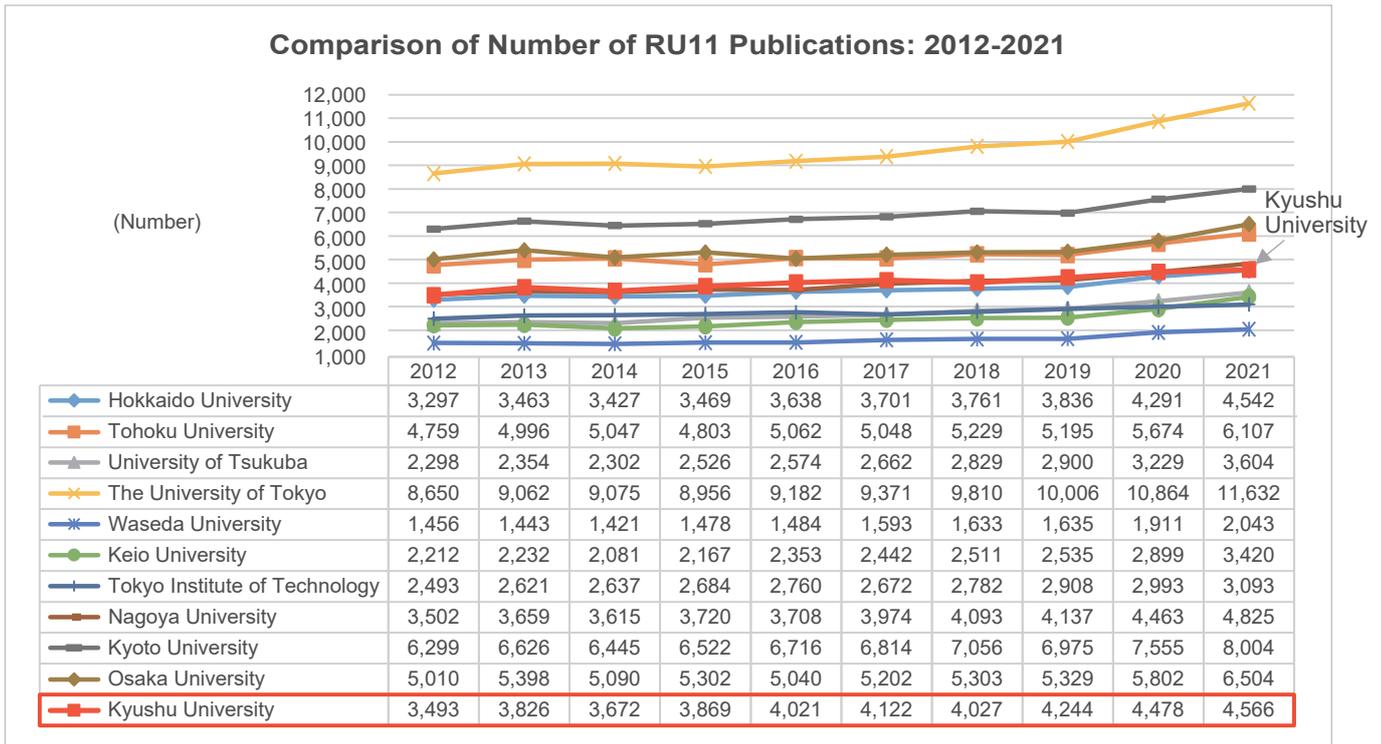
#### Metrics Details

Publication Type: Articles and Reviews; Self-Citations: included

Source: Elsevier's "SciVal" (as of September 2022)

## 9-2. Comparisons of Publication Quantity and Quality (Continued)

### ◆ Comparison of RU11 (\*1) ◆



(\*1) RU11 (Research University 11) is a consortium that aims to develop academia via eleven universities: Hokkaido University, Tohoku University, University of Tsukuba, The University of Tokyo, Waseda University, Keio University, Tokyo Institute of Technology, Nagoya University, Kyoto University, Osaka University, and Kyushu University. RU11 is composed of both national and private universities.

(\*2) FWCI (Field-Weighted Citation Impact) is the number of citations received by the publication, divided by the world average for the same type of publications in the same field and same publication year. An FWCI of 1 or higher means that the average impact is higher than the world average.

#### Metrics Details

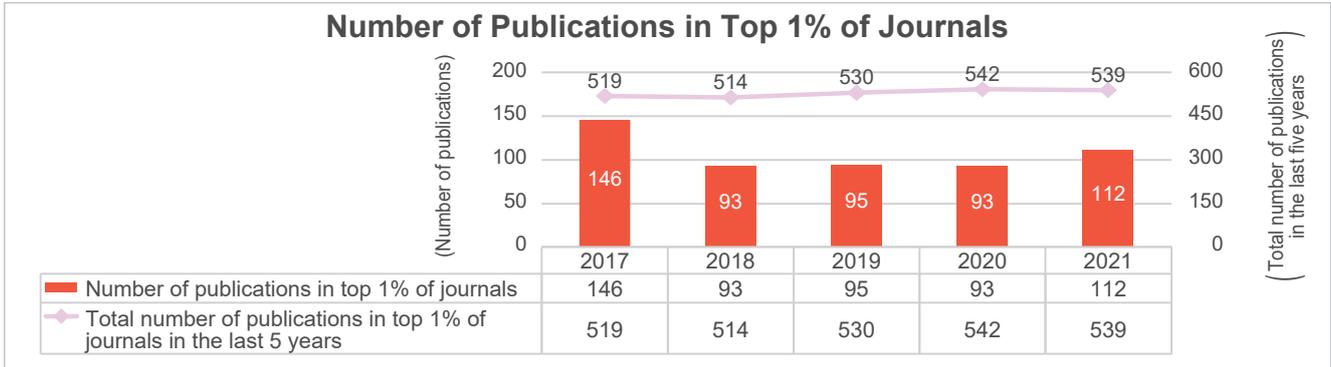
Publication Type: Articles and Reviews; Self-Citations: included

Source: Elsevier's "SciVal" (as of September 2022)

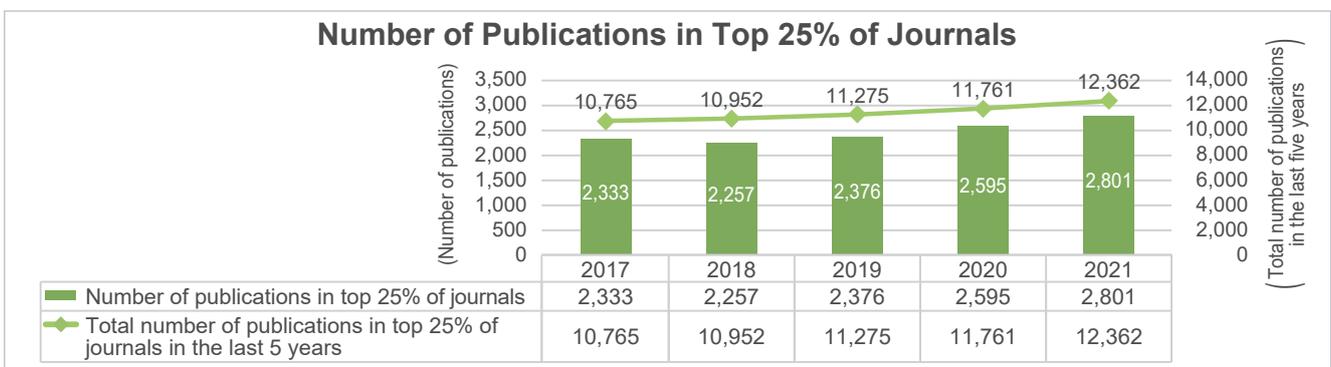
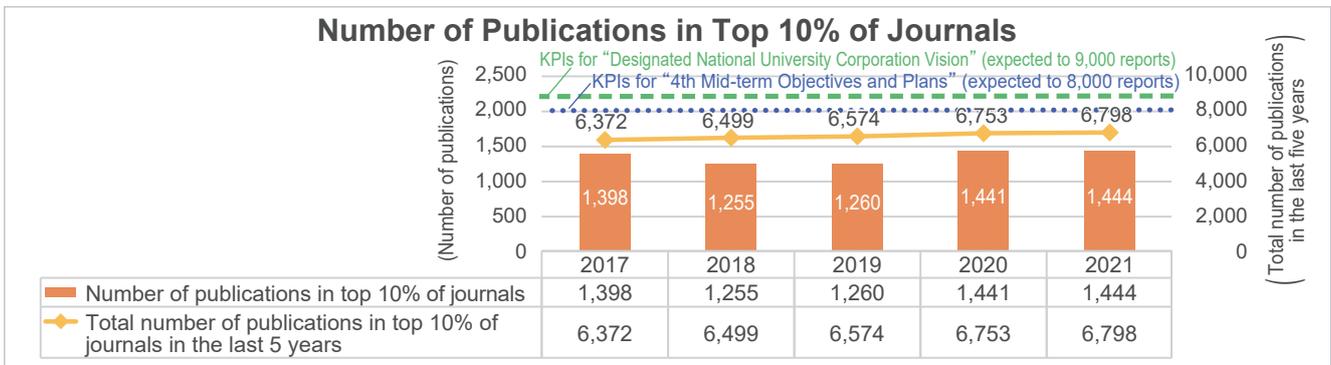
## 9-2. Comparisons of Publication Quantity and Quality (Continued)

### ■ Number and Percentage of Publications Carried in the World's Top Journals

#### ◆ Kyushu University ◆



#### ★Key Performance Indicators (KPI) for the Designated National University Corporations



- Number of Publications in Top X % of Journals refer to the number of publications in the world's top percentile of journals, based on the number of citations. It indicates the number of publications in top 1%, 5%, 10%, and 25% of journals based on the number of citations in Scopus each year.
- The polygonal line indicates the number of publications in top 10% of journals in the last five years, including the relevant year.

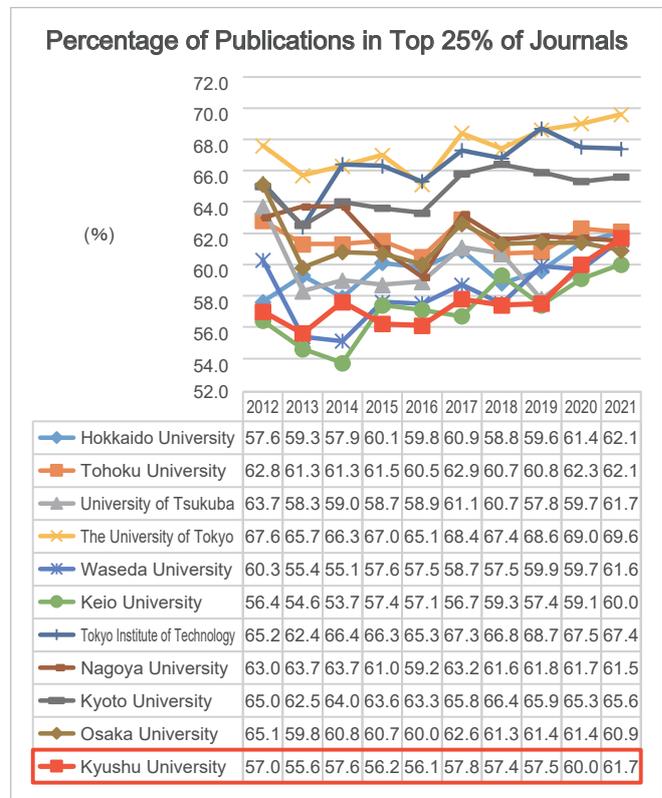
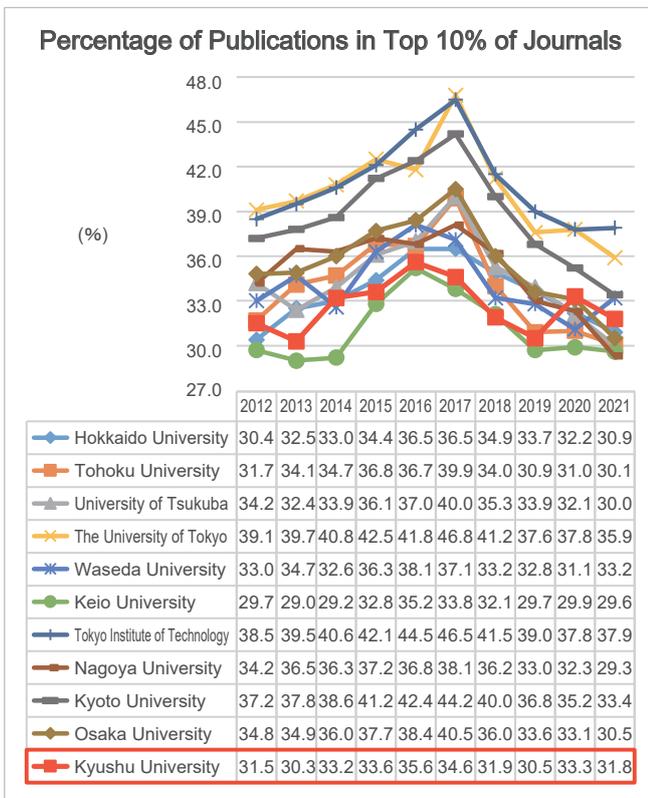
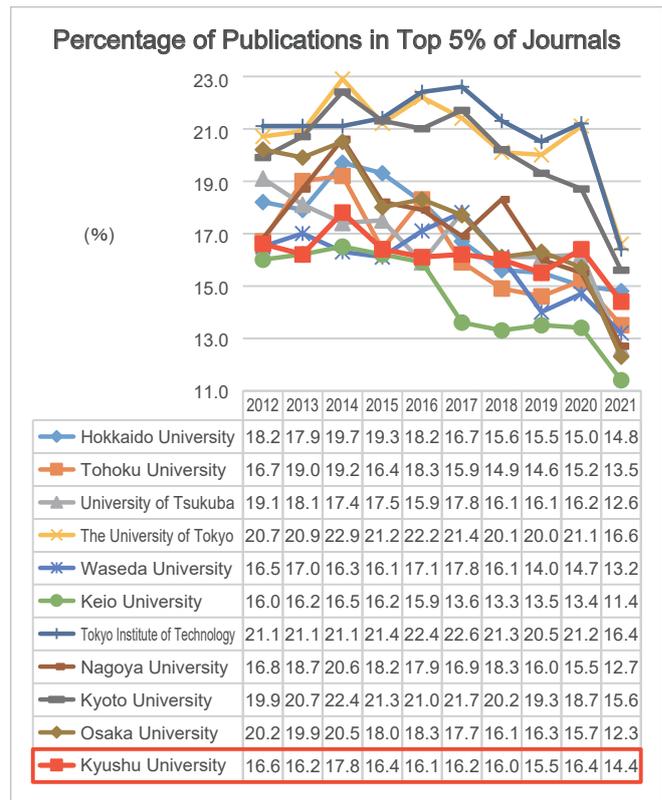
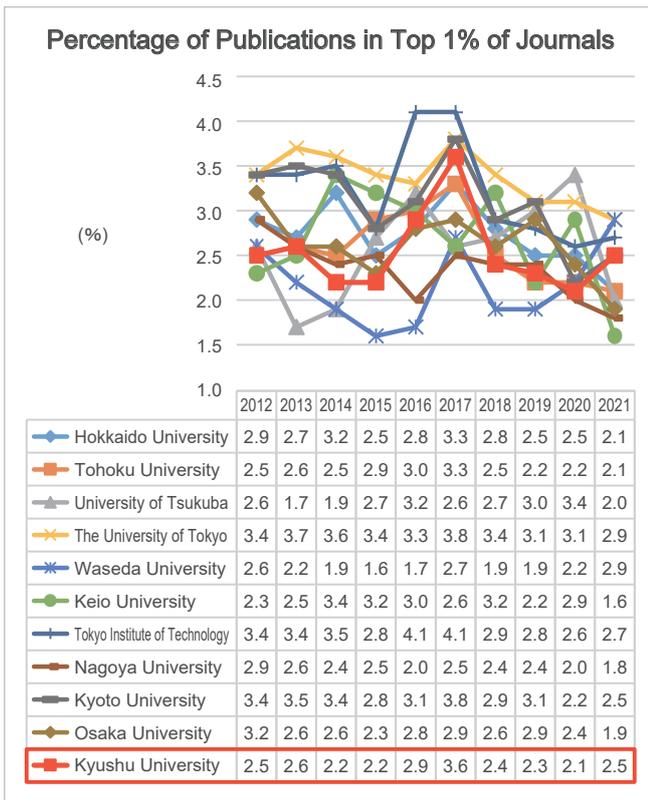
#### Metrics Details

Publication Type: Articles and Reviews; Journal Metric: CiteScore Percentile

Source: Elsevier's "SciVal" (as of September 2022)

## 9-2. Comparisons of Publication Quantity and Quality (Continued)

### ◆ Comparison of RU11 (\*1) ◆



(\*1) RU11 (Research University 11) is a consortium that aims to develop academia via eleven universities: Hokkaido University, Tohoku University, University of Tsukuba, The University of Tokyo, Waseda University, Keio University, Tokyo Institute of Technology, Nagoya University, Kyoto University, Osaka University, and Kyushu University. RU11 is composed of both national and private universities.

#### Metrics Details

Publication Type: Articles and Reviews; Journal Metric: CiteScore Percentile

Source: Elsevier's "SciVal" (as of September 2022)

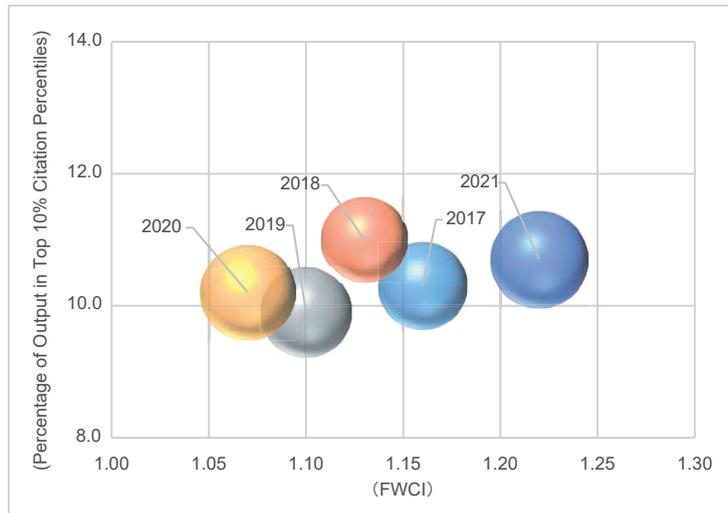
9-2. Comparisons of Publication Quantity and Quality (Continued)

Overall Comparisons of Publication Quantity and Quality

◆Kyushu University◆ (2017-2021)

Percentage of Output in Top 10% Citation Percentiles(\*1) (Vertical Axis) × FWCI(\*2) (Horizontal Axis) × Total Number of Publications (Bubble Size)

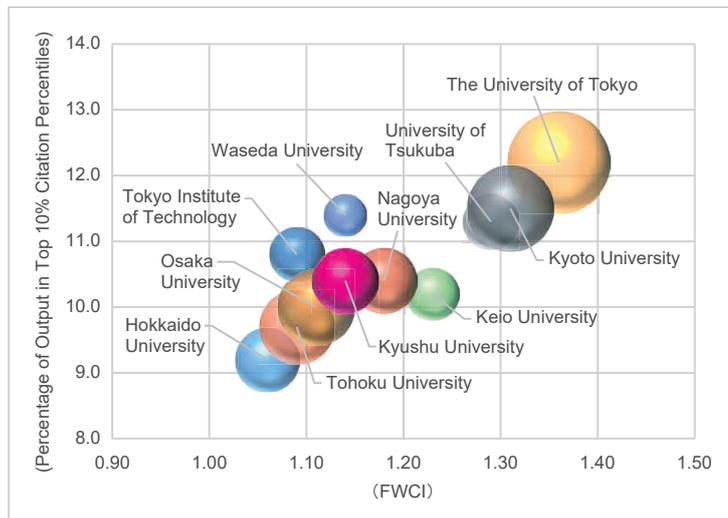
Year	Percentage of Output in Top 10% Citation Percentiles	FWCI	Number of publications
2017	10.3	1.16	4,122
2018	11.0	1.13	4,027
2019	9.9	1.10	4,244
2020	10.2	1.07	4,478
2021	10.7	1.22	4,566
Average	10.4	1.14	4,287



◆Comparison of RU11(\*3)◆ (2017-2021 Average)

Percentage of Output in Top 10% Citation Percentiles (Vertical Axis) × FWCI (Horizontal Axis) × Total Number of Publications (Bubble Size)

University	Percentage of Output in Top 10% Citation Percentiles	FWCI	Number of publications
Hokkaido University	9.2	1.06	4,026
Tohoku University	9.7	1.09	5,451
University of Tsukuba	11.3	1.29	3,045
The University of Tokyo	12.2	1.36	10,337
Waseda University	11.4	1.14	1,763
Keio University	10.2	1.23	2,761
Tokyo Institute of Technology	10.8	1.09	2,890
Nagoya University	10.4	1.18	4,298
Kyoto University	11.5	1.31	7,281
Osaka University	10.0	1.11	5,628
<b>Kyushu University</b>	<b>10.4</b>	<b>1.14</b>	<b>4,287</b>



(\*1) Percentage of Output in Top 10% Citation Percentiles

This refers to the number of (field-weighted) publications in top 10% most cited worldwide. This figure indicates the proportion of papers, including the top 10%, based on the annual number of Scopus citations.

(\*2) FWCI (Field-Weighted Citation Impact) is the number of citations received by the publication, divided by the world average for the same type of publications in the same field and same publication year. An FWCI of 1 or higher means that the average impact is higher than the world average.

(\*3) RU11 (Research University 11) is a consortium that aims to develop academia via eleven universities: Hokkaido University, Tohoku University, University of Tsukuba, The University of Tokyo, Waseda University, Keio University, Tokyo Institute of Technology, Nagoya University, Kyoto University, Osaka University, and Kyushu University. RU11 is composed of both national and private universities.

Metrics Details

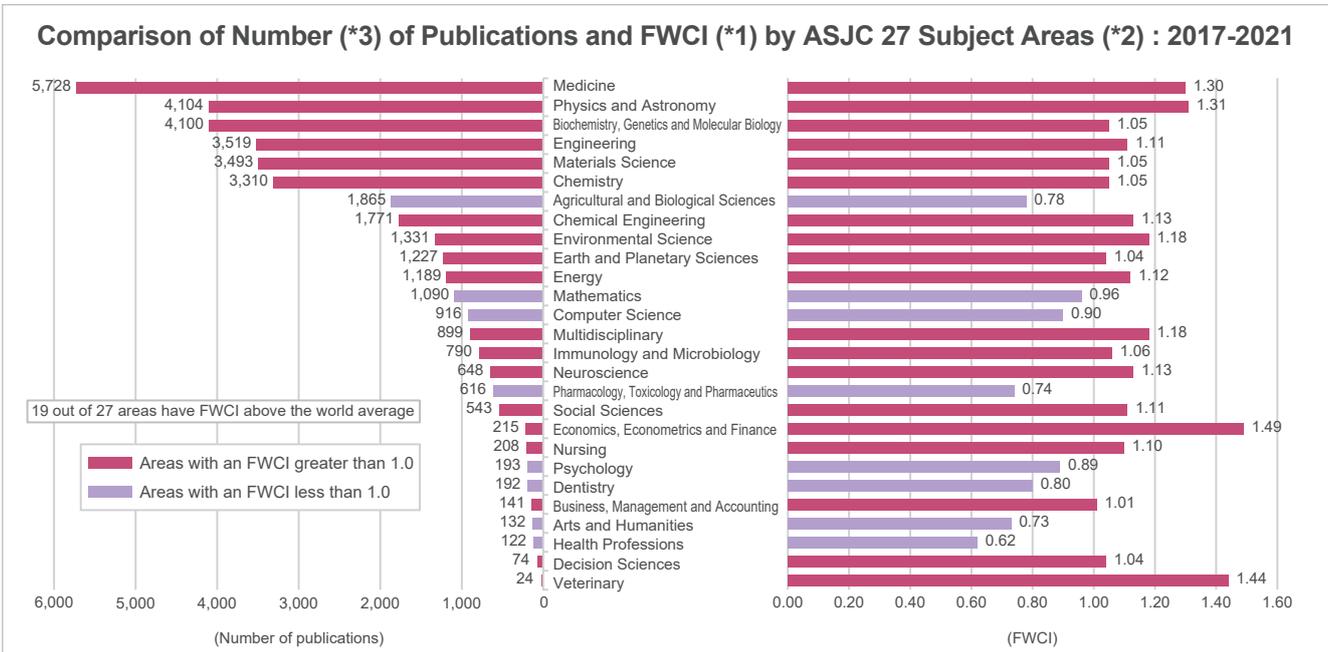
Publication Type: Articles and Reviews; Self-Citations: included; Field-Weighted: yes

Source: Elsevier's "SciVal" (as of September 2022)

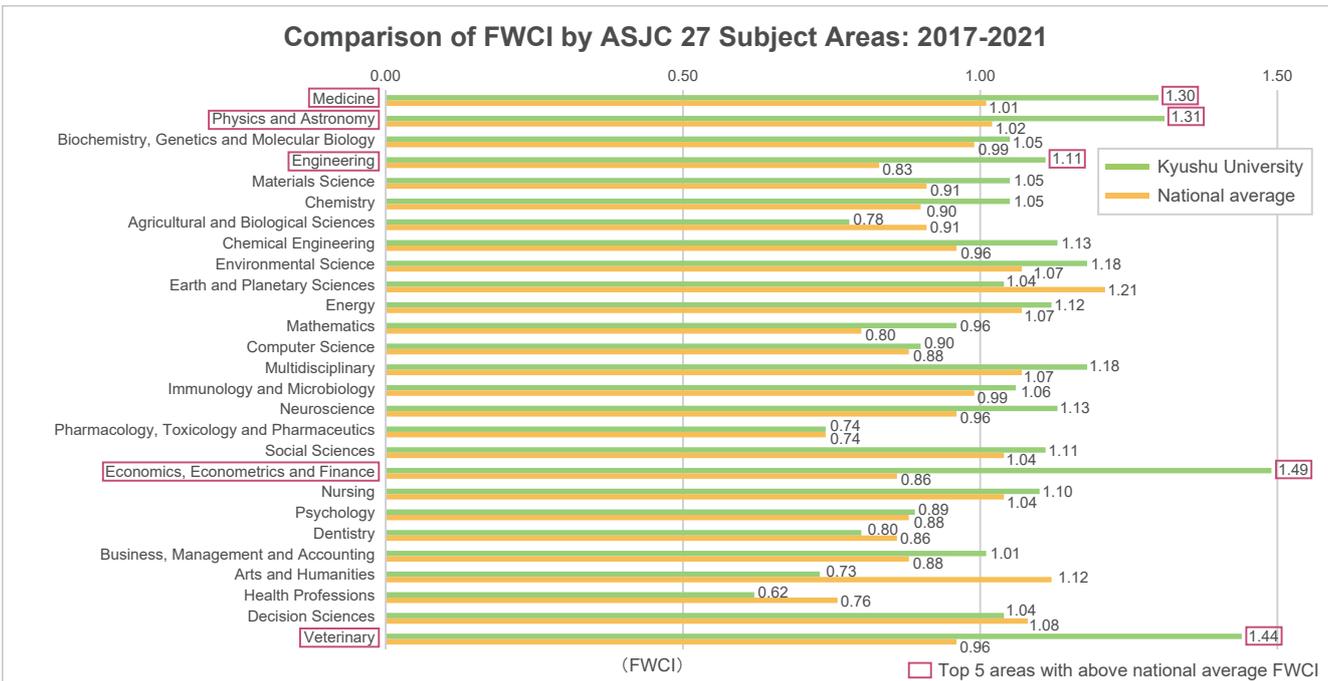
## 9-2. Comparisons of Publication Quantity and Quality (Continued)

### ■ Comparison between Kyushu University and the National Average by ASJC\* 27 Subject Areas: FWCI

#### ◆ Kyushu University ◆



#### ◆ Comparison between Kyushu University and the National Averages ◆



(\*1) FWCI (Field-Weighted Citation Impact) is the number of citations received by the publication, divided by the world average for the same type of publications in the same field and same publication year. An FWCI of 1 or higher means that the average impact is higher than the world average.

(\*2) The above journal categories are based on the ASJC 27 (ASJC: All Scopus Science Journal Classification) in Scopus.

(\*3) A larger number of publications and higher FWCI indicates greater depth of research capability (i.e. that it is one of the university's strengths). A smaller number of publications and high FWCI often indicates that there is a specific faculty member with advanced research ability. In addition, when a specific faculty member belongs to a huge community of researchers, both the number of publications and FWCI are often higher.

#### Metrics Details

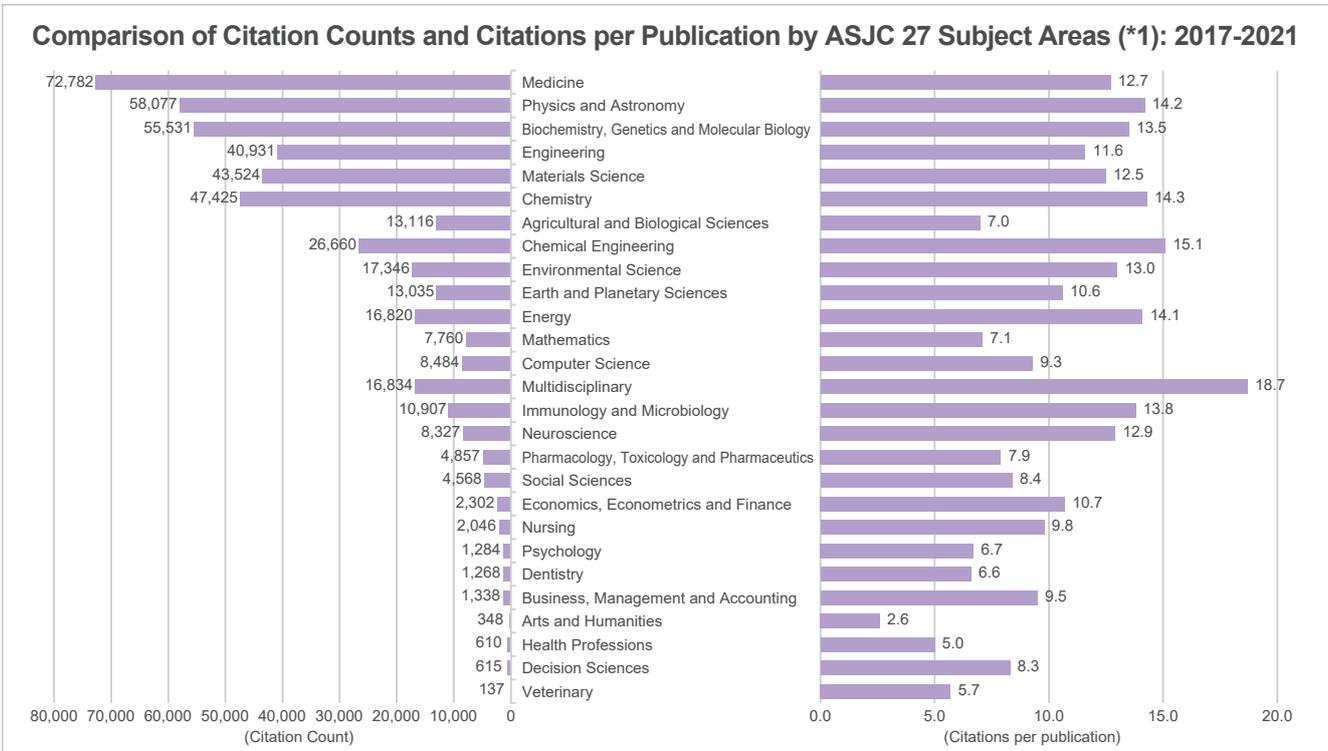
Publication Type: Articles and Reviews; Self-Citations: included

Source: Elsevier's "SciVal" (as of September 2022)

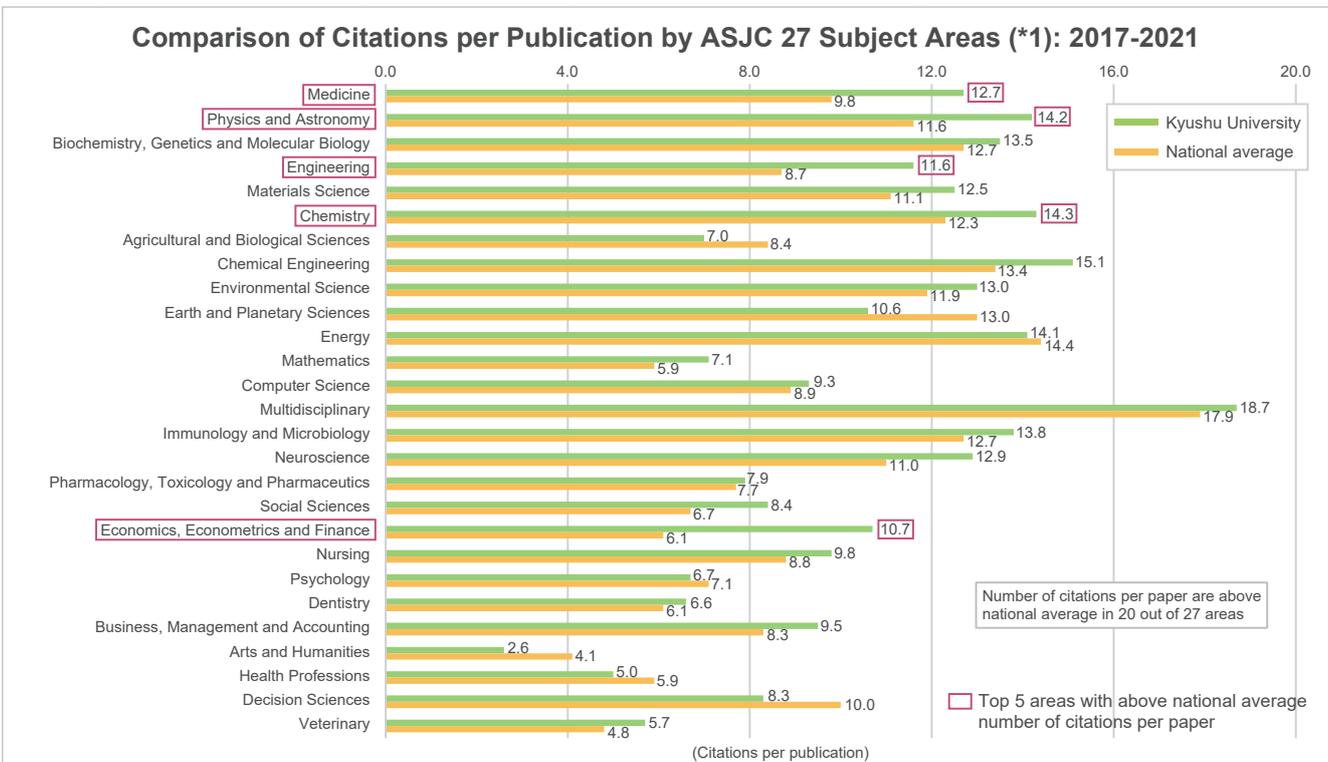
## 9-2. Comparisons of Publication Quantity and Quality (Continued)

### ■ Comparison between Kyushu University and the National Average by ASJC 27 Subject Areas: Citations per Publication

#### ◆ Kyushu University ◆



#### ◆ Comparison between Kyushu University and the National Averages ◆



(\*1) The above journal categories are based on the ASJC 27 (ASJC: All Scopus Science Journal Classification) in Scopus.

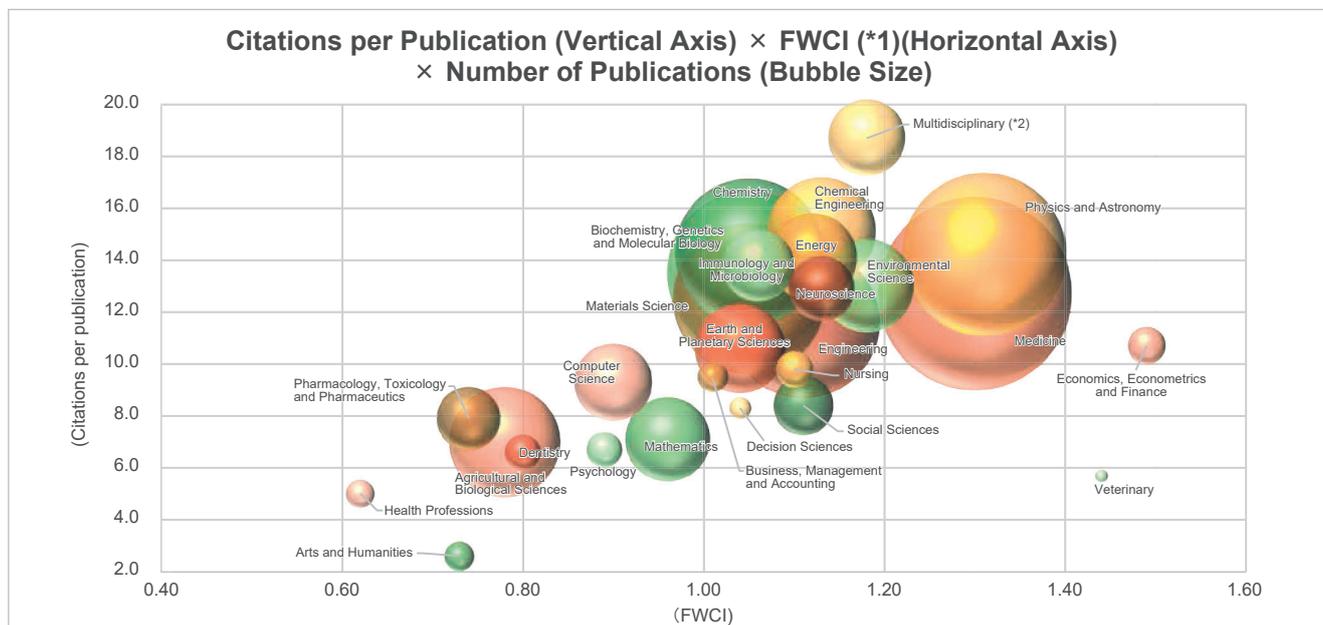
#### Metrics Details

Publication Type: Articles and Reviews; Self-Citations: included

Source: Elsevier's "SciVal" (as of September 2022)

## 9-2. Comparisons of Publication Quantity and Quality (Continued)

### ■ Comparison of Research Fields of Kyushu University Publications by ASJC 27 Subject Areas: 2017-2021



### ■ Comparison of Research Fields of Kyushu University Publications by ASJC 334 Fields: 2017-2021

Top 10 fields with high FWCI (\*3)

Rank	ASJC 27 Subject Areas (*4)	ASJC 334 Fields (*4)	FWCI	Number of publications
1	Nursing	Psychiatric Mental Health	16.42	3
2	Medicine	General Medicine	5.74	266
3	Veterinary	Small Animals	4.74	2
3	Veterinary	Equine	4.74	2
5	Immunology and Microbiology	Parasitology	3.24	22
6	Engineering	Engineering (miscellaneous) (*5)	3.19	183
7	Health Professions	Optometry	2.69	1
8	Physics and Astronomy	Physics and Astronomy (miscellaneous) (*6)	2.56	295
9	Business, Management and Accounting	Business and International Management	2.43	26
10	Psychology	Applied Psychology	2.27	11

(\*1) FWCI (Field-Weighted Citation Impact) is the number of citations received by the publication, divided by the world average for the same type of publications in the same field and same publication year. An FWCI of 1 or higher means that the average impact is higher than the world average.

(\*2) Multidisciplinary field is one in which publications are carried in general scientific magazines such as Nature and Science.

(\*3) 138 fields out of a total of 334 fields have FWCI above world average. Fields with high FWCI and a low number of papers indicate a strong ability to perform research amongst staff. Fields with a high FWCI and a high number of papers demonstrate a strong research ability overall (as a University).

(\*4) The 27 subject areas and 334 fields is based on the Scopus ASJC categorization (ASJC: All Science Journal Classification). Translation assistance: NIAD-QE, the National Institution for Academic Degrees and Quality Enhancement of Higher Education (the major field categories are Elsevier translations)

(\*5) Engineering (miscellaneous) refers to topics besides the following: Aerospace Engineering; Automotive Engineering; Biomedical Engineering; Civil and Structural Engineering; Computational Mechanics; Control and Systems Engineering; Electrical and Electronic Engineering; Industrial and Manufacturing Engineering; Mechanical Engineering; Mechanics of Materials; Ocean Engineering; Safety, Risk, Reliability, and Quality; Media Technology; Building and Construction; Architecture.

(\*6) Physics and Astronomy (miscellaneous) refers to topics besides the following: Acoustics and Ultrasonics; Astronomy and Astrophysics; Condensed Matter Physics; Instrumentation; Nuclear and High Energy Physics; Atomic and Molecular Physics or Optics; Radiation; Statistical and Nonlinear Physics; Surfaces and Interfaces.

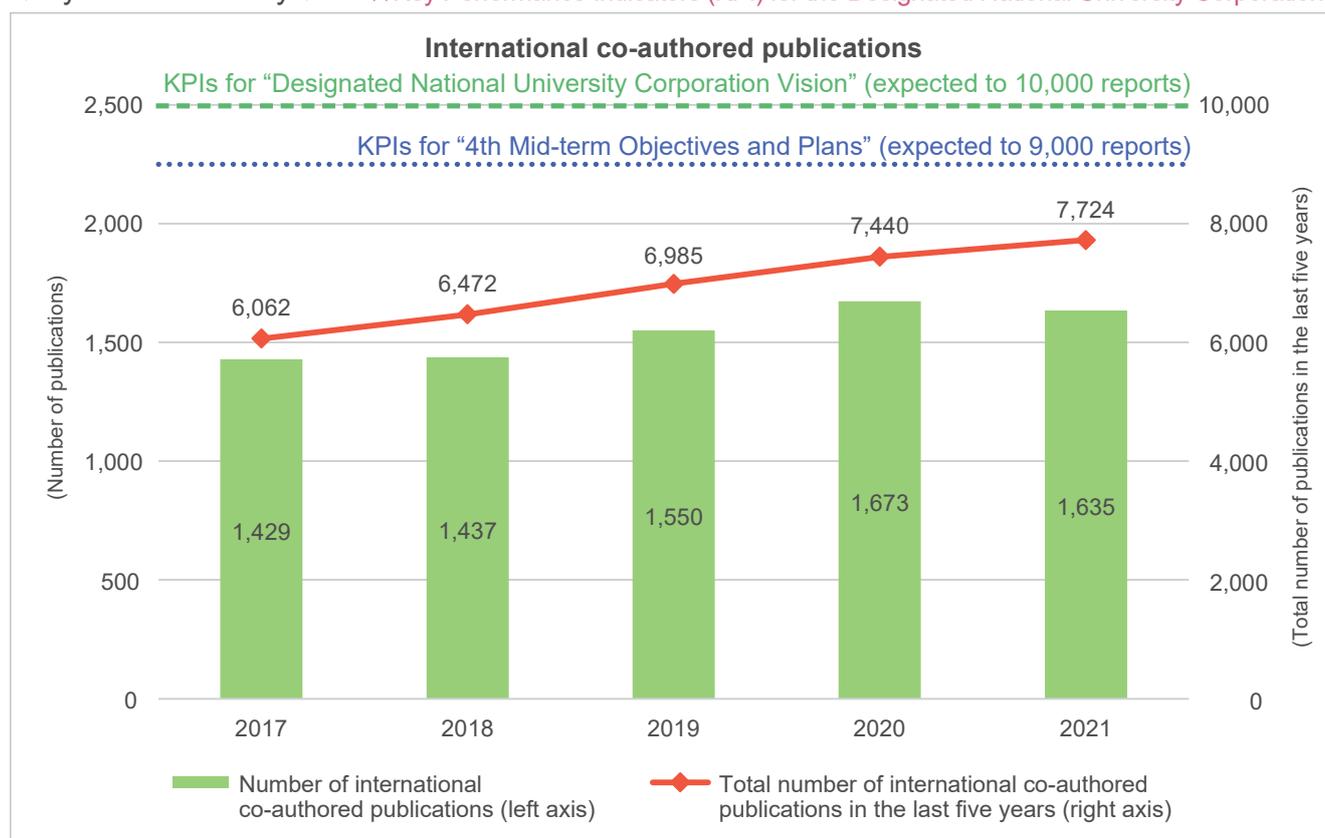
#### Metrics Details

Publication Type: Articles and Reviews; Self-Citations: included

Source: Elsevier's "SciVal" (as of September 2022)

## 9-3. International Co-authored Publications

◆Kyushu University◆ ★Key Performance Indicators (KPI) for the Designated National University Corporations



### ◆By Faculty◆ (2017-2021)

Rank	Faculty	Number of International Co-authored Publications (Total)	International Co-authorship Average Rate (%)
1	Faculty of Engineering	1,160	33.8
2	Faculty of Science	1,004	52.9
3	Faculty of Medical Sciences	735	16.7
4	Faculty of Agriculture	731	42.7
5	Faculty of Engineering Sciences	447	43.3
6	Faculty of Information Science and Electrical Engineering	358	38.5
7	Faculty of Dental Science	161	24.5
8	Faculty of Pharmaceutical Sciences	140	24.1
9	Faculty of Design	73	26.7
10	Faculty of Social and Cultural Studies	68	51.9
11	Faculty of Human-Environment Studies	50	33.8
12	Faculty of Economics	42	32.6
13	Faculty of Mathematics	38	22.0
14	Faculty of Languages and Cultures	7	20.6
15	Faculty of Law	6	66.7
16	Faculty of Humanities	2	7.1

#### Metrics Details

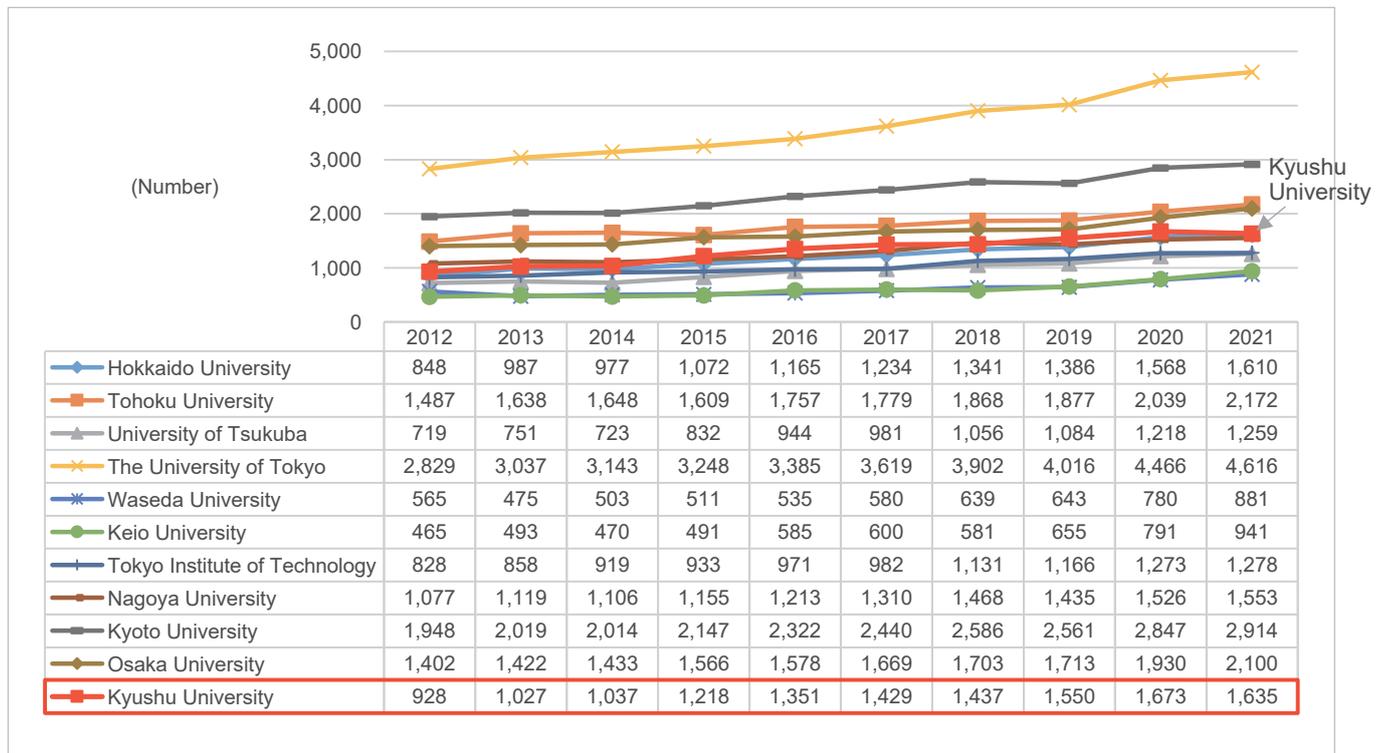
- Publication Type: Articles and Reviews; Field-Weighted: no
- Number of internationally co-authored publications by faculty: A tally of international co-authored publications by authors enrolled at Kyushu University as of 1st April 2022, including those previously published while working at other institutions.
- The polygonal line indicates the number of international co-authored publications in the last five years, including the relevant year.

Source: Elsevier's "SciVal" (as of September 2022)

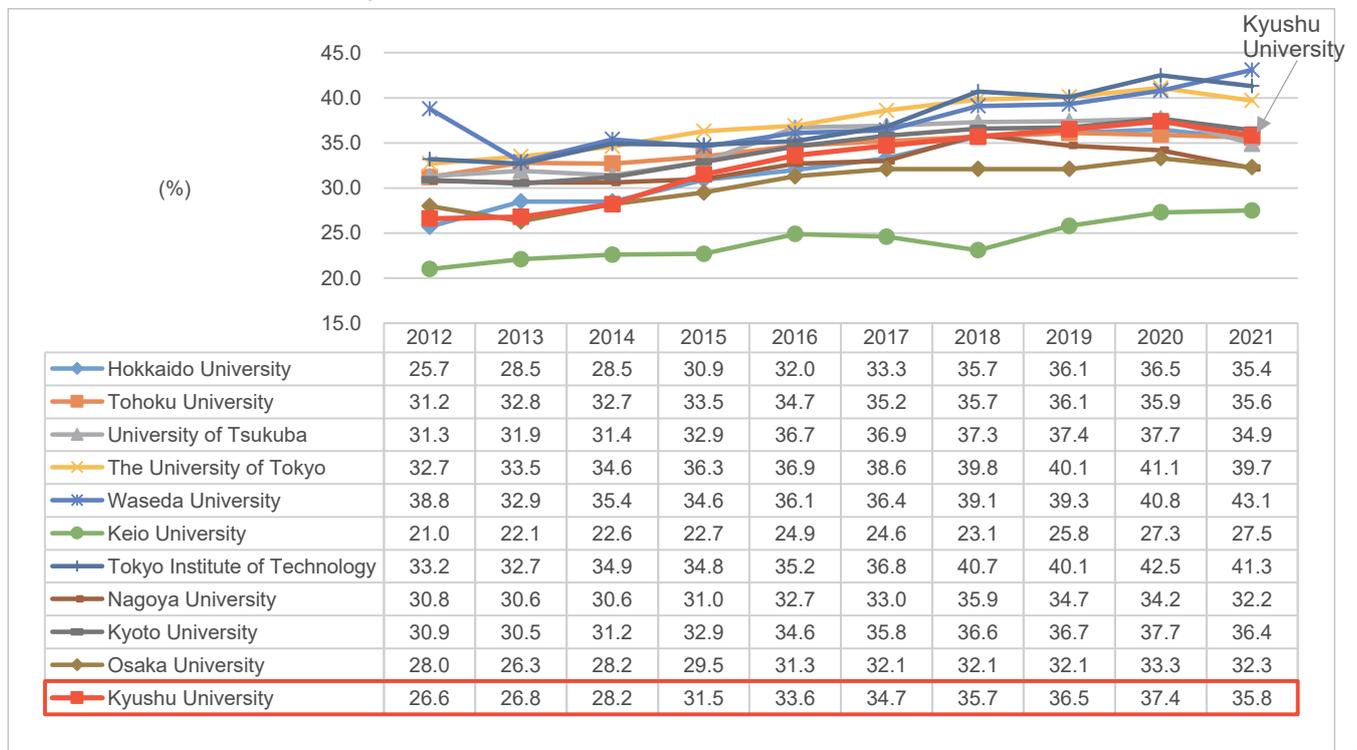
### 9-3. International Co-authored Publications (Continued)

#### ◆Comparison of RU11 (\*1)◆ (2012-2021)

#### Number of International Co-authored Publications



#### International Co-authorship Rate



(\*1) RU11 (Research University 11) is a consortium that aims to develop academia via eleven universities: Hokkaido University, Tohoku University, University of Tsukuba, The University of Tokyo, Waseda University, Keio University, Tokyo Institute of Technology, Nagoya University, Kyoto University, Osaka University, and Kyushu University. RU11 is composed of both national and private universities.

#### Metrics Details

Publication Type: Articles and Reviews; Field-Weighted: no

Source: Elsevier's "SciVal" (as of September 2022)

### 9-3. International Co-authored Publications (Continued)

#### International Co-authorship with Institutions Worldwide: 2017-2021

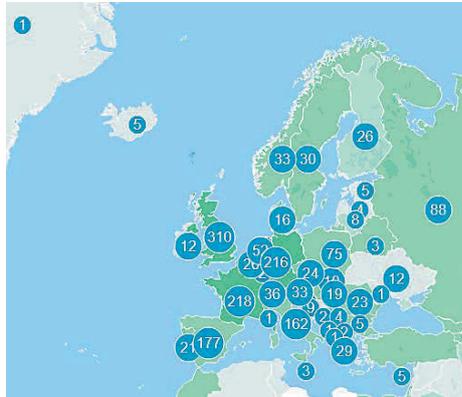
##### North America

2,905 international co-authored publications with 785 institutions



##### Europe

3,019 international co-authored publications with 1,715 institutions



##### Asia-Pacific

6,961 international co-authored publications with 1,237 institutions



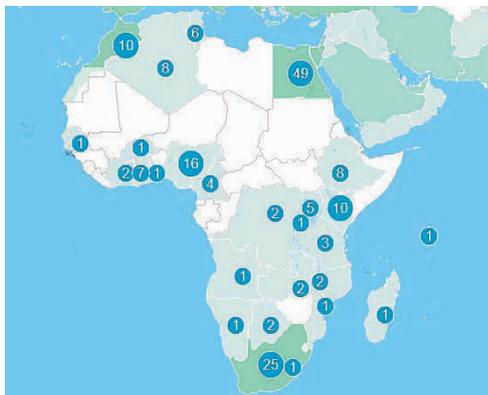
##### South America

651 international co-authored publications with 164 institutions



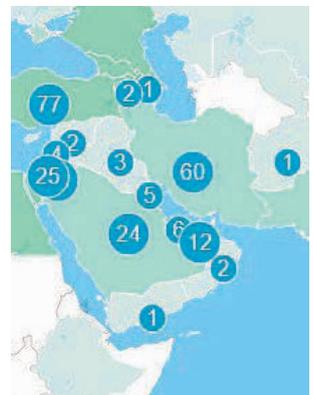
##### Africa

1,072 international co-authored publications with 171 institutions



##### Middle East

878 international co-authored publications with 240 institutions



• Figures on the maps represent the number of institutions.

##### Metrics Details

Publication Type: All

Source: Elsevier's "SciVal" (as of September 2022)