Como evaluar las publicaciones de su universidad dentro de los Objetivos de Desarrollo Sostenible
Sustainable Development Goals (SDGs)

The 2030 Agenda for Sustainable Development, adopted by all United Nations Member States in 2015, provides a shared blueprint for peace and prosperity for people and the planet, now and into the future.

At its heart are the 17 Sustainable Development Goals (SDGs), which are an urgent call for action by all countries - developed and developing - in a global partnership. They recognize that ending poverty and other deprivations must go hand-in-hand with strategies that improve health and education, reduce inequality, and spur economic growth – all while tackling climate change and working to preserve our oceans and forests.
Our SDG Report

• SciVal matching methodology: Identifying research supporting the United Nations Sustainable Development Goals

https://www.elsevier.com/connect/sdg-report
Our SDGs data is used in rankings

Impact Rankings 2020

The Times Higher Education Impact Rankings are the only global performance tables that assess universities against the United Nations’ Sustainable Development Goals (SDGs). We use carefully calibrated indicators to provide comprehensive and balanced comparisons across three broad areas: research, outreach and stewardship.

This second edition includes 767 universities from 85 countries.

Read more...

EXPLORE IMPACT RANKINGS FOR INDIVIDUAL SDGS

1. NO POVERTY
2. ZERO HUNGER
3. GOOD HEALTH AND WELL-BEING
4. QUALITY EDUCATION
5. GENDER EQUALITY
6. CLEAN WATER AND SANITATION
7. AFFORDABLE AND CLEAN ENERGY
8. DECENT WORK AND ECONOMIC GROWTH
9. INDUSTRY INNOVATIONS AND INFRASTRUCTURE
10. REDUCED INEQUALITIES
11. SUSTAINABLE CITIES AND COMMUNITIES
12. RESPONSIBLE CONSUMPTION AND PRODUCTION
13. CLIMATE ACTION
14. LIFE BELOW WATER
15. LIFE ON LAND
16. PEACE, JUSTICE AND STRONG INSTITUTIONS
17. PARTNERSHIPS FOR THE GOALS
Agenda

• Introduction
  – SDG report
  – SciVal matching methodology

• Demo
  – Spain research related to the SDGS
  – CSIC example

You will learn: to map your university’s publications to the SDGs using Scopus or SciVal. SciVal, with respect to Scopus, offers more advanced functionalities for the analysis of data (benchmarking, research themes, etc....)

Focus on:
- Total publications and growth
- Impact (FWCI)
- Collaborations
**Key Trends in SDG research**

**Energy is rapidly growing area**
- 9.1% article growth from 2015
- Highest academic – corporate collaborations (3.9%)
- But the lowest amount of research from low income counties

**Clear focus on the environment**
- Climate action had one of the highest volume (180k) and highest cited papers (37%)
- Sustainable Cities had the most growth (13.1%), followed closely by Responsible Consumption (11.6%).

**Clear gaps in SDG focus**
- No Poverty had the least amount of articles (11K)
- Papers regarding SDG 2 “Zero Hunger” on the other hand only feature 11.2% international collaborations
- SDG 4 “Quality Education”; papers were cited 4% less than the world’s average and had the least academic-corporate collaborations (0.5%)
What about the contribution by Spain to the SDGs?

- World output share by Spain is 3% (dashed line)
- SDG1, SDG16 share is <3%
- SDG2, SDG3, SDG7 share is ca. 3%
- SDG4-6, SDG8-15 is >3%
- Spain is ranked 5 in SDG5
- Spain is ranked 6 in SDG4
¿Cuáles son las preguntas que puede tener una universidad sobre los ODS?

- ¿Tenemos actividades de investigación relacionadas con los ODS?
- ¿Cuál es el impacto de nuestra investigación en los ODS?
- ¿Cuáles son los temas tratados en las publicaciones relacionadas con los ODS?
- ¿Quiénes son los equipos universitarios que realizan esta investigación?
- Y finalmente, ¿cómo podemos mejorar y, por ejemplo, en el THE impact rankings?
- ¿Con cuales universidades tiene sentido compararnos?
Matching Research to the SDGs
Research lives upstream of the goals

Research → Changes in practice, New tools, New policies

TARGET 14-1
CONSERVE COASTAL AND MARINE AREAS

TARGET 14-2
SUSTAINABLE FISHING

TARGET 14-3
REDUCE OCEAN ACIDIFICATION

TARGET 14-4
REDUCE MARINE POLLUTION

TARGET 14-5
REDUCE OCEAN ACIDIFICATION

14 LIFE BELOW WATER

ELSEVIER
Identifying research supporting the SDGs: Where are we and how did we get here?

- Expert-vetted keywords from Sustainability report * mapped to SDGs
- Additional keywords added based on SDG descriptions
- Internal and external SDG expert review
- Results in THE rankings (2019)

Assess query results against SDG targets/indicators

Identify missing terms and terms resulting in false positives

Generate new refined query

Results in SciVal

*Sustainability Science in a Global Landscape report*
SDG1: End poverty in all its forms everywhere

SUMMARY

Original search string: 210,613 document results

TITLE-ABS-KEY ( { poverty OR income* OR finance* OR {distributional effect} OR {distributional effects} OR {child labor} OR {child labour} OR {development aid} OR {social protection} OR microfinanc* OR micro-financ* OR {resilience of the poor} OR {resilien* AND poor} OR {safety net} OR {safety nets} OR {economic resource} OR {economic resources} OR welfare OR {food bank} OR {food banks} ) ) AND PUBYEAR < 2018 AND PUBYEAR > 2012

Graphical summary of co-occurrence of terms from 2000 randomly selected results:

Updated search string (last update): 10,387 document results

TITLE-ABS-KEY ( { {extreme poverty} OR {poverty alleviation} OR {poverty eradication} OR {poverty reduction} OR {international poverty line} OR ( {financial aid} AND {poverty} ) OR ( {financial aid} AND {poor} ) OR ( {financial aid} AND {north-south divide} ) OR ( {financial development} AND {poverty} ) OR {financial empowerment} OR {distributional effect} OR {distributional effects} OR {child labor} OR {child labour} OR {development aid} OR {social protection} OR {social protection system} OR ( {social protection} AND access ) OR microfinanc* OR micro-financ* OR {resilience of the poor} OR ( {safety net} AND {poor} OR {vulnerable} ) OR ( {economic resource} AND access ) OR ( {economic resources} AND access ) OR {food bank} OR {food banks} ) ) AND PUBYEAR < 2018 AND PUBYEAR > 2012
The theme of the SDG promotes the **eradication of extreme poverty** and aims to reduce the amount of people living in poverty by half. Appropriate **social protection systems**, which distinguishes a variety of segments of a country’s population, should be in place or should be established.

Each individual should have **equal rights to economic resources** and should have **access to basic services**, **tenure rights** and **ownership** and control of property, natural resources, technology and financial services. Resilience of the poor and others to reduce vulnerability to climate-related events or other economic, social or environmental disasters.

<table>
<thead>
<tr>
<th>query term</th>
<th>decision</th>
<th>rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poverty</td>
<td>Changed to: {extreme poverty} (poverty alleviation) (poverty eradication) (poverty reduction) (international poverty line)</td>
<td>Narrowed down to include keywords that specifically relate to the targets</td>
</tr>
<tr>
<td>Income*</td>
<td>Deleted</td>
<td>Income* is far too broad and leads to hits on many articles unrelated to the theme of the SDG. Deleted as poverty already indicates low income.</td>
</tr>
<tr>
<td>Finance*</td>
<td>Deleted</td>
<td>Too broad, microfinance* is included as a keyword. It seems better to delete this keyword and add more narrow keywords in return (see below)</td>
</tr>
<tr>
<td>(Financial aid) AND (poverty)</td>
<td>Added</td>
<td></td>
</tr>
<tr>
<td>(Financial aid) AND (poor)</td>
<td>Added</td>
<td></td>
</tr>
<tr>
<td>(Financial aid) AND (north-south divide)</td>
<td>Added</td>
<td></td>
</tr>
<tr>
<td>(financial development) AND (poverty)</td>
<td>Added</td>
<td></td>
</tr>
<tr>
<td>(financial empowerment)</td>
<td>Added</td>
<td></td>
</tr>
<tr>
<td>[social protection] AND access</td>
<td>ADDED</td>
<td></td>
</tr>
<tr>
<td>(social protection system)</td>
<td>Added</td>
<td></td>
</tr>
<tr>
<td>(safety net)</td>
<td>Changed to ((safety net AND (poor) OR (vulnerable)))</td>
<td>Changed to narrow the results down to safety nets for poor and vulnerable segments of the population and to disregard results on medical studies, engineering studies, etc</td>
</tr>
<tr>
<td>{safety nets}</td>
<td>Deleted</td>
<td>See (safety net)</td>
</tr>
<tr>
<td>(resilienc* AND poor)</td>
<td>Deleted</td>
<td>This part of the query on its own does not bring up any results, deleted</td>
</tr>
<tr>
<td>Economic resource</td>
<td>Changed to {economic resource} and access</td>
<td>Too broad on its own</td>
</tr>
<tr>
<td>Economic resources</td>
<td>Changed to {economic resources} and access</td>
<td>Too broad on its own</td>
</tr>
<tr>
<td>Welfare</td>
<td>Deleted</td>
<td>Welfare is too general on its own and leads to hits on many articles unrelated to the SDG, deleted</td>
</tr>
</tbody>
</table>
SDG 1: End poverty in all forms
The theme of the SDG promotes the **eradication of extreme poverty** and aims to reduce the amount of people living in poverty by half. Appropriate **social protection systems**, which distinguishes a variety of segments of a country’s population, should be in place or should be established.

Each individual should have **equal rights to economic resources** and should have **access to basic services, tenure rights** and **ownership** and control of property, natural resources, technology and financial services. Resilience of the poor and others to reduce vulnerability to climate-related events or other economic, social or environmental disasters.
SDG 1: End poverty in all forms
VOSViewer – original vs new query

Original query

- 210k docs
- Top 20 - 1 reflect the theme
- Random 20 – 1 reflect theme

New query

- 10k docs
- Top 20 – 16 reflect theme
- Random 20 – 18 reflect theme
SDG queries are transparent

• On Mendeley data we uploaded:
  • The full Scopus query for each SDG
  • The query development methodology documentation for each SDG
Lessons learned so far:
SDG Queries generate highly variable results

→ Venn diagrams showing the overlap between four different queries when assessing research from University of Southern Denmark
→ No more than 20% of common publications for the different queries related to a given SDG

“SDU” queries
SciVal queries
AURORA queries
Austrian queries

Data and analysis provided by Maeva Vignes, Funding Advisor, University of Southern Denmark Research & Innovation Organisation (SDU RIO)
Identifying research supporting the SDGs: Where are we and how did we get here?

- Expert-vetted keywords from Sustainability report mapped to SDGs
- Assess query results against SDG targets/indicators
- Additional keywords added based on SDG descriptions
- Identify missing terms and terms resulting in false positives
- Internal and external SDG expert review
- Generate new refined query
- Feedback from community
- Generate validated publication sets
- Results in SciVal
- Results in THE rankings (2019)
SDG Feedback

We’ll gather feedback in 2020 to improve the SDG queries.

• Work with subject matter experts

• Gather feedback via a website:

• Likely to follow the pilot done on SDG 6: https://sdgresources.relx.com/

[Match SDG 6 Research Publications to Targets and Indicators]

To understand the research landscape related to SDG 6, we developed a query to identify research publications that support the SDG 6 targets and indicators. Below is a random selection of publications retrieved by the query. Help us match the publications to the specific targets and indicators by selecting the Match to Indicators option next to each title.

<table>
<thead>
<tr>
<th>Source</th>
<th>Year</th>
<th>Cited by</th>
<th>Title</th>
<th>Authors</th>
<th>Feedback</th>
</tr>
</thead>
<tbody>
<tr>
<td>journal of Environmental Management</td>
<td>2018</td>
<td>2</td>
<td>A modified MBIR system with post advanced purification for domestic water supply system in 180-day CELSS: Construction, pollutant removal and water allocation</td>
<td>Li T., Zhang L., Al W., Dong W., Yu Q.</td>
<td>Match to Indicators</td>
</tr>
<tr>
<td>Data in Brief</td>
<td>2018</td>
<td>19</td>
<td>Data on microbiological quality assessment of rural drinking water supplies in Poldasht county</td>
<td>Yousefi M., Saleh H.N., Yaseri M., Mahvi A.H., Saleimani H., Sareed Z., Zohdi S., Mohammadzadeh M.</td>
<td>Match to Indicators</td>
</tr>
<tr>
<td>Environmental monitoring and assessment</td>
<td>2018</td>
<td>2</td>
<td>Irrigation water quality and the threat it poses to crop production: evaluating the status of the Crocodile (West) and Marico catchments, South Africa</td>
<td>du Preez G.C., Wepener V., Fourie H., Danielz M.S.</td>
<td>Match to Indicators</td>
</tr>
</tbody>
</table>
SDGs in SciVal

- They are available as predefined Research Areas:
  - Type “SDG” into “Find existing Research Areas” and choose an SDG
  - You can use the SDGs in Overview, Benchmarking and Trends

https://service.elsevier.com/app/answers/detail/a_id/29398/suppporthub/scival/kw/SDG/
How to look at the contribution of an institution to an SDG

1. Put the SDG in Trends
2. Find the institution in which you’re interested
   a. Use the region filters to help locate the institution
3. Click on the Scholarly Output number to see the underlying publications
4. Create a Publication Set
   a. Use the Save as Publication Set option
5. You can now look deeper at the institution’s contribution to the SDG based upon our search queries

https://service.elsevier.com/app/answers/detail/a_id/29398/supporthub/scival/kw/SDG/
Let’s see the SDG data in action

scival.com/sgd
Quality education Search Query in Advanced Search Scopus
UN Sustainable Development Goals

The United Nations Sustainable Development Goals (SDGs) challenge the global community to build a world where no one is left behind.

Adopted in 2015 as part of the 2030 agenda for sustainable development, the SDGs comprise of 17 goals and the associated 169 targets as areas considered of critical importance for humanity.

Explore the most active contributors

In 2019, Elsevier's data science teams built search queries for 16 of the SDGs. They used a targeted and expert-informed approach to ensure the queries reflected the specific targets and indicators of each SDG. These search queries - which are free to download from Mendeley Data - have been loaded into Scival and can help researchers and institutions track and demonstrate progress towards the targets of the SDGs. Why not take a look!

Click on the SDGs below to see who's making a difference
Keyphrase analysis

Top 50 keyphrases by relevance, based on 30,990 publications

Learn about keyphrase calculations
### Largest Topic Clusters

#### Top 5 Topic Clusters, by Scholarly Output

<table>
<thead>
<tr>
<th>Topic Cluster</th>
<th>Scholarly Output</th>
<th>Field-Weighted Citation Impact</th>
<th>Prominence percentile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher; School; Education</td>
<td>2,684</td>
<td>1.11</td>
<td>76.640</td>
</tr>
<tr>
<td>Child; Adolescent; Schools</td>
<td>1,859</td>
<td>1.06</td>
<td>95.114</td>
</tr>
<tr>
<td>Schools; Students; Disability</td>
<td>1,535</td>
<td>0.99</td>
<td>56.894</td>
</tr>
<tr>
<td>Sustainability; Sustainable Development; Students</td>
<td>1,107</td>
<td>0.92</td>
<td>61.914</td>
</tr>
<tr>
<td>Student; Education; Learning</td>
<td>883</td>
<td>1.33</td>
<td>44.645</td>
</tr>
</tbody>
</table>

[Analyze in more detail]
4: Quality Education

Most active Institutions

- University College London: 337
- Monash University: 275
- Harvard University: 270
- Deakin University: 207
- Kazan Volga Region Federal University: 203

Most active Countries/Regions

- United States: 7,423
- United Kingdom: 2,787
- Australia: 2,361
- Brazil: 1,689
- Spain: 1,514

Incomplete year 🔄
### Largest Topic Clusters

Top 5 Topic Clusters, by Scholarly Output

<table>
<thead>
<tr>
<th>Topic Cluster</th>
<th>Scholarly Output</th>
<th>Field-Weighted Citation Impact</th>
<th>Prominence Percentile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Violence; Women; Child ...</td>
<td>5,616</td>
<td>1.15</td>
<td>85.408</td>
</tr>
<tr>
<td>HIV; HIV Infections; HIV-1 ...</td>
<td>2,781</td>
<td>1.41</td>
<td>95.984</td>
</tr>
<tr>
<td>Microfinance; Farmers; Cooperative ...</td>
<td>1,390</td>
<td>0.82</td>
<td>68.407</td>
</tr>
<tr>
<td>Family; Woman; Marriage ...</td>
<td>1,219</td>
<td>1.25</td>
<td>54.953</td>
</tr>
<tr>
<td>Party; Election; Voter ...</td>
<td>987</td>
<td>1.38</td>
<td>86.479</td>
</tr>
</tbody>
</table>
5: Gender Equality

Most active Institutions

- Harvard University: 583
- Johns Hopkins University: 506
- University of Toronto: 447
- Columbia University: 376
- University of Michigan, Ann Arbor: 358

Most active Countries/Regions

- United States: 15,106
- United Kingdom: 5,814
- Australia: 2,685
- Canada: 2,649
- Spain: 1,655

Year range used for metrics 2015 to >2020

--- Incomplete year

--- Analyze in more detail
Links

- SDG SciVal Methodology (Search queries): https://data.mendeley.com/datasets/87txkw7khs/1
- SciVal Dashboard: https://scival.com/sdg
Breve Biografía

• **ANNAPAOLA MIGANI** (https://orcid.org/0000-0001-5422-805X), Consultora de Research Intelligence, Elsevier. Licenciada en química por la “Universitá di Bologna” y doctora en química por el “King’s College of London” (2001) con más de 15 años de experiencia como investigadora académica. Ha trabajado en prestigiosas instituciones de educación superior y centros de investigación en Europa (Universitá di Siena, Universitat de Barcelona, Universitat de Girona, CSIC-CFM, Instituto Catalán de Nanociencia y Nanotecnología, CSIC - IQAC). Fue galardonada con varias becas europeas y españolas de prestigio, incluyendo la beca Ramón y Cajal. Desde julio de 2018, trabaja como Consultora de Research Intelligence para España y otros países del sur de Europa. ¡Contacten con ella para más información sobre SciVal!
Thank you