

Introduction to Journal Bibliometrics and Research Impact

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Journal Citation Reports (JCR)

Journal Citation Reports provides Impact Factors (IF), Immediacy Index, Citation Half-Like and other metrics to help researchers identify the most appropriate, influential journals in which to publish. JCR covers more than 8,000 of the world's most highly cited, peer-reviewed journals. Journals are from 3,300 publishers in approximately 227 disciplines, from 66 countries. There are two editions: The Sciences Edition covers over 6,500 journals the Social Sciences Edition covers over 1,900. You can search for an individual journal's metrics, or by subject category to allow comparison between journals in a particular field.

How to access JCR in Web of Knowledge:

Go to the 'Web of Knowledge' online Library platform, you can see a link to Web of Knowledge (including Web of Science) from many Library pages, on-campus students will normally access databases from the electronic Library at http://liv.ac.uk online students usually access Web of Knowledge from the Library for Online Programmes http://libguides.liv.ac.uk/onlineprogrammes (see the E-Resources tab then scroll down the E-Journals area to the Web of Knowledge link, you may see links to Web of Knowledge elsewhere in the site), otherwise visit Web of Knowledge directly at http://www.webofknowledge.com.ezproxy.liv.ac.uk

When you have visited Web of Knowledge, click the 'Additional Resources' tab, then click 'Journal Citation Reports':



Comparing the metrics for a group of journals by Subject Category

1. Select the appropriate JCR edition (Science or Social Sciences) and year. Make sure the radio button is set against **View a group of journals...** and select **Subject Category** from the menu (this should be the default):

ISI Web of Knowledge ^s	M		
Journal Citation Reports®			
			<u>Ir</u>
	Select a JCR edition and year:	Select an option:	
		 View a group of journals by Subject Category Search for a specific journal Subject Category 	
	◎ JCR Social Sciences Edition 2010	View all journals Publisher Country/Territory	_
	SUB		
	This product is best viewed in	800x600 or higher resolution	
	The Notices file was last upda	ted Wed Sep 28 11:41:34 2011	
	Copyright © 2011	Thomson Reuters.	

2. Select a subject category to display the metrics (using 'Environmental Sciences' as an example):

ISI Web of Knowledge [™]				
Journal Citation Reports®				
WELCOME 2 HELP				2010 JCR Sc
Subject Category Selection				Subject Catego
	 Select one or more categories from the list. (How to select more than one) Select to view Journal data or aggregate Category data. 	ENGINEERING, MANUFACTURING ENGINEERING, MARINE ENGINEERING, MECHANICAL ENGINEERING, MULTIDISCIPLINARY ENGINEERING, PETROLEUM ENTOMOLOGY ENTOMOLOGY ENTOMOLOGY EVOLUTIONARY BIOLOGY View Journal Data - sort by: © [®] View Category Data - sort by:	Journal Title Journal Title Total Cites	
		SUBMIT	Immediacy Index Current Articles Cited Half-Life	Choose sort order. Default sort is by journal title
		Acceptable Use Policy Copyright © 2011 <u>Thomson Reuters</u> .	Eigenfactor(TM) Score ArticleInfluence(TM) Score	

3. View results (sorted by Impact Factor in this case). To view the full citation report for a particular journal click on its title:

SI Web	of k	Kno	owledge℠											
ournal C	itati	ion	Reports®											
		1												
WELCOME	2 HELP												2010 JCR Science E	dition
Journa	al Su	umi	mary List				-						Journal Title Ch	banges
ournals from	n: subj	ject o	categories ENVIRONMENTAL	SCIENCES OF WE	W CATEGORY	SUMMARY 1	ust							
orted by.	and	Jacit	actor	Sort rest	ults by oth	her met	trics							_
ournals 1 -	20 (of	f 193)	4 44	([1])	2121	4151	61218	19110]	>> •			Page 1	1 of 1
MARK ALL UP	GATE MAJ	RIKED LI	ST	Rank	ing is ba	used on	your j	ournal a	d sort select	tions.				
								JCR	Data D			Eigenfactor TM Metrics D		
Mai	rk Ra	ank	Abbreviated Journal Title (linked to journal information) ISSN	Total C	ites 1	impact Factor	5-Year Impact Factor	Immediacy Index	Articles	Cited Half-life	Elgenfactor TM Score	Article Influence TH Score	
E	1	1	ENERG ENVIRON SCI	1754-5692		1766	9.488	9.488	0.944	198	1.7	0.00941	2.922	
10	1 3	2	FRONT ECOL ENVIRON	1540-9295		2994	8.820	7.931	1.309	55	4.1	0.01592	3.132	
E	1 3	3	GLOBAL CHANGE BIOL	1354-1013	1	3987	6.346	7.814	1.378	262	5.1	0.06034	3.049	
100	1 4	4	ENVIRON HEALTH PERSP	0091-6765	2	6174	6.087	7.024	1.289	270	7.1	0.06206	2.103	
E	1 1	5	GLOBAL BIOGEOCHEM CY	0886-6236		8761	5.263	5.936	0.853	102	7.7	0.02896	2.881	
2	1 .	6	GLOBAL ENVIRON CHANG	Colort a lournal		2722	4.918	7.840	0.731	67	5.1	0.00955	2.390	
10	1 3	7	CONSERV BIOL	view full breakdo	own of	5680	4.894	5.963	0.789	171	8.4	0.03558	2.160	
E	1	8	ENVIRON SCI HEAL C	metrics in tabula	arand	283	4.840	4.380	0.091	11	3.4	0.00114	1.176	
87	1 9	9	ENVIRON SCI TECHNOL	graphic tom	a	2582	4.827	5.398	0.747	1400	6.2	0.18254	1.490	

Viewing the metrics for a specific journal

1. Select the appropriate JCR edition (Science or Social Sciences) and year. Make sure the radio button is set against **Search for a specific journal**:

ISI Web of Knowledge	SM	
Journal Citation Reports®		
	Select a JCR edition and year:	Select an option:
		○ View a group of journals by Subject Category ▼
	◎ JCR Social Sciences Edition 2010	View all journals
	SU	BMIT
	This product is best viewed in	1 800x600 or higher resolution
	The Notices file was last upda	ated Wed Sep 28 11:41:34 2011

2. Search for the journal title:

SI Web of Knowledge [™]									
Journal Citation Reports®									
WELCOME ? HELP									
Journal Search									
Search by full title, journa	1) Search by:	2) Type search term:							
abbreviation or keyword		Enter words from journal title or ISSN (view list of full journal titles)							
	Full Journal Title 🗸	environmental research							
	Full Journal Title	SEARCH							
	Abbreviated Journal Title								
	I itle Word								
Full Journal Title: Enter JOURNAL OF CELLULAR PHYSIOLOGY or JOURNAL OF CELL* (more examples)									
	Abbreviated Journa	I Title: Enter J CELL PHYSIOL or J CELL * (more examples)							
	Title	Word: Enter CELLULAR or CELL* (more examples)							
		ISSN: Enter 0021-9541 or other ISSN (more examples)							

3. A summary of the metrics is displayed.

ISI V	ISI Web of Knowledge™												
Journal Citation Reports®													
WELCOME PHEP 2010 JCR Science Edition													
Dourna	ourn Is fror	al Su n: sea	Immary List rch Full Journal Title for	ENVIRON	MENTAL F	RESEARC	:н'					Journal Title C	hanges
Sorted	by:	Jou	irnal Title 🔻	SORT AGAIN			()						
Journa MARK AL	1 51- 1. UF	1 (of	1) RKED LIST	Ranking	 g is based	d on you	[1]) Ir journa	al and sort s	selection	5.		Page	1 of 1
				_			-						
			Abbreviated Journal				JCR	Data (j)			Eigenfacto	r [™] Metrics Ü	
	Mark	Rank	Title (linked to journal information)	ISSN	Total Cites	Impact Factor	5-Year Impact Factor	Immediacy Index	Articles	Cited Half- life	<i>Eigenfactor</i> ™ Score	Article Influence™ Score	
		1	ENVIRON RES	0013- 9351	5481	3.500	3.670	0.558	104	6.5	0.01504	1.143	
MARK AL	MARK ALL UPDATE MARKED LIST Journals 1 - 1 (of 1) Image: Control of 1												

4. Select the title to view the full breakdown:

ISI Web	o of Knowledge [™]												
Journal	Citation Reports®												
	AWELCOME ? HELP CONTRACTOR TO 2010 JCR Science Edition												
🗘 Journ	nal: ENVIRONMENTAL RESEARCH												
Mark	Journal Title	ISSN	Total Cites	Impact Factor	5-Year Impact Factor	Immediacy Index	Citable Items	Cited Half-life	Citing Half-life				
	ENVIRON RES	0013-9351	5481	3.500	<u>3.670</u>	0.558	104	<u>6.5</u>	7.0				
	Cited Journal	000 Citing Journ	al 000 Source (Data Journ	al Self Cites								
	CITED JOURNAL	DATA CITING JO	URNAL DATA	IMPACT FACTOR T	REND	ATED JOURNALS							
Journal In	nformation 🕕												
Full Journal Title: ENVIRONMENTAL RESEARCH Eigenfactor TM Metrics ISO Abbrev. Title: ENVIRON RES JCR Abbrev. Title: ENVIRON RES ISSN: 0013-9351 Issues/Year: 8 Language: ENGLISH Journal Country/Territory: UNITED STATES Publisher ACADEMIC PRESS INC ELSEVIRE SCIENCE Publisher: ACADEMIC PRESS INC ELSEVIRE SCIENCE Publisher AcADEMIC PRESS INC ELSEVIRE SCIENCE VIEW JOURNAL SUMMARY LIST Publisher AcADEMIC PRESS INC ELSEVIRE SCIENCE VIEW JOURNAL SUMMARY LIST PUBLIC, ENVIRONMENTAL & OCCUPATIONAL HEALTH Score HOTE Journal Rank in Categories: JOURNAL RANKING													
Cites in 2010 to items published in: 2009 = 387 Number of items published in: 2009 = 132 2008 = 600 2008 = 150													
Calculation:	Sum: 987 <u>Cites to recent items</u> <u>987</u> Number of recent items <u>282</u>	Sur	n: 282										
5-Year Jou	urnal Impact Factor D	and the second second	Strand Strange			and the second	Jonal Contraction	and the					

Scopus

Scopus is the largest abstract and citation database of research literature and quality web sources, covering 29 million abstracts of over 15,000 peer-reviewed journals from more than 4,000 publishers. To identify the key sources in your field use the 'Journal Analyzer' to measure and compare impact for up to 10 journals. Impact is measured by SJR (SCImago Journal Rank), SNIP (Source Normalized Impact per Paper), citation

How to access Scopus:

counts and other metrics.

Go to the 'SCOPUS' online Library platform, you can see a link to SCOPUS from many Library pages, on-campus students will normally access databases from the electronic Library at <u>http://liv.ac.uk</u> online students usually access SCOPUS from the Library for Online Programmes <u>http://libguides.liv.ac.uk/onlineprogrammes</u> (see the E-Resources tab then scroll down the E-Journals area to the SCOPUS link, you may see links to SCOPUS elsewhere in the site), otherwise visit SCOPUS directly at <u>http://www.scopus.com.ezproxy.liv.ac.uk</u>

Viewing the metrics for a specific journal

1. Select the **Sources** tab:

Hub ScienceDirect Scopus SciTopics Applications
Search Sources Analytics My alerts My list My settings
The latest SciVerse release is now available. See how SciVerse Scopus has been enhanced.
Document search Author search Affiliation search Advanced search
? Search tips
Search for: in Article Title, Abstract, Keywords
Ct Add search field Search

2. Search for a journal by title:

Search Sources Analytics My alerts My list My settings		Live Chat Heip
Quick Search Search		Cibrary Catalogue
Subject Area: All Subject Areas	Searc in:	environmental research
ABCDEFGHIJKLMNOPQRSTUVWXYZ	T = Tra	de Publications = Journals
Results: 21 sources found matching "environmental research".		
∧ Source title	SJR 🕕	SNIP 🚺
1 Advances in Environmental Research (coverage discontinued in Scopus)	26	50
2 JAnnual Report of the Research Institute of Environmental Medicine Nagoya University (coverage discontinue Institution Coverage discontinue)	d in Scopus)	
3 (JApplied Ecology and Environmental Research	0.035	0.692
4 DEnvironmental Biosafety Research	0.054	0.543
5 DEnvironmental Education Research	\sim	
DEnvironmental Research Overview and the Journal Analyzer Overview and the Journal Analyzer	0.220	1.627

3. Select the title to view the full range of metrics:

Environmental Research									
Subject Area: Publisher: ISSN: E-ISSN: Scopus Coverage Years:		Biochemistry, Genetics an Environmental Science Academic Press 0013-9351 1096-0953 from 1967 to Present	d Molecular Biology: Biochemistry						
SJR (2010): SNIP (2010): Compare with other Sources:		0.220 () 1.627 () M View journal analyzer	View journal analyzer to access metrics in graphic format						
Journal homepage find it Sliverpool	Library Catalogue		View						
Articles in press			View						
Latest issue: Volume 111, Issue 7 (October 2011)		II View citation overview						
• 2011	(140 Documents)	Minus ritetion	View citation overview						
• 2010	(116 Documents)	VIEW CItation	View citation overview						
• 2009	(140 Documents)	paper from a	View citation overview						
• 2008	(167 Documents)	specific year	View citation overview						
• 2007	(143 Documents)		II View citation overview						
• 2006	(134 Documents)		View citation overview						
• 2005	(143 Documents)		View citation overview						

4. Select the **View citation overview** for a particular year to track how often articles have been cited, and to gauge their impact with the **h-index** metric:

Citation overview		Cita	ation	s rec	eived	since	1996	i
Source: Environmental Research Publication Year 2009								
Overview options		Hi	de 🖃					
Exclude from citation overview:								
Sort documents Date range								
Year descending 2009 to 2011	Update	overvie	w					
				Citatio	ns			h index = 13 ⊟
140 Cited Documents 🛛 💾 Save list	<2009	2009	2010	2011	Subtotal	>2011	Total	Document h index
두 🗶 Delete Tota	1 1	82	394	442	918	3	922	View h-Graph Of the 140 documents
1 🕅 2009 Bioaccumulation of metals and ef				1	1		1	considered for the <i>h</i> index, 13 have been cited at least 13
2 2009 Exposure to cadmium and persiste Click on a	number			4	4		4	times.
3 2009 Long-term exposure to traffic-re to view to	to view the the		5	6	11		11	Scopus does not have complete
4 🔲 2009 Increased micronuclei and bulky	cuments		4	6	10		10	published before 1996.
5 🔲 2009 Antioxidative system and oxidati			1		1		1	About n-Graph

5. You can also view the complete range of metrics for a journal in graphic or tabular format by selecting the **Journal Analyzer** link (see screen dump for step three above):

Journal Analyzer		Select graphic or				
Search Journal Title •	Show journals in: Line Chart	Table 4 tabular format	About calculations			
Limit by Subject Area	SJR SNIP Citation	s Docs Percent Not Cited Percent Reviews				
Show • SJR SNIP ISSN Search Journal Title \$JR	0.22 Select the metric 0.18 0.16 0.14 0.14 0.14 0.14 0.14 0.14 0.08 0.06 0.00 0.04 0.02 0.00 0.04 0.02 0.00 0.04 0.02 0.00 0.04 0.02 0.00 0.00					
	1996 1997 1998 19	99 2000 2001 2002 2003 2004 2005 2006 2007 2008 Zoom Year	8 2009 2010 2011			
Note: Scopus does not have complete citation information for articles published before 1996. Calculations Last Updated: 22 Oct 2011						
	Journals In Chart		X Clear chart			
	Environmental Research	E	+ Show Info 🗙			

Comparing the metrics for a group of journals by Subject Category

The procedure is similar to viewing the metrics for a specific journal (steps 1-5 above), but at step 2, select the appropriate **Subject Area**. This will allow you to compare SJR and SNIP metrics between journals, but please note that the Subject Areas are quite broad:

Subject Area: Environmental Science Source Type: All Sources		Search: in: Title 💌 Search
ABCORFORIAL MNOPOR STUVINYZ Ab Ac Ad M Ag M Am An Ag Ar As Al Au I Al Results: 166 Display Sources to view	Default sort arrangement is alphabetical by title. To rank by SJR of SNIP, click on the link	T = Trade Publications I = Journats C = Conference Proceedings B = Book Serie
Source the	~ SJR (T	grup O
EAnnual Review of Ecology, Evolution, and Systematics find (S) Intervolution Library Catalogue	1.263	5.273
2 Applied and Environmental Microbiology	0.367	2.103
3 Applied Catalysis B: Environmental Ind K Introd Library Catalogue	0.274	2.704
4 Analytica Chimica Acta	0.255	1.888
5 BAnnual Review of Environment and Resources	0.254	2.391

Using the Journal Analyzer to compare metrics for selected journals

You can use the Journal Analyzer to compare up to ten journals on a variety of metrics, including SJR, SNIP, citations, and percentage of documents not cited.

1. To access, select the Analytics tab:

Hub ScienceDirect Scopu	s SciTopics Applications		
Search Sources Autalytics My alerts My list The latest SciVerse release is now available. See I Document search Author search Affiliation search Search for: E.e. There atlance AND stress	Journal Analyzer Search Journa Limit by Subject Area Show • SJR • SNIP • ISSN	I Title V	Chart contains no journal To add journals, use the Sea Add journals from the seach
	Journal Title	SJR	or by dragging and dropping

- 2. To compare journals you need to populate the Journal Analyzer Chart:
 - a. Enter the journal title and click Search. This adds the title(s) to the Results box.
 - b. Drag and drop a title from the Results box into the Chart area on the right.
 - c. Your graph will then display showing the various metrics for that journal.
 - d. To add more titles for comparison, repeat the process.



Google Scholar

Google Scholar (GS) provides access to a diverse range of scholarly material including peer-reviewed journal articles, books, conference papers, theses, reports etc. This wide coverage includes material outside the remit of other indexing & abstracting databases, so can lead to better citation counts for disciplines where the journal article is not the main source of published research output.

To extract the journal ranking metrics from GS you need to use a third-party software package, of which there are several freely available on the Web. This document will concentrate on the **Publish or Perish** software package.

Using Publish or Perish to identify key journals

Publish or Perish works with GS data to produce a range of metrics to allow you to gauge the impact of a journal. Unlike JCR or Scopus, you cannot use it to compare groups of journals.

- 1. Download and install the Publish or Perish software from: http://www.harzing.com/pop.htm
- 2. Open the program and select the Journal impact tab:



- 3. Enter the journal title and 'Lookup'. Points to bear in mind:
 - a. There is no facility for an exact title search, so enter the title in "quotation marks" to reduce the number of false hits.
 - b. To further focus your search, select only one subject category.
 - c. Use the date limit to keep within Publish or Perish's 1,000 article limit.
 - d. Click on the Publication column heading to sort by journal title and scan for unwanted titles. If there are any, deselect the check boxes to remove from the metric calculations.

Harzing's Publish or Perish	Westman Internet	-							
ile Edit View Tools Help									
Citation analysis	Author impact Jou	umal impact	General citations Multi-qu	ery center Web Br	owser				
Author impact analysis	Journal impact analysis - Perform a citation analysis for one or more journals								
Journal impact analysis	leuroal titles	Annual Mar. Pressentiation biology?						Biology, Life Sciences, Environmental Science	Lookup
General citation search	Souther doc.	Journal tote: Conservation biology						Business, Administration, Finance, Economics	
Multi-query center	Exclude these work	'ds:					_	Chemistry and Materials Science	Lookup Direc
Web Browser	Year of publication	between:	2009 and: 2011	Enter t	itle in "quotes": li	mit by		Engineering, Computer Science, Mathematics	Liste.
Program maintenance				publicatio	n vear: select on	e subie	ct	Medicine, Pharmacology, Veterinary Science	neip
Check for undates					category	· · · · , ·		Social Sciences, Arts, Humanities	
	Results								
Help resources	Papers: 74	41 01	ites/naner: 4.12	h-index: 22	AW/CR 1265	67	_		Convia
Help contents	Citations: 30	056 Cit	lites/author: 1133.06	g-index: 32	AW-index: 35.5	в		Double-click on an article	Copy >
What's new	Years: 3 Cites hear: 10	Pa 018.67 Au	apers/author: 377.19	hc-index: 30	AWCRpA: 474.	05		to link through to citing	Copy results
2-Minute introduction	ches/year. It	010.07 A0	aalora/paper. 2.30	hI,norm: 11	hm-index: 14.7	7		documents -	
requently Asked Questions	Cites	Per year	Rank Authors	Title		Vear	Publication	Publisher	Check all
Version information	07	22.22	1 E Danielson H PEU	Riefuel plantati	one on forgeted lands	2000	Concernation	Wiley Opline Library	Check selection
ublish or Pensh home page	73	24.33	2 W1Sutherland, WM	One hundred o	uestions of importanc	2009	Conservation	Wiley Online Library	
The Publish of Perish Book	60	20.00	3 LN Joseph, RF Malo	Optimal allocat	ion of resources amon	2009	Conservation Biology	ug.edu.au	Uncheck all
	✓ 52	17.33	4 F Danielsen, ND Bu	Local participat	ion in natural resourc	2009	Conservation	Wiley Online Library	Uncheck 0 cites
	42	14.00	5 B Collen, J Loh, S V	Monitoring cha	nge in vertebrate abu	2009	Conservation	Wiley Online Library	Linchack calactic
	42	14.00	8 JR MAWDSLEY, R C	A Review of Cl	imate-Change Adapt	2009	Conservation	Wiley Online Library	Undirect beleed
	40	13.33	7 RL Chazdon, CA Pe	The potential f	or species conservati	2009	Conservation	Wiley Online Library	Help
	V 30	12.00	6 KD Fausch, be Kiell 9 H Van Dyck, A1 Van	Declines in com	s isolation: Trade*Ut	2009	Conservation	Wiley Online Library	
	35	11.67	11 KT Burghardt, DW 1	Impact of nativ	e plants on bird and	2009	Conservation	Wiley Online Library	
	☑ 34	11.33	10 DS SCHMELLER, PY	Advantages of	Volunteer - Based Bio	2009	Conservation	Wiley Online Library	
	29	9.67	13 J Xu, RE Grumbine,	The melting Hir	nalayas: cascading ef	2009	Conservation	Wiley Online Library	
	29	9.67	20 GP ASNER, TK RUD	A contemporar	y assessment of chan	2009	Conservation	Wiley Online Library	
	28	9.33	12 KA Murray, LF Sker	Impact and dy	namics of disease in s	2009	Conservation biology	uq.edu.au	
	26	8.67	21 TK Rudel, R Defries	Changing drive	rs of deforestation a	2009	Conservation	Wiley Online Library	
	26	13.00	31 T Pailet, L Berges, 19 SD EUHI ENDORE F	Biodiversity Dif	rerences between Ma	2010	Conservation	Wiley Online Library	
	24	0.00	13 SD I OHLENDORF, L	···· ··· ··· ·························	. remaining identised perm	2009	Contact voluof1	whey online clorery	