Assessing social impact: challenges and possibilities

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الهيئة الوطنية لتقييم منظومة التربية والتكوين والبحث العامي Instance Nationale d'Evaluation du Système d'Education, de Formation et de Recherche Scientifiqu **International Symposium**

Research Evaluation: Issues, methods and tools

Rabat, December 6th and 7th 2017

Scientific, Political and Social impacts of research
 Why Social Impact?

3) Evaluation: Social Impact Open Repository

4) Social Impact and Open Knowledge

1) Scientific, Political and Social impacts of research

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Transference / Political impact

Social impact

When the scientific community (peers), but also institutions, NGOs and citizens and large get to know the research results.

When policy makers, institutions, companies and citizens at large **use the research results** to plan their interventions (or develop products).

when there is evidence of social improvements experienced by individuals and society (according to societal objectives) resulting from the transference of the research results.







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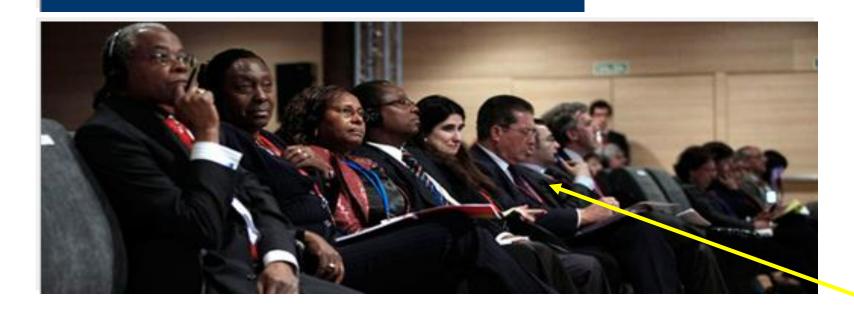
What politicians and society expect from science is changing rapidly, and science must change with it, or risk losing public support. Academics and leaders of the scientific community must realize that the system is failing to prepare researchers to meet wider society's requirements.

support. Academics and leaders of the scientific community must realize that the system is failing to prepare researchers to meet wider society's requirements.

- Grant giving: Global funders to focus on interdisciplinarity
- I IK releases world's

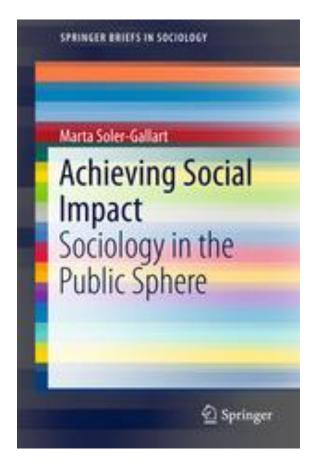
Science Against Poverty Conference

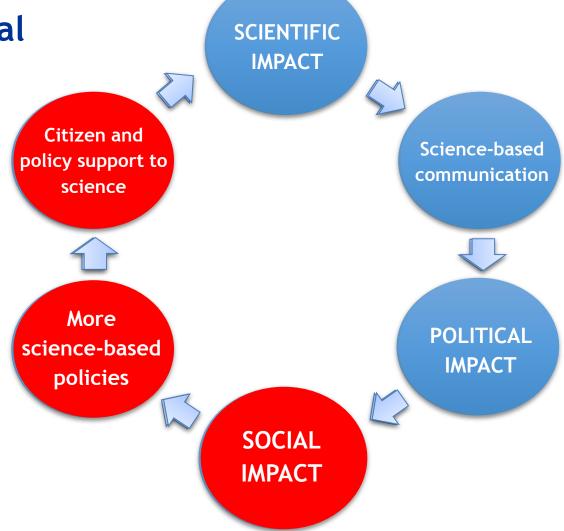
8th-9th of April 2010, La Granja, Segovia



Federico Mayor Zaragoza (Former Director General UNESCO):

I will not go to another Conference where they present diagnoses of poverty, because the best diagnosis is autopsy, but it comes too late. We need solutions based on scientific evidence and we need them now. Social impact is crucial for the social and political support to science















The main objective of IMPACT-EV is to develop a permanent system of selection, monitoring and evaluation of the various impacts of Social Sciences and the Humanities research. IMPACT-EV will not only develop indicators and standards for evaluating scientific impact of SSH research but especially, for evaluating their policy and social impact





Impact evaluation (last call FP6, FP7) Ex-post evaluation FP7, SSH

- On-line questionnaire, 473 SSH projects in FP6, FP7, HERA, NORFACE and ERC-Ideas
- Analysis of CORDA data
- Analysis of 162 SESAM reports from FP7 projects
- 26 interviews with main researchers
- 15 interviews with Officers from DG Research
- Bibliometric analysis of a projects' sample
- Webometric analysis of FP6 and FP7 projects

Case studies on Successful and Non successful FP7 SSH projects

- 14 Top Success and 8 Non successful projects
- Interviews to researchers, policy makers, stakeholders, and end users
- Analysis of documents

Comparative policy analysis of SSH National Evaluation Frameworks



- 12 case studies of European member states and Australia, US, Brazil
- 102 interviews with representatives of national agencies (i.e. NSF, HEFCE, ANR, CNPq etc.) and stakeholders



Interim evaluation H2020, Challenge 6



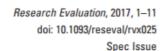
- Analysis of CORDA data
- On-line questionnaire (on steps done and planned to achieve social impact)
- Analysis of policy and H2020 documents

Development of impact indicators

- Integrative panels: scientific, political and social impacts
- Delphi panel on political impact
- Piloting on selection, monitoring and evaluation of SSH research in National Agencies (foreseen)









A review of literature on evaluating the scientific, social and political impact of social sciences and humanities research

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Abstract

Recently, the need to contribute to the evaluation of the scientific, social, and political impact of Social Sciences and Humanities (SSH) research has become a demand of policy makers and society. The international scientific community has made significant advances that have transformed the impact of evaluation landscape. This article reviews the existing scientific knowledge on evaluation tools and

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3) Evaluation: Social Impact Open Repository

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Register of Commission expert groups and other similar entities

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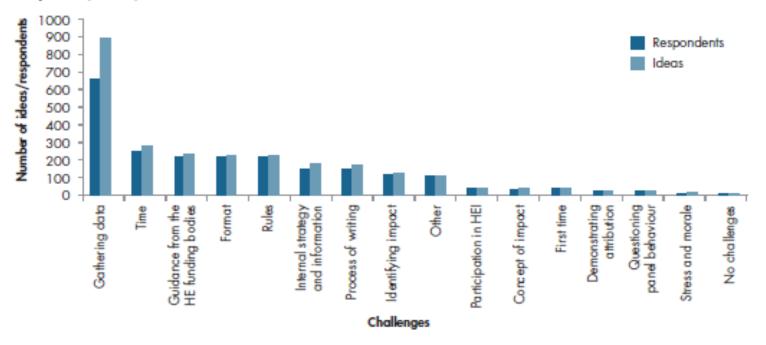
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FLECHA José Ramón Chair	Spain
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PLESCAN Angela Christina	Romania
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SORENSEN Karen Hanghoj	Denmark
SOUTHWOOD David	United Kingdon
VALTA Katerina	Greece
VAN DEN BESSELAAR Peter	Netherlands
WIDERA Barbara	Poland

Details	Additional Information		Subgroups	Statistics	Members			
	Name:		roup on evaluand ex-post e				Active	
	Abbreviation:	EG METH	0					
	Policy Area:	Research and Innovation						
	Lead DG:	RTD - DG Research and Innovation						
	Туре:	Formal, Permanent						
	Scope:	Limited						
	Mission:	The Expert Group on the Evaluation of Social Impacts of EU Framework Programmes will identify, adapt and/or develop methodologies for the assessment of the social impacts since FP4 until now using a portfolio analysis.						
	Task:	Assist the Commission in the preparation of legislative proposals and policy initiatives						
	Composition:	Environment, Space and Satellites (research), Agriculture, Statistics, Climate, Other (Big data, evaluation, Social assessment, Private consumer engagement and Energy, Energy, Data analysis and transport, Micro, macro-migration, labour market, ICT, creative industries, SMEs, Raw materials, IT and health, Impacts and micro-steal, Data mining, resource efficiency, Exports and competitiveness)						
Public	ation in RegExp:	24 May 2	916					
	Creating Act:	Commiss	ion Decision C((2016)1349 -	9 March 201	5		
	Link to Website:	http://ec.europa.eu/programmes/horizon2020/en/ 연						
	Last updated:	01 Jul 20	16					

Social impact assessment challenge: Data

the basic principle is that peer review lies at the heart of the evaluation process, but that peer review needs to be informed by whatever data is available and useful (Interview, responsible at HEFCE, UK)

Figure 3-2: Challenges identified by survey respondents in developing impact case studies (above) and impact templates (below)







Social Impact Open Repository

Responds to the open demand of measurable parameters of social improvements generated by scientific projects, promoting a necessary alternative to the stagnation of scientific results and enabling real social impact.

Non-profit initiative launched by the IMPACT-EV consortium (EU) http://sior.ub.edu









The open repository scores research on metrics such as social improvement, transferability to diverse populations or social contexts, and sustainability.

SIOR data are also used to back research proposals.

Nature, 528, 193 (Dec 2015)

Ramon Flecha, Marta Soler-Gallart & Teresa Sordé





SOCIAL IMPACT CRITERIA



- Connection to UN Sustainable Development Goals, EU2020 targets or other similar official targets
- Percentage of improvement achieved in relation to the starting situation
- Transferability of the impact, the actions developed based on project's findings have been transferred to other contexts besides the original one
- Publication in scientific journals (with a recognized impact) and/or by governmental or non-governmental official bodies
- Sustainability, the impact achieved by the action developed based on the project's findings has showed to be sustainable throughout time







Example:

Journal content

Journal home

publication

Current issue

Nature News

Supplements

Web focuses

News Specials

Journal information

Podcasts

Videos

Archive

Advance online







Creation of employment and economic growth



Museum of Human Evolution:

- 500.000 visitors
- More than 1130 new jobs
- Economic impact: 53 million €

Development of industrial

and ICT sector:



Creation of new Companies:

SCHOLA ACTIVA SIERRA DE ATAPUERCA SL

MNEMOSFERA SL.



Economic impact in the region:







From 1995-01-01 to Website Idd Score: 10 This is the provisional score according to the available data **Project Description** Project Impacts Targets Oriented Research Team

Creation of employment, economic growth and cultural development in the region

1. Creation of employment

Evidence:

1130 Jobs

Creation of 11 workplaces in different categories at Universitat Rovira i Virgili (Tarragona, Spain) between 1995 and 2004 (10 of them were new creations with permanent contracts linked to the project).

3 years Predoctoral Grants provided by Atapuerca Fundation during 2000-2004.

Source: Official report (external from research team)

http://www.jcyl.es/jcyl/patrimoniocultural/atapuerca/DocumentosQueAcompanan.pdf

2. Creation of intangible cultural happiness

Evidence:

Around 815.700 visitors

The attractiveness of Atapuerca connects directly to the meaning that visitors attribute to humanity and its origins. The intergenerational groups (like families) have an incredible opportunity to talk and transmit to the youngest important issues like the relations between sciences, religions and ideologies.

Source: Official report (external from research team)

http://www.jcyl.es/jcyl/patrimoniocultural/atapuerca/DocumentosQueAcompanan.pdf













Graduate School of Agricultural and Life Sciences, The University of Tokyo
Department of Applied Biological Chemistry / Department of Biotechnology

RESTORING FUKUSHIMA PROJECT

University of Tokyo

Strict control of agricultural products after nuclear disaster. Decontamination with agricultural procedures.

The proportion of rice with radiocesium concentrations dropped significantly from 2011 to 2013

Evidence:

The contamination decreased after the inspection of radiocesium concentration levels in rice, for which custom-made belt conveyor testers were used, within the prefecture compared to other agricultural products, since rice is the main basic food of the Japanese diet. The proportion of rice with radiocesium concentrations exceeding 100 Bq/kg was 0.8% in 2011 and dropped to a mere 0.0007% (71 bags out of the total 10,338,000) and 0.0003% (28 bags out of the total 11,001,000) in 2012 and in 2013, respectively.

Source: Official report (external from research team)

http://www.nature.com/srep/2015/150303/srep08653/full/srep08653.html

Source: Book publication

http://www.u-tokyo.ac.jp/en/utokyo-research/feature-stories/restoring-fukushima/







INCLUSIVE CITIES PROJECT

Harvard Kennedy School

Reducing urban poverty from the organizational capacities of the working poor

Inclusive Waste Management

Evidence:

Integrating Waste Pickers into Municipal Solid Waste Management in Pune (India). Structurally, SWaCH is a workers' cooperative and powersvest with the members. All members are working members, not merely shareholders. Women constitute 78 per cent of SWaCH membership. While this holds for most age groups, the presence of men is higher in the youngest age group and among the aging. Most SWaCH members used to work as waste pickers or itinerant waste buyers. Housekeeping and cleaning workers constitute another significant group. Members of the Scheduled Castes continue to be the majority in SWaCH. Other Backward Castes, as well as the middle castes, are represented in SWaCH.

Source: Media coverage





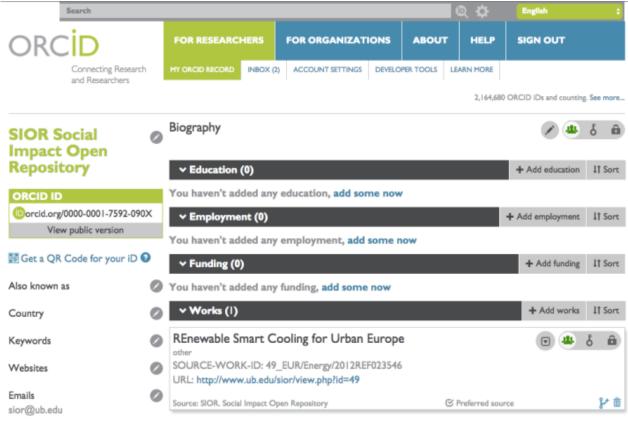
Social Impact Open Repository

 Link between social impacts of researchers to their individual profiles



Connecting Research and Researchers





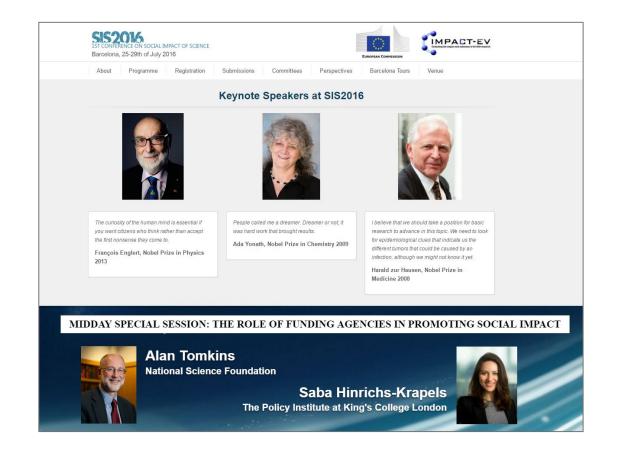






SIS2016 1ST CONFERENCE ON SOCIAL IMPACT OF SCIENCE

Barcelona, 25-29th of July 2016



Some registered participants to SIS2016 come from these countries Some of the papers already accepted at SIS2016

- Researchers from all disciplines, 40 countries
- Agencies (NSF, RCUK, DG.RTD,...)
- Publishers (PLOS, Nature, Thomson Reuters, ...)



Research Enabling Social Impact (RESI):

The cumulative impact of the research that has contributed to further research which, in turn, has achieved social impact.

In order to find a solution there are many research projects and scholarly work exploring different avenues. They have all been necessary to find the solution, facing both failures and successes on the way.







EXAMPLE 1:

Social Impact of Research: combating cancer disease

Research Impact enabling Social Impact: research about the possible connection between infection agents and human cancer.



Harald zur Hausen Nobel Prize in Medicine 2008

"In the late 1960s Herpes simplex type 2 (HSV-2) emerged as the prime suspect based on some seroepidemiological observations. I had asked my colleague Heinrich Schulte-Holthausen to use the same technique to search for HSV-2 sequences in cervical cancer biopsies. All attempts, however, failed."

Later "Up to 20% of sera from human adults also revealed neutralising antibodies to this virus. Our attempts to isolate a human correlate, however, failed."

"I have devoted my scientific life to the question to what extent infectious agents contribute to human cancer, trusting that this will contribute to novel modes of cancer prevention, diagnosis and hopefully later on also to cancer therapy. I am of course pleased to see that at least part of this programme has been successful."





EXAMPLE 2:

Social Impact of Research: 1) creation of employment and economic growth in the region and 2) creating intangible cultural happiness, from the discovery of homo antecessor and the related Museum of Human Evolution.

Research Impact enabling Social Impact: Groups of paleontologists working in Atapuerca Mountains since 1863.



Atapuerca Project

1863: the first discoveries of fossils were found.

1976: first human remain is found

1997: discovery of a new human species: *homo antecessor*

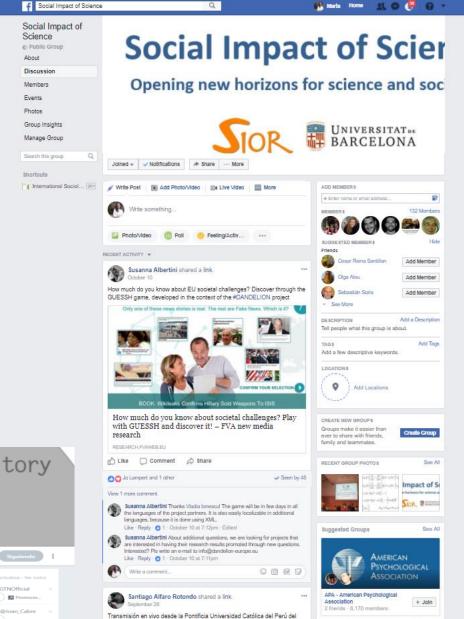
More than a century of research has been developed in Atapuerca, which eventually enabled the discovery of homo antecessor, as one of the earliest known human species in Europe.

Barcelona 9-12 July 2019











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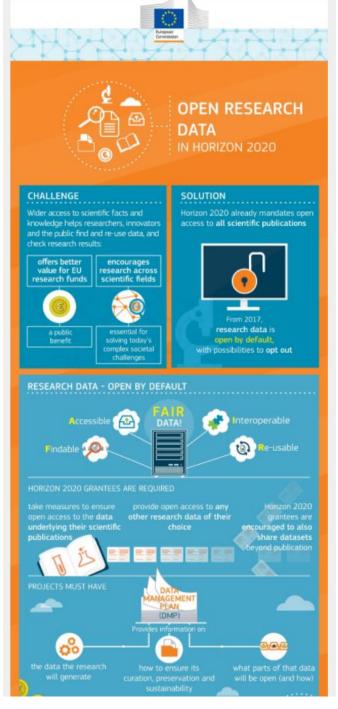
4) Social Impact and Open Knowledge

Open access publishing Open research data

FAIR data

- ✓ Findable
- ✓ Accessible
- ✓ Interoperable
- ✓ Re-usable



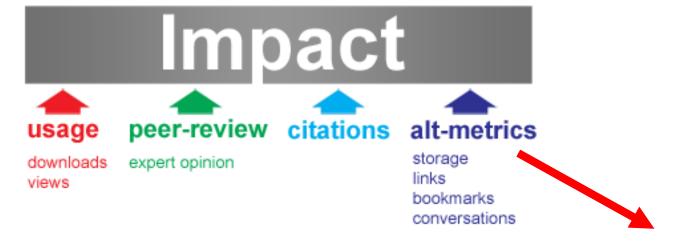


Altmetrics













Research Blogging







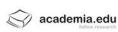






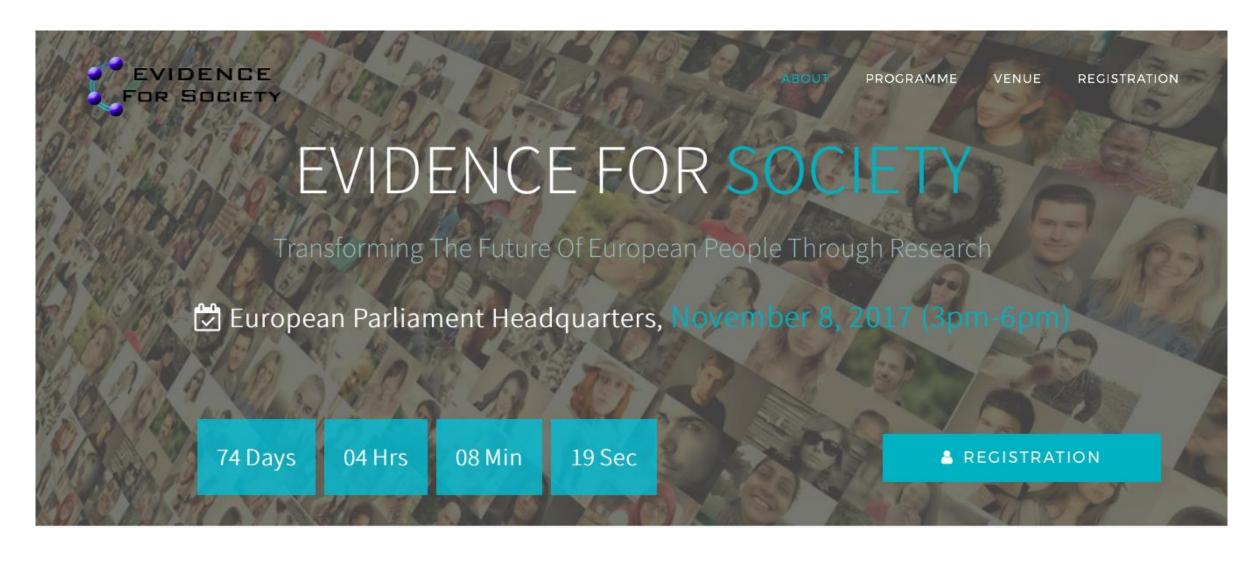












November 8, European Parliament







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Science 14 June 2013:

Vol. 340 no. 6138 p. 1291

DOI: 10.1126/science.1233319

POLICY FORUM

HUMAN RIGHTS

A Human Right to Science

Audrey Chapman 1, Jessica Wyndham 2

Author Affiliations

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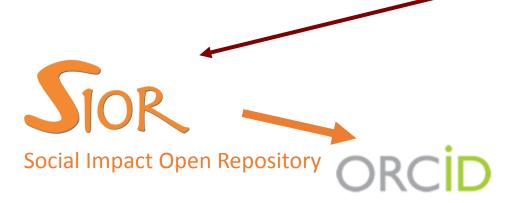
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Citizens have the right to know not only the latest scientific knowledge but also which are the social improvements achieved as a result of using this scientific knowledge.





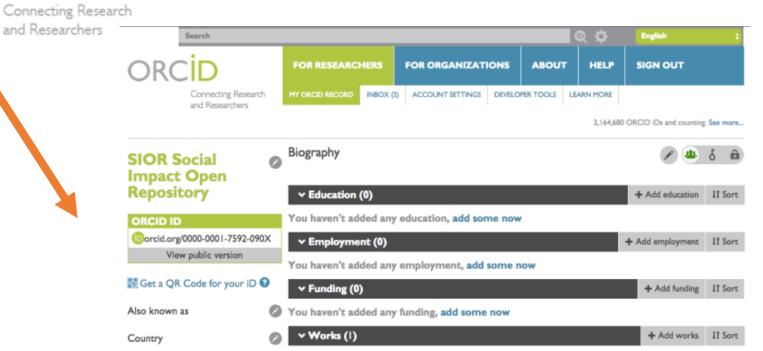




 Link between social impacts of researchers to their individual profiles



- Link between social impacts of research projects and entries in Wikipedia
- Collaboration to open peer review of social impact to all citizens



Open knowledge

Citizens search for information and contribute information in open sources such as Wikipedia.

Researchers are now contributing scientific knowledge in Wikipedia

Wikipedia is a space for bridging researchers' outcomes and citizens' knowledge about the impacts of their research.













Interaction

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Biochar

From Wikipedia, the free encyclopedia

Studies have reported positive effects from biochar on crop production in degraded and nutrient—poor soils.[43] The application of compost and biochar under FP7 project FERTIPLUS has had positive effects in soil humidity, and crop productivity and quality in different countries.[44]

44. ^ a b "Improvement of soil quality. [Social Impact]. FERTIPLUS. Reducing mineral fertilisers and agro-chemicals by recycling treated organic waste as compost and biochar products (2011-2015). Framework Programme 7 (FP7)." ②. SIOR. Social Impact Open Repository.

https://en.wikipedia.org/wiki/Biochar





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Drinking water

From Wikipedia, the free encyclopedia

One of the Millennium Development Goals (MDGs) set by the UN includes environmental sustainability. In 2004, only 42% of people in rural areas had access to clean water.[24] Projects such Democratisation of Water and Sanitation Governance by Means of Socio-Technical Innovations work to develop new accessible water treatment systems for poor rural areas, reducing the price of drinking water from US \$ 6.5 per cubic meter to US \$1.[25]

25. ^ "Access to clean water. [Social Impact]. DESAFIO. Democratization of Water and Sanitation Governance by Means of Socio-Technical Innovation (2013-2015). Framework Programme 7 (FP7)." SIOR, Social Impact Open Repository.

https://en.wikipedia.org/wiki/Drinking_water





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Corruption

From Wikipedia, the free encyclopedia

Creating bottom-up mechanisms, promoting citizens participation and encouraging the values of integrity, accountability, and transparency are crucial components of fighting corruption. The implementation of the ALACs "Advocacy and Legal Advice Centres (ALACs)" has led to a significant increase in the number of citizen complaints against acts of corruption received and documented[62] and also to the development of strategies for good governance by involving citizens willing to fight against corruption[63].

- 62. ^ "Increase in the number of civil complaints against acts of corruption. [Social Impact]. ALACs. Promotion of Participation and Citizenship in Europe through the "Advocacy and Legal Advice Centres (ALACs)" of Transparency International (2009-2012). Framework Programme 7 (FP7)" ☑. SIOR, Social Impact Open Repository.
- 63. ^ "Impact on national legislation. [Social Impact]. ALACs. Promotion of Participation and Citizenship in Europe through the "Advocacy and Legal Advice Centres (ALACs)" of Transparency International (2009-2012). Framework Programme 7 (FP7)" ☑. SIOR, Social Impact Open Repository.

https://en.wikipedia.org/wiki/Corruption







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Initiatives to prevent sexual violence

From Wikipedia, the free encyclopedia

Outcomes show that program participation is associated with reductions in rape myth acceptance and increased bystander intervention(Coker, Cook-Craig, Williams, Fisher, Clear, Garcia & Hegge, 2011). In this line, the establishment of solidarity networks, specially among peer, it also constitutes a strong initiative to prevent sexual violence. [27]

Protocols for Preventing and Responding to sexual violence situations within institutions such as universities, have shown to be successful not only for acting to respond in front of concrete cases and help survivors, but also to prevent these situations from happening.[28]

- 27. A "Establishment of solidarity networks with the victims of violence against women in Spanish universities. [Social Impact]. VGU. Gender-based Violence in Spanish Universities (2006-2008). SIOR, Social Impact Open Repository.
- 28. A "Implementation of protocols against sexual harassment in some Spanish universities. [Social Impact]. VGU. Gender-based Violence in Spanish Universities (2006-2008)." SIOR, Social Impact Open Repository.

https://en.wikipedia.org/wiki/Initiatives_to_prevent_sexual_violence

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Research Evaluation: Issues, methods and tools

Rabat, December 6th and 7th 2017