Research Assessment to Add Value and Improve: What I Have Learned Steering the Chemistry Panel for VQR 2020-2024

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VQR 2020-2024

WHAT?

- **The Research Quality Evaluation (VQR)** is the exercise through which the Italian agency ANVUR analyses and measures the quality of scientific output produced by universities and research institutions, with the aim of promoting a competitive research system capable of significantly contributing to the scientific and technological advancement of the country.
- The VQR is conducted every five years. Each cycle involves the analysis of scientific publications and other research outputs (knowledge enhancement case studies, infrastructure reports from Research Institutions, and international competitive projects) produced by the evaluated entities.

WHO?

- **Evaluation Expert Panels (GEV)**: composed of researchers and academics, they carry out the analysis and evaluation of the submitted outputs, supported by external reviewers.
- 17 panels for 17 discipline areas
- GEV AREA #3 – Chemical Science, 4-SubGEV, 37 members

WHY?

- **Promote** and stimulate the quality of research in the country by encouraging researchers to actively participate in scientific research;
- **Stimulate** improvements in the quality of recruitment and career progression;
- **Increase** international visibility and participation in international projects;
- **Stimulate** improved spending capacity;
- **Stimulate** improvements in the quality of doctoral training;
- **Encourage** open access to data and publications.

A Continuous improvement process

- Based on the lessons by the 2015-2019 VQR, ANVUR worked on the VQR 2020-2024.

- The experiences of previous evaluation exercises were taken into account in the new evaluation, incorporating stimuli and proposals gathered through **internal discussion**, and through the opinion gained from **foreign experts** (ERC, REF, EUA, European Alliance for SSH) to improve critical aspects of the evaluation.

ANVUR and CoARA

- ANVUR joined the Coalition for Advancing Research Assessment (CoARA) in 2023.
- the Agency is actively engaged in rethinking research evaluation at the national and international levels.
- ANVUR consolidates its role in the process of reforming research evaluation methods, actively contributing to the improvement of the academic and scientific system both nationally and internationally.

https://www.coara.org

WHAT IS NEW AND IMPROVED IN VQR 2020-2024

Focus on quality: The GEVs evaluate the quality of each product selected by the Institutions

Center on peer review: they adopt the ***peer review*** methodology informed by international citation indexes, also taking into account the number of self-citations.

Move beyond metrics: These indices cannot in any case replace an accurate assessment of the merits of the research product, nor can they result in an automatic assignment

For products for which the use of specific expertise not represented in the GEV is required, the GEV may use expert external evaluators (AI systems available for selection)

Recognize diverse contributions:

- **Expansion of the product types under evaluation**

a) Journal contribution:
b) Scientific monograph
c) Volume contribution
d) Conference proceedings

but also *datasets, software, workflows, protocols, prototypes, intellectual property rights, standards, redactions, technical reports*

- **Evaluation of research results for** researchers who have obtained a **PhD**, regardless of their current membership, and calculation of a specific evaluation profile on the development of research capacities through the maintenance of of doctoral courses.

- Consideration of the possibility of evaluating **interdisciplinary publications** collaboration between different disciplinary areas.

Three main **quality** criteria:

- a) **originality**: the ability of the product to introduce a new way of thinking and/or interpreting new methods, also by introducing methods typical of other disciplines;
- b) **methodology:** the ability of the product to clearly present the objectives of the research and their scientific value, the literature used and the results obtained, also encouraging, where applicable, the reproducibility of the results, transparency of methods and procedures and access to the data used, *with a view to enhancing the entire process leading to the final output*.
- c) **impact**: the ability of the product to generate, in the short, medium or long term, an effect or benefit for the national and international scientific community, and/or on the economic and social context.

The VQR 2020-2024 peer review process

1 The product is conferred by the Institutions

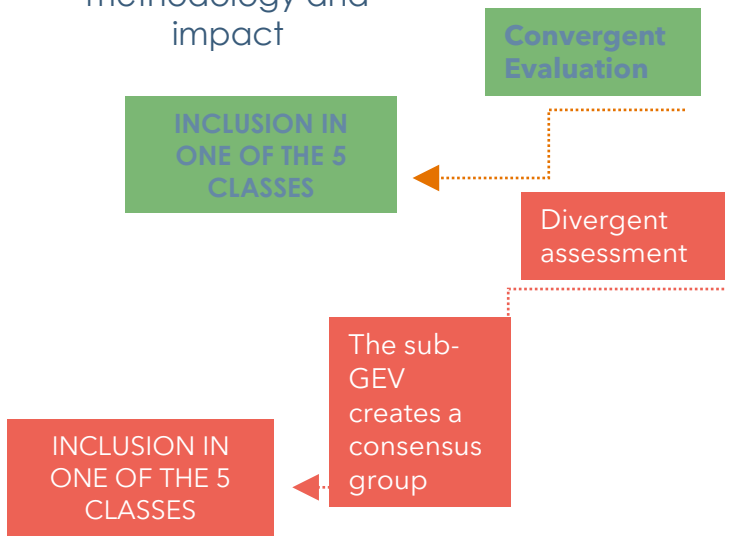
2 Informed peer review is entrusted to 2 members of the GEV or 2 external experts

3 **Independently** they will express a judgment on originality, methodology and impact

4 The two GEV components come into contact

5 the responsibility for the final evaluation lies with the GEV

- ✓ Each reviewer will assign a **score** between 1 and 10 for each of the three evaluation criteria **.**
- ✓ The evaluation concerns the product as a whole **and not the contribution of the author**
- ✓ The evaluation is based **exclusively on the quality,** and is independent of the type of product delivered, as well as the language of drafting**.**



Category	Class
Exceptional	A = 1
Excellent	B = 0.8
Standard	C = = 0.5
Sufficient	D = 0.2
Scarce or not acceptable	E = 0

Responsible use of quantitative indicators

INFORMED
PEER
REVIEW

NB

✓**Data are visualized using a traffic light system**

AVAILABLE INFORMATION

Product Citation Data

For each subject category, product type and year of publication:
the number of citations and the corresponding percentile
The number of self-citations

Publication Venue Data

per *subject category* and year:
1. **Impact indexes:**
5-year Impact Factor
Article Influence (AI), WoS
CiteScore
SCImago Journal Rank (SJR), Scopus
2. **percentile**

ANVUR is **committed** to conducting its activities in line with its core values, as outlined in its Code of **Ethics**.

The members of GEV 03 will refrain from evaluating or assigning:

- products of which they are **authors** or **co-authors**;
- products of which spouses, relatives or relatives-in-law, cohabiting family members up to the 4th degree are authors or co-authors;
- products presented by institutions with whom GEV members have or have had employment relationship or with whom they have carried out official assignments, collaborations, affiliation starting from 1/1/2020.

Lessons learned

Philosophical insight:

- Changein Research Assessment is imperative
- Change is achievable and we are responsible for driving it, particularly with a view to sharing best practices among countries of the European Community

Practical reality:

- ~ 10,000 research products to review
- ~ 500 per reviewer → high workload

Fewer items to be submitted and evaluated?

✓ Improved focus on quality

✓ Process streamlined

THANKS!