

Mutual Learning Exercise (MLE) on Research Integrity

Challenge paper:
Dialogue and communication



March – 2019

MLE on Research Integrity: Challenge paper: Dialogue and communication

European Commission
Directorate-General for Research and Innovation
Directorate A Policy Development and Coordination
Unit A.4 — Reforms and economic impact – country intelligence

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Manuscript drafted in March 2019.

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Mutual Learning Exercise on Research Integrity

Challenge paper: Dialogue and Communication

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1 INTRODUCTION

At the Kick-off Meeting of the Mutual Learning Exercise (MLE) on Research Integrity (RI) the 14 participating countries in this MLE (Austria, Bulgaria, Denmark, Estonia, Finland, France, Greece, Ireland, Lithuania, Luxembourg, Moldova, Norway, Spain, and Sweden) presented the basic information about RI framework in their countries. After the discussion sessions, the participating countries agreed on four priority topics for the MLE:

1. Processes and structures for the RI,
2. Incentives for RI,
3. Dialogue and communication about RI, and
4. Training and education for RI.

This Challenge Paper focuses on the third priority topic – ***Dialogue and communication*** to promote RI and deal with allegations of research misconduct. The Paper is based on the review of existing relevant literature and documentation, and consultations with the representatives of the participating countries. The Paper has been developed to help MLE participants prepare for the second Working Meeting in Athens on the 12th and 13th March 2019.

The scope for the Challenge Paper 3 on Dialogue and Communication is outlined in Section 2. Section 3 presents an overview of the information available from published literature, surveys on the existing landscape for RI in Europe, and EU grants. Section 4 presents the lessons learned from the consultations with 14 countries participating in the MLE. The Paper concludes with the main challenges that can be addressed in the second Workshop, with the aim to formulate good practice recommendations in establishing dialogue and participation of all stakeholders in RI and in communication during research misconduct investigations.

2 SCOPE

This Challenge Paper is based on the review of existing relevant literature and documentation on the topic dialogue and communication to support and foster RI, as well as the discussions at the MLE Kick-off Meeting in Brussels on the 15th November 2018. For this Challenge paper, the representatives from the 14 countries participating in the MLE were consulted in order to collect relevant data about this topic in order to prepare for the second country meeting and creation of good practice recommendations for dialogue and communication for RI.

During the scoping and kick-off meetings, the following themes were identified for the topic of Dialogue and Communication:

1. Best practices in developing the culture that fosters open communication and dialogue

The negation of responsible conduct of research – research misconduct – is a sensitive issue, and still perceived as something that is best not discussed openly. The important question here is how to find a “comfort zone” for all stakeholders so that they can have a common ground for communication and subscription to RI practices? This includes also the best ways to communicate the results of RI (misconduct) investigations. While it is important to keep the confidentiality of the participants in investigations and there are often legal barriers to full transparency, without sharing experiences about procedures and outcomes it is difficult to learn and improve the RI environment. With this in mind, it is important to explore how to engage all stakeholders both from bottom-up (researchers and the public) and from top-down (policy-makers, funders) in the dialogue about RI.

2. Dialogue among the three levels of RI: institutional, national, transnational

In MLE countries and generally in Europe and the world, practices differ in the organization of the RI system and especially the responsibilities for monitoring it and processing misconduct allegations and conducting investigations. However, regardless of the difference in the importance, there are three levels of RI: 1) local – research performing organization (where research is performed by individual researchers or groups of researchers); 2) national (and/or regional) - including research funding organizations, government or independent RI bodies, and 3) transnational – becoming more and more important with research mobility and multidisciplinary and multinational collaborations. In such a complex system, it is not easy to ensure that there is open dialogue and understanding of basic principles and core common values.

3. Dialogue with the public

The public is an important stakeholder in RI as it works together with other societal actors to align the research process and outcome with the values, needs and expectations of the society. The lack of communication between the research community and media interest in research misconduct scandals may have a detrimental effect on the confidence of the public in science and scientists. It is important to have an ongoing dialogue with the public, but it is not clear who can lead this dialogue, and who should have the responsibility and provide resources?

4. Dialogue to prevent research misconduct and increase responsible research

Most of the activities in the RI community are about allegations of research misconduct, investigation and outcomes, and structures are often in place to deal with misconduct. The question of prevention of misconduct, i.e. promotion of responsible conduct of research is more elusive, as such activity is long-term, requires structural changes and is difficult to assess whether it was successful.

This Challenge Paper will deal in more depth with what is known about definitions, structures, processes and resources for RI, and will put forward the challenges related to collaboration in investigating research misconduct and to emerging issues, such as data management, protection of privacy and open access.

3 LANDSCAPE

In this section, the information on dialogue and communication for RI from published research, European RI surveys, EU research grants, experiences discussed at the World Conference on Research Integrity, will be presented. The topics related to RI dialogue and communications vary for different sources

3.1 Published research

There is not a large body of evidence related to dialogue and communication in research integrity. For example, the search of PubMed, which indexed 43 journals dedicated to ethics, on the 24th February 2019 retrieved only 63 articles for search strategy “(research integrity) AND dialogue” and 19 articles for “(research misconduct) AND dialogue”. More articles were found for search strategies “(research integrity) AND communication” – 2615 articles, “(research misconduct) AND communication” – 1264, “(research integrity) AND perception” – 1603, “(research misconduct) AND perception” – 154. In all cases, most of the articles were not relevant because the term communication or dialogue was not used as defined in this paper (it was mostly research on education or opinion pieces).

The following recent research reports address issues relevant for the topics of this Challenge Paper.

3.1.1 Perceptions of RI between universities and industry

In a study by Godecharle et al,¹ qualitative analysis of interviews with 22 employees from Belgian universities, spin-off companies and large multinational pharmaceutical companies, showed that researchers and research managers in these sector have different perception of research misconduct, procedures for dealing with research misconduct, strategies to prevent research misconduct, research integrity, mentorship, trustworthiness of research, and perception of the "other" sector.

3.1.2 Cross-cultural differences in perception of RI

Two recent studies explored cultural differences in RI perception, which is important for transnational research collaboration.

In a study by Antes et al,² a new tool was used to assess the perceptions of seriousness of violating regulations, norms and ideals in research. The study found differences between the USA-born researchers and those born outside of the USA, with the former group significantly better distinguishing the seriousness of violation of federal research regulations and science ideals.

The study of Li and Cornelis,³ used an online questionnaire to compared the perceptions of Chinese researchers and those from Flemish research community in Belgium. They found that the Chinese respondents had higher acceptance of research behaviours that violated the principles of honesty, fairness and verifiability, and did not differ from their Flemish colleagues in the perceptions of violations of responsibility, objectivity and truth.

These studies demonstrated the importance of understanding differences and keeping an open dialogue between research groups coming from different cultural settings.

3.1.3 Quality of RI investigations by academic institutions

The study of Grey et al⁴ looked at how 3 different academic institutions dealt with allegations of concerns with more than 200 publication with overlapping authorship from these institutions. They analysed the reports provided by the institutions, using a quality checklist, and found a number of discrepancies and deficiencies in the reports. Only one out of 3 institutions published the findings of the investigations.

3.2 Surveys of RI frameworks in Europe

This Challenge Paper will present the findings of surveys that explored RI in different European settings when they addressed dialogue and communication for RI.

3.2.1 Survey of the Danish Agency for Science, Technology and Innovation (2013)

This survey⁵ which included 15 countries, also addressed the transparency of misconduct investigations findings, which is relevant for the communication of RI to other stakeholders. The 15 countries participating in the survey were divided in their approach to making

¹ Godecharle S, Nemery B, Dierickx K. Differing Perceptions Concerning Research Integrity Between Universities and Industry: A Qualitative Study. *Sci Eng Ethics*. 2018 Oct;24(5):1421-1436.

² Antes AL, English T, Baldwin KA, DuBois JM. The Role of Culture and Acculturation in Researchers' Perceptions of Rules in Science. *Sci Eng Ethics*. 2018 Apr;24(2):361-391.

³ Li D, Cornelis G. How do researchers perceive research misbehaviors? A transcultural case study of Chinese and Flemish researchers. *Account Res*. 2018;25(6):350-369.

⁴ Grey A, Bolland M, Gamble G, Avenell A. Quality of reports of investigations of research integrity by academic institutions. *Res Int Peer Rev*. 2019;4:3.

⁵ The Danish Agency for Science, Technology and Innovation. National systems for handling cases of research misconduct. 2013. Available: http://www.enrio.eu/wp-content/uploads/2017/03/National_systems_for_handling_cases_on_research_misconduct.pdf.

misconduct investigation results public: 7 countries had a closed procedure but generally public decisions, and 8 had closed procedures and decisions.

The survey also indicated that there is a need for more collaboration between institutions so that similar cases may have different outcomes at different institutions. The suggestion to overcome this problem is the existence of a permanent national independent body for handling research misconduct cases. However the success of such a body is dependent on its authority and legal weight.

3.2.2 Survey of RI guidance documents in countries in the European Economic Area (2014)

This survey performed a systematic content analysis of biomedical research integrity guidance documents from the countries in the European Economic Area⁶. The study included 31 target countries and obtained response from 30 countries. The documentation was collected from 19 countries and included 49 guidelines. Out of these 49 guidelines/code, only 5 had the requirement for the scientists to communicate with the public. With regard to the prevention of misconduct and promoting RI, guidelines emphasized the importance of training (n=22 out of 49), and much less the role of the research environment (n=5 out of 49). Some guidelines stated that it is not possible to fully prevent misconduct.

3.2.3 Survey of RI practices in Science Europe member organisations (2016)

This survey was performed in 2014 and included 27 responses from 33 different organizations that are members of Science Europe⁷. It specifically addressed the following topics: 1) Raising awareness of RI, and 2) Strengthening collaboration and monitoring mobility.

In relation to the first issue, the document emphasised that awareness goes beyond RI training and includes the "acceptance of individual and collective responsibility for research integrity". Several important recommendations were put forward:

1. Institutions (both research performing and research funding organizations) should have clearly and visibly published the guidance for good research practice and procedures for dealing with allegations of misconduct, because this constitutes a clear statement about the institution's seriousness and dedication to responsible research.
2. Institutions should have dedicated contact person(s) for individual researchers to contact for guidance on RI or in cases of research misconduct. Contact information should be clearly visible on the web-site.
3. Research funding organizations should emphasize the importance of RI at each step of grant application procedure: 1) in the calls for applications (incorporating RI elements in instructions for grant proposal preparation), 2) writing of a grant proposal (such as signing a declaration of commitment to accepted standards or a specific code of conduct), and 3) grant peer review procedure (such as detailed description of the review procedure to ensure objectivity and decrease personal bias, and asking declaration from the peer reviewers about competing interests).
4. RI should be stressed in research practice by incorporating the expectations of good practices in the grant agreement or contract. Furthermore, research performing organizations can extend the requirement for commitment to responsible research

⁶ Godecharle S, Nemery B, Dierickx K. Heterogeneity in European research integrity guidance: Relying on values or norms? *J Emp Res Hum Res Val* 2014;93:79-90.

⁷ Science Europe. Research Integrity Practices in Science Europe Member Organisations. 2016. Available: <https://www.scienceeurope.org/wp-content/uploads/2016/07/Science- Europe Integrity Survey Report July 2016 FINAL.pdf>.

practice to all researchers, such as formal signing a code of oath to follow good research practice. The latter should not be restricted to master of PhD students.

The section on collaboration and mobility addressed important issues related to cross-border collaboration, which require mutual understanding and agreement on good research practices and responsible conduct of research. It is important that participating institutions and collaborating researchers understand how their local standards, rules and procedures differ and how they are similar; this should be started from the very beginning. Several sources of guidance on communications on RI across borders were recommended, in addition to the ALLEA's European Code of Conduct for Research Integrity (Table 1).

Table 1 Guidance on research integrity in international research collaborations

Description
OECD Global Science Forum "Best Practices for Ensuring Scientific Integrity and Preventing Misconduct" (2007) Link: http://www.oecd.org/science/inno/40188303.pdf
OECD Global Science Forum "Investigating Research Misconduct Allegations in International Collaborative Research Projects – A Practical Guide" (2009) Link: http://www.oecd.org/science/inno/42770261.pdf
World Conference on Research Integrity – Montreal Statement on Research Integrity in Cross-Boundary Research Collaborations (2013) Link: https://wcrif.org/documents/354-montreal-statement-english/file

3.2.4 Survey of guidance on RI and misconduct at European universities (2017)

This survey explored what guidance about RI is available at 18 universities from 10 European countries (Belgium, Finland, France, Germany, Italy, Netherlands, Spain, Sweden, Switzerland, United Kingdom), which are members of the League of European Research Universities (LERU).⁸ The information from this survey that is relevant for this Challenge Paper is the visibility of institutional guidance over time. In comparison to 2014, the availability of RI documentation on the web pages increased and the guidance included new topics in 2016. Institutional RI guidance documents also more often referred to national or international RI guidance, such as the European Charter for Researchers.

3.3 EU research projects

PRINTEGER project analysed the media discourse about RI and related themes.⁹ It analysed 179 daily press articles for Italy and 674 for the UK from January 2000 to March 2016, which were retrieved by a search with keywords related to RI.

In the 15-year period, the topics related to RI were increasingly covered by media in UK (the peak of over 110 articles in 2010) and Italy (the peak over 40 in 2013). The peaks were related to major misconduct cases, Climategate and retraction of Wakefield Lancet paper in the UK and Stamina stem cell therapy in Italy.

The most common themes (as judged by the frequency of keywords) were related to research misconduct and much less to research integrity, and addressed usually a specific case in medical and health research. It is interesting that the media identified causes for misconduct mostly among the individual factors, such as career competition, private funding and interests, but also system problems, such as the culture of "publish or perish", external pressures to alter data, and a failure of the whole research system.

In relation to proposed solutions for research misconduct, the proposals suggested in the media did not correspond to the actual responses described in the media. While the suggestions were about improving the peer review system and the research process, most

⁸ Bonn NA, Godecharle S, Dierickx K. European universities' guidance on research integrity and misconduct: accessibility, approaches, and content. *J Emp Res Hum Res Ethics* 2017;12:33-44.

⁹ PRINTEGER. Deliverable 3.2. Report on Media Analysis. Available: <https://printeger.eu/wp-content/uploads/2017/10/D3.2.pdf>.

of the descriptions were about investigations and sanctions. Very rarely the proposed solutions and actual responses addressed the promotion of RI.

3.4 Experience from World Conferences on Research Integrity

Here we will present two initiatives presented at the World Conferences on Research Integrity, which resulted in recommendations on best practice. Both are related to collaboration between stakeholders in RI.

3.4.1 CLUE Recommendations on Best Practice

One of the theme focus tracks at the World Conferences on Research Integrity (WCRI) was the communication between institutions and journals in correcting the published research record after misconduct investigation. At the 5th WCRI in Amsterdam, the recommendations for collaboration between universities and editors were discussed. The CLUE (Collaboration and Liaison between Universities and Editors) Recommendations on Best Practice¹⁰ were discussed from the perspective of institutions, journals and publishing ethics organization (Committee on Publication Ethics, COPE). The recommendations were based on the COPE guidelines from 2012,¹¹ and provided further guidance on collaboration in RI investigations. The recommendations are the following:

1. National registers of individuals or departments responsible for research integrity at institutions should be created.
2. Institutions should develop mechanisms for assessing the validity of research reports that are independent from processes to determine whether individual researchers have committed misconduct.
3. Essential research data and peer review records should be retained for at least 10 years.
4. While journals should normally raise concerns with authors in the first instance, they also need criteria to determine when to contact the institution before, or at the same time as, alerting the authors in cases of suspected data fabrication or falsification to prevent the destruction of evidence.
5. Anonymous or pseudonymous allegations made to journals or institutions should be judged on their merit and not dismissed automatically.
6. Institutions should release relevant sections of reports of research trustworthiness or misconduct investigations to all journals that have published research that was the subject of the investigation.

3.4.2 RePAIR Consensus Guidelines

These guidelines relate to handling literature retractions because of misconduct and clarify the role of different stakeholders in this process: authors, institutions, peer reviewers and journals. The guidelines were discussed at the 5th WCRI in Amsterdam in 2017,¹² and published in *Research Integrity and Peer Review* journal.¹³

The guidelines define the responsibilities of all stakeholders in correcting the literature (Table 2), but are also relevant for promoting RI and ensuring the dialogue of all the stakeholders in RI.

¹⁰ Wager E, Kleinert S, Garfinkel M, Bahr V, Bazdaric K, Farthing M, Graf C, Hammatt Z, Horn L, King S, Parrish D, Pulverer B, Taylor P, van Meer G. Cooperation & Liaison between Universities & Editors (CLUE): Recommendations on Best Practice. Available at: <https://www.biorxiv.org/content/10.1101/139170v1>.

¹¹ Cooperation between research institutions and journals on research integrity cases: guidance from the Committee on Publication Ethics (COPE). Available at: https://publicationethics.org/files/Research_institutions_guidelines_final_0_0.pdf.

¹² Broccardo J, Bonn NA. Repair Consensus Guidelines: Responsibilities of Publishers, Agencies, Institutions and Researchers in Protecting the Integrity of the Research Record. 5th WCRI Abstract book. Available at: <https://wcrif.org/documents/41-abstract-book-5th-wcri-2017/file> (abstract O-036, page 24).

¹³ Collaborative Working Group from the conference “Keeping the Pool Clean: Prevention and Management of Misconduct Related Retractions. RePAIR consensus guidelines: Responsibilities of Publishers, Agencies, Institutions, and Researchers in protecting the integrity of the research record. *Res Int Peer Rev* 2018;3:15.

Table 2 Guidance on research integrity in international research collaborations

Researchers	Institutions
<ul style="list-style-type: none"> • Maintain compliance to the highest ethical standards • Address and communicate likely breaches of RI as appropriate • Sustain and create local environment to discuss ethics issues • Use rigorous research methods • Maintain careful and accurate research record • Archive research data and documentation • Regularly review raw data • Perform robust and transparent data analysis • Cooperate with institutional, journal and government inquiries 	<ul style="list-style-type: none"> • Designate RI officer or equivalent administrative officer • Ensure prominent and public posting of RI officer contact details • Create environment fostering ethical behaviour and responsible research • Establish clear and confidential channels to report RI allegations • Perform timely and thorough assessment and investigation of RI allegations • Protect both the complainant and respondent privacy • Provide findings of RI investigation when misconduct is found (redacted according to institutional policy) • Identify publication that warrant retraction or correction and notify journals • Cooperate in investigations and communicate with relevant stakeholders
Publishers and editors	Regulatory or funding agencies
<ul style="list-style-type: none"> • Effectively screen manuscripts for signs of poor RI practices • Publish clear policy and process guidelines for RI misconduct • Examine suspicious allegations, beginning with open and professional communication with author(s) • Notify institutions when misconduct is suspected after examination; require authors to submit information on RI officer early in the manuscript publication process • Determine which publication warrant retraction or correction • Cooperate with institutional investigations • Publish freely available retraction, correction or expression of concern • Ensure retracted/corrected articles are clearly identifiable and indexed in bibliographic databases 	<ul style="list-style-type: none"> • Post publicly information for reporting misconduct concerns • If applicable (mandated) perform thorough, timely and impartial oversight and/or investigations of misconduct allegations • Assess appropriate penalties for findings of misconduct • Ensure that legal mandates and sanctions are executed • Notify public of the findings of research misconduct

4 LESSONS

The countries participating in the MLE were asked to describe the situation in their countries related to dialogue and communication for RI. The basis for this consultation was the information from the RI Country Report Cards, presented in the Appendix of the First Report Paper addressing the Challenge 1 of this MLE.

The countries were asked to further elaborate on four questions from the RI Country report cards, which are related to dialogue and communication, presented in Tables 3-6.

In relation to the public perception of RI and public in science generally, there was a range of experiences – from negative perception of RI due to presentation of research misconduct cases in the media, to high trust and very interactive relationship between the research community and the public to promote responsible conduct of research. There are examples, such as from Denmark, Finland and Norway– the countries that have long history of RI activities and culture, to innovative approaches like in Luxembourg and Ireland.

Table 3 Public perception of research integrity in the country and public trust in science

Country	Description
Austria	Usually, cases of research integrity are dealt in confidence and decisions are not made public. Some cases of misconduct were reported in the press. There are several initiatives as RRI projects and science shops, "Wiener Vorlesungen". The FWF (Austrian Science Fund) publishes statistics on suspected cases in an anonymous form. It is updated annually.
Bulgaria	The public perception of the role of RI in Bulgaria is low. This appears in many ways a more general problem in many European countries. However, interesting examples exist in which an all-party parliamentary consensus can be developed with both academia and business to secure widespread support for a major national effort on RI.
Denmark	Denmark has a high level of social trust and people usually have a high level of trust in public institutions.
Estonia	Statement of the Estonian Presidency of the Council of the EU "Tallinn Call for Action 2017" emphasizes the importance of building trust between research and society. This would be done on several levels, including academia, media, research performing organisations and research funding organisations.
Finland	Public perception of research integrity and trust in science in Finland is on a high level. The majority thinks that research is conducted in a responsible way and that research community cares about its social responsibilities. A "Science Barometer" is published every third year. It reflects opinions of the public on the impact of research to the society and credibility of universities and other research institutions in comparison to other societal institutions (church, parliament, court, police etc.) (results are available only in Finnish)
France	Public perception of science was shaken when several cases of misconduct became public. There is no recent barometer in France on public perception, but scientific community, ministry of higher education and research, stakeholders, politics, strongly emphasize the necessity to retain society's trust in science.
Greece	-
Ireland	In 2015 Science Foundation Ireland made a report "Science in Ireland Barometer", an analysis of the Irish public's perceptions and awareness of STEM in society.
Lithuania	Trust in Lithuanian public institutions is low due to corruptive practices. However, there is no evidence how the public perceives research integrity and whether they (mis)trust in science.
Luxembourg	Through the Secretary of State for Higher Education and Research, there has been strong support for research integrity, including "fostering a culture of the integrity of research." According to the 2011 EU competitiveness report, "The highest trust in science and technology can be found in Malta, Iceland, the United Kingdom, Luxembourg and Norway" [p. 454].
Moldova	As far as many public scandals involve high position researchers, the public perception of science and its role-results is more negative and pessimist than positive. Special studies don't exist on this topic.
Norway	4 out of 10 agree that research results are largely influenced by the researchers' own political attitudes and views. It is not just the scientists' political motives that are being called into question. Other actors must also live with failing confidence. For example, 70% believe that politicians only use the research results that support their own views, while about half believe the same is the case for journalists and media. This is presented in a survey presented to the Research Council of Norway. However; this is questioned in another survey – where new figures do not show increased distrust of researchers and a growing belief in conspiracy theories among Norwegians.
Spain	Low perception – system is perceived as corrupted. Academic corruption survey of 5,725 people who studied in 11 European countries shows the highest levels of perceived corruption in Ukraine and Spain Since 2002, the percentage of the population understanding science and technology as bringing more benefits than harms keeps growing every year.
Sweden	-

In relation to what is discussed in the press, the reported experiences from MLE countries are similar to the results from the media analysis in the PRINTEGER project – the press discusses mostly the cases of research misconduct because they are media-attractive. Some countries, like Luxembourg and Norway, have special web-pages dedicated to RI promotion.

Table 4 Discussion of research integrity in the lay press

Country	Description
Austria	Occasionally (cases related to research fraud)
Bulgaria	Occasionally research integrity is discussed in the press
Denmark	Occasionally (cases of fraud and plagiarism).
Estonia	Occasionally. Articles about the contribution of the Center for Ethics were published by several media.
Finland	Occasionally. The Finnish media wrote about scientific misconduct and TENK's role and authority in the control of scientific misconduct.
France	Occasionally. Usually related to cases of research fraud and academic corruption (Le Monde and Les Echos newspapers).
Greece	Occasionally. Usually related to corruption or fraud.
Ireland	Yes. The print media has given coverage to research integrity in the past number of years, both the positive and the negative.
Lithuania	Within the period 2013-2017, the www.delfi.lt news portal published around 40 press articles about ethical infringements regarding (self-) plagiarism, authorship, contract cheating, fraud and conflict of interest.
Luxembourg	Mr Science is a media partnership with TV and radio created for the promotion of research. Moreover, http://Science.lu is a web page aiming to promote science in Luxembourg.
Moldova	Some research integrity aspects are discussed in media. Usually regarding high position personalities in research.
Norway	Often. In addition to national media, many universities have their own independent press covering research, i.e. Khrono, På høyden, Uniform and Universitetsavisa. Another platform is http://Forskning.no , initiated by the Norwegian Research Council in 2002. Usually about cases of research misconduct. There were also some publications regarding RINO project.
Spain	Occasionally. The most relevant cases of scientific misconduct have been published in newspapers at the regional and national level. Others not so media-attractive are not published. In recent years, the scientific community and journalists have used international websites like PubPeer to report cases of misconduct, they are disseminated on social networks and the most media-attractive cases are published in the press.
Sweden	Occasionally. Relating to cases of misconduct.

In relation to the communication between different stakeholders in RI, there is a variety of practices in the MLE countries, from those that have little collaboration (or unknown collaboration) to countries with already well-functioning communication and collaboration at institutional and national levels and to those that have recently build such systems.

Table 5 Degree of cooperation between the institutions in research integrity and research ethics

Country	Description
Austria	<p>Forum for the Austrian Ethics Committees is a body, representing all ethics committees in Austria. It consists of a Board and General Assembly, which have regular meetings once and twice a year. Moreover, the Forum organises annual training for the members of ethics committees.</p> <p>The Austrian Agency for Research Integrity organises annual meetings for its members and celebrated its 10th anniversary with a conference in 2018. Moreover, it established bi-annual meetings "Plagiarism – Control and Prevention" in which more than 20 research institutions participate.</p> <p>In 2018 the Ministry launched a national working group on RI and RE within the Austrian University Conference with the aim to develop a national document on RI and RE.</p>

Bulgaria	Unknown.
Denmark	<p>When a complaint about an alleged case of research misconduct is handed in at the research institution, the institution must assess whether or not the provided information includes research misconduct. There are several conditions that must be completed for the case to be defined as research misconduct and handled to the Danish Committee on Research Misconduct. If so, the institution must compose a report and send it to the Committee. Further, the Committee will open an investigation based on the report. At the request of Committee, the research institution at which the research was conducted assists the Committee regarding specific circumstances of the case. The Danish Research Misconduct Act states that in processing cases of questionable research practices, research institutions can collaborate with other research institutions or external experts.</p> <p>The institutions send an annual report of handled cases of questionable research practices upon which the Committee writes the annual report about research misconduct and status of questionable research practices.</p>
Estonia	<p>Estonian Research Ethics Committees write annual reports to the State Agency of Medicines and to the governmental bodies of their institution. Moreover, research ethics committees share information with each other. Twice a year seminars for research ethics committees are organised for the purposes of networking. The Centre for Ethics at the University of Tartu has ongoing cooperation in organising conferences and other educational activities with the Estonian Bioethics Council, the Tartu University Human Subjects Research Committee, and the Tartu University Clinic Ethics Committee.</p>
Finland	<p>Finnish institutions have a high degree of cooperation when it comes to handling violations of research integrity and research ethics. Organisations cooperate with TENK (Finnish National Board on Research Integrity) regarding alleged violations of research integrity and if those researchers have worked in several research communities, the handling of alleged misconduct requires cooperation between organisations, which have to agree in which way to conduct the investigation.</p> <p>National Committee on Medical Research Ethics (TUKIJA) organises seminars for regional ethics committees and with other national and regional committees regarding research and ethics. Moreover, national seminars and local meetings are organised by regional ethics committees. There are at least four occasions yearly where ethics committees can share information with each other.</p>
France	<p>Before 2015, institutions had a low degree of cooperation. Since, a growing number of institutions (public research operators) signed the French charter for research integrity : 8 signatories in 2015 (Cirad, CNRS, Inra, Inria, Inserm, Institut Curie, IRD, and the Conference of University Presidents-CPU), they reach 46 currently (besides those appearing via the CPU' signature), and including in 2018 the ANR (French funding agency). Jointly, research integrity officers (91 currently, 4 in 2015), have an informal network (Resint), in order to share their practices. OFIS supports and coordinates the national commitment within French operators, and promotes works of research integrity officers network.</p>
Greece	<p>The members of EARTHnet work on the promotion of research ethics and research integrity and on raising awareness on issues regarding RE and RI. The network has 15 members (universities and research institutions).</p>
Ireland	<p>The National Research Integrity Forum has a broad membership, including representation from all publically funded higher education institutions, government research institutions, research funders and the state agencies responsible for quality and regulation of the higher education system.</p>
Lithuania	<p>The National Bioethics committee is responsible for coordination and methodological assistance to Hospital Ethics Committees and to Regional Biomedical Research Ethics Committees. Moreover, the Committee organises lectures and seminars for the purpose of networking between ethics committees.</p> <p>At the national level, the Office of the Ombudsperson for Academic Ethics and Procedures organises roundtable discussions with HEIs to learn their activities, relevant issues. Additionally, Office's practice in conducting investigations and related pitfalls is introduced to HEIs. Internationally, the Office takes part in the Council of Europe Platform on Ethics, Transparency and Integrity in Education (ETINED platform).</p> <p>Lithuanian University Rectors' Conference is an active association in promoting RI through guidelines development, press articles and so far.</p> <p>Mykolas Romeris University is a co-founder of the European Network for Academic Integrity (ENAI). The investigator from Lithuania has been elected to the ENAI Board.</p>

Country	Description
Luxembourg	The National Ethics Committee (CNER) cooperates with the National Data Protection Commission (CNPD) which has one member attending the national ethics committee meeting as an observer. Copies of the opinions of CNER during its meetings are then sent to the CNPD, as well as to the Competent Authority (Pharmacy and Medicines' Division of the Ministry of Health). Members of CNER cooperate with LARI in the cases of research misconduct. LARI also organises training courses for scientists, students, and coaches at different research institutions. Overall, regional institutions cooperate with LARI in RE and RI; however, LARI is the sole investigative body for RI for its member institutions.
Moldova	The degree of cooperation between universities and research institutions is very weak, given the heavy teaching workload for university professors (up to 1000 hours/year) and lack of research grants incentivizing cooperation and/or mobility between the two sides.
Norway	The National Committee for Medical and Health Research Ethics (NEM), The National Committee for Research Ethics in the Social Sciences and the Humanities (NESH) and The National Committee for Research Ethics in Science and Technology (NENT) cooperate with The National Commission for the Investigation of Research Misconduct (GRU) on the prevention of research misconduct, combining proactive teaching and advise on RE/RI with retroactive investigations of misconduct. NEM and Regional Committee for Medical and Health Research Ethics (REK) organise a national conference for the members of committees for networking and addressing prominent issues.
Spain	The collaboration is low. According to the National Statement of Scientific Integrity, the cooperation of researchers within research groups and collaboration with other entities are required but in actual fact, several RI institutions and generally RECs are controlling all the domains of research. An integrity committee is currently being created in the Ministry of Science, Universities and Research, which seeks to address these deficiencies. This body will have jurisdiction throughout the State. This model in Spain may pose additional problems due to the jurisdiction of the autonomous communities and the autonomy of the universities and research centers. The ideal would be, in addition to collecting it in a national regulation, the development of an agreement for RI signed by the largest possible number of institutions, including their commitment of collaboration with this national arbitration body.
Sweden	Within the previous organisational structure, the chairman of the regional ethics committees would meet once or twice a year for the purposes of networking and education. Moreover, seminars and meetings are organised for all members of ethics committees. As a part of the new organisational structure, the cooperation between committees is strengthened and it is a natural part of the work of research committees. In January 2020, a new organisation for research integrity and research misconduct (Research Misconduct Board) will be established, which will also contribute to the cooperation between research ethics and research integrity bodies.

Finally, the public availability of the finding from RI investigations varied among the MLE countries, from full transparency, over anonymized case presentations to full confidentiality. The procedures reported are similar to those already described in previous surveys of misconduct investigation practices in Europe.

Table 6 Investigation of misconduct allegations and public availability of outcomes from investigations

Country	Description
Austria	<p>Investigations of alleged misconduct are done by the Austrian Agency for Research Integrity, i.e. Commission for Research Integrity. Inquiry can be initiated by members of the Agency and individuals, whereupon the Agency will decide its competence to bring statements in each case. However, those statements don't have any legal influence and it is up to each institution to bring decision about further actions in the possible cases of research misconduct.</p> <p>The Agency for Research Integrity issues annual reports about cases of research misconduct in which the identity of parties is not discovered. https://oeawi.at/wp-content/uploads/2018/08/Annual-Report_engl_-2017_final-1.pdf.</p> <p>Besides the Agency, cases of misconduct at Universities are handled by ethics committees or equal bodies.</p> <p>Some cases of proven misconduct were published in media.</p>
Bulgaria	<p>This role is usually taken by ethics committees which are situated at universities, hospitals, and research institutions.</p> <p>Ministry of Education and Science has established a Committee on Academics Ethics which provides opinion publicly available opinions regarding received alleged cases of misconduct in academia.</p>
Denmark	<p>The Danish Committee on Research Misconduct (DCRM) is responsible for investigating allegations of research misconduct on the national level, while each institution has a legal responsibility to deal with questionable research practices. Decisions brought by DCRM are legally binding. If there is a possible case of research misconduct (falsification, fabrication and plagiarism), an institution has to make an initial assessment. If the allegation of possible research misconduct is in accordance with the law on misconduct § 11 (which addresses certain criteria for the notification) and regards questions on FFP (fabrication, falsification, plagiarism), the institution shall send over the notification to the Committee on Research Misconduct.</p> <p>DCRM decisions are published in anonymised form, as well as annual report consisting investigated cases. Under certain circumstances it is possible to publish the decisions without anonymizing. Furthermore, Research Misconduct Act stipulates the obligation of each institution to prepare a report about cases of the questionable research practices. Institutions are encouraged to enter in a dialogue with DCRM before they send over the case regarding allegation on research misconduct. This dialogue is something that DCRM sees as an important part of the process with sending over a case to the committee.</p>
Estonia	<p>This role is usually taken by ethics committees at the research institutions. For example, the Statute of the Research Ethics Committee of the University of Tartu states that in the case of the violation of research ethical principles, a member of the Committee has the right to delay the processing of the application or its approval until the circumstances are clarified.</p> <p>The Estonian Code of Conduct for Research Integrity emphasizes the confidentiality of all parties involved in cases of violations of research integrity.</p>
Finland	<p>Alleged violations of research misconduct are primarily the responsibility of the research organisations. Research organisations who signed the agreement for adhering to TENK guidelines have taken the responsibility to follow the procedures named in guidelines when it comes to dealing with cases of alleged violations of the responsible conduct of research. The decision whether a violation of research integrity occurred is brought by the rector of the university, or if the university so decides, the chancellor, or the rector of a university of applied sciences, or the director of the research organisation. The allegations of research misconduct and decision related to the allegations are reported to TENK for the purpose of monitoring the compliance with guidelines. If a party in the process is unsatisfied with the decision, the TENK statement regarding the case can be requested in the period of 6 months.</p> <p>TENK does not publish its concrete decisions, but according to the Finnish law of general publicity, all official documents are available for stakeholders.</p> <p>Usually, rector investigates the alleged violations of research integrity upon the notification but in some cases, it can conduct the investigation of allegations that have come to his/her attention from other channels. Furthermore, TENK can also initiate the investigation if it has reasons to suspect misconduct occurred at the research organisation.</p> <p>If the allegations of research misconduct are unfounded, the rector's decision to stop the investigation process can be publicly announced.</p> <p>Moreover, if the investigation confirms the research misconduct the findings contained in the final report must be published at least in the publication channel where the fraudulent research findings or results based on fraudulent means have already been published. If the investigation finds that the person alleged of misconduct has not violated the responsible conduct of research, an effort must be made to publish the findings of the investigation in an appropriate publication channel if the person alleged of misconduct</p>

Country	Description
	wants, or if there are other compelling reasons. TENK statements are publicly available and in its annual report cases of research misconduct are presented in the anonymous form.
France	Investigations of alleged misconduct and undesirable conduct are led by research integrity officers, under the own responsibility of the organisations conducting research. Research integrity officers are organized in an informal network, and published in December 2018, their guideline of investigation. Some cases of proven misconduct were published in media.
Greece	This role is taken by local ethics and bioethics committees situated at the universities, research institutes and hospitals. Regarding the publication of cases of misconduct, for example, the Technological Educational Institute of Crete in its Code of Ethics states that sharing information with the community will be discussed in each case and then decided whether to publish information or not.
Ireland	Investigations of alleged misconduct are performed by the research institution where the researcher is employed or is a registered research student. The National Forum on Research Integrity has committed to publishing annual statistics on the numbers of formal investigations of alleged misconduct. The first statistics report was published in February 2019 (https://www.iaa.ie/download/122659/).
Lithuania	Office of the Ombudsman for Academic Ethics and Procedures is responsible for the investigation of complaints and violations of academic ethics and procedures in academia. The Office encourages HEIs to adhere to academic ethics and procedures, monitors their compliance with recommendations for approval, implementation and monitoring codes of academic ethics, and cooperates in solving problems related to violations of academic ethics and procedures. The investigation is conducted upon received complaints or at the own initiative. All decisions of the ombudsman are publicly available online in Lithuanian and their summaries in English. Depending on an individual request, decisions might be anonymised and/or non-anonymised. The Commission on ethics of research activities examines infringement of ethical principles in research activities related to projects financed by the Council, to evaluation and publication of research results, expert activities of researchers, an organisation of research work, dissemination of research knowledge in the society and other activities of the Council. The Commission adheres to the principles of research ethics in activities of the Research Council of Lithuania and the provisions for ethical behaviour of researchers approved by Resolution No. VII-102 of 7 May 2012 of the Council and the Description of the Procedure for the Examination of Notifications Related to Infringements of Ethics of Research Activities at the Research Council approved by Resolution No. VII-126 of 17 December 2012 of the Council.
Luxembourg	The National Commission for Research Integrity is a part of the Luxembourg Agency for Research Integrity and responsible for the investigation of cases of research misconduct. The Commission may be called upon by any person or organisation with a legal capacity which has knowledge of suspected scientific misconduct occurring in LARI member organisations. Moreover, the Commission may also investigate cases of suspected scientific misconduct on their own initiative. If the case of alleged misconduct has happened more than 10 years ago, the Commission can refuse to handle the cases. The decision about conducting an investigation or decide to not to initiate an investigation or suspend the case. If the Commission decides to initiate the investigation its decision will be sent to the Board of LARI, person or organisation that have reported the case, person to whom the allegations refer to, head of the affected research institution, and FNR if the case occurs in relation with the FNR funded project or researcher. In exceptional cases, the Commission can decide not to communicate the decision to abovementioned parties due to the higher priority to protect the accused person. Upon completion of the investigation, the Commission member leading the investigation shall compose a summary opinion which contains an assessment of the results of the investigation. This will be presented to other members for approval. The opinion is further sent to the person or institution which called upon Commission if it is directly affected by allegations, and to the person to whom the allegation referred. The opinion is also sent to the LARI Board for information purposes. The LARI Annual Report and quarterly reports to the Board contain an anonymized summary of RI cases.
Moldova	Institutional ethics committees deal with cases of misconduct and these cases are usually solved institutionally and not publicly available. There were only a few cases, referring to public people, which were made publicly available (plagiarized PhD thesis). In practice, there were approved ad hoc commissions designated by the different institution to investigate cases. Usually, the commission proved even the misconduct; the court had another opinion.

Country	Description
Norway	Investigations of alleged cases of research misconduct are done usually by institutions, but some cases are handled by The National Commission for the Investigation of Research Misconduct (GRU). Any researcher or institution can notice the GRU about possible research misconduct. GRU is the appeal body for statements in which it is concluded that a researcher has not acted according to Good Research Practice. Moreover, GRU can decide to conduct the investigation in some cases, usually more serious cases of research misconduct. Cases of research misconduct are usually published annually and anonymously by the Commission.
Spain	Ethics Committee of the Spanish National Research Council (CSIC) is responsible for dealing with ethical conflicts. Any individual or institution can bring a case to the attention of the Committee, whose field of competence is limited to CSIC and its employees. There also are Research Ethics Committees in research institutions and universities: The Research Ethics Committees (Comités de Ética en Investigación, CEI) and ad hoc commissions are in charge of settling scientific integrity problems. These committees are independent and their decisions can be binding, although there is a right of appeal. The official list of proven misconduct regulated by authorities is not publicly available at the moment. Professional organizations: Deontological commissions related to the professional organizations act independently to sanction the professionals involved in research misconducting. Justice System: If misconduct affects human beings, Justice system (Fiscalía General del Estado) starts a process of investigation. In general, the misconduct cases are not public nor their resolution or outcomes, except when dealing with very serious media cases.
Sweden	Investigations of alleged cases of research misconduct are handled by the research institutions. Upon request, institutions are obligated to seek a statement from the Expert Group on Research Misconduct. Since those are only statements and not decisions, institutions don't have to obey and they can have a different opinion.

5 CHALLENGES

Participating countries expressed their interest for sharing experiences regarding good practices in promoting the dialogue on research integrity within and among relevant institutions and the communication with the public to enhance a culture for RI and to engage key stakeholders. Despite existing differences in countries' experiences in developing the RI system and its current structure and procedures, it would be possible to agree on basic recommendations how to promote the dialogue and communication to foster RI. This will be the challenge of the third MLE meeting on RI – to create guidance for best practices in relation to two issues: promoting the dialogue with different stakeholders in RI and communication related to RI investigations.

5.1 Challenges related to the dialogue with different stakeholders in RI

Q1: How to ensure the dialogue and participation of all stakeholders in RI?

The stakeholders include:

1. Policy makers (ministries, government)
2. Research funding organizations
3. Research performing organizations (universities, institutes)
4. Professional societies
5. Individual researchers
6. Journal editors
7. Industry
8. International bodies for RI
9. The public (including advocacy groups, such as patient advocacy groups)

5.2 Challenges related to communication during RI investigation

The challenges here relate to the communication challenges before, during and after RI investigations:

Q1: What are good practices in communication when allegation of misconduct is made?

Q2: What are good practices in communication during misconduct allegation investigation?

Q3: How to communicate the outcome of misconduct investigation?

The challenges to the last question include communication to the following parties:

1. to the individuals (reported and reporting)
2. to the organisation
3. to the journal(s)
4. to the research funder
5. to legal/regulatory bodies
6. to the public

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