# TORs Research Integrity

## Content

# Introduction

The quality of research is an important asset for every society. Economic, technological and societal progress, sustainable development as well as fairness between generations would all be unthinkable without reliable scientific and scholarly knowledge. The quality of that knowledge must be ensured by rules and codes to encourage self-governance in science and research.

The European Code of Conduct for Research Integrity serves the European research community as a framework for self-regulation across all scientific and scholarly disciplines and for all research settings. The European Commission recognises the Code as the reference document for research integrity for all EU-funded research projects and as a model for organisations and researchers across Europe.

The following TORs give insights into the main arguments of this code and show how the code is applied across Europe. In addition, the terms include a proposal how Universities can establish rules and standard to tackle research integrity. Based on good practices from Austria and other EU countries, the architecture, the mission and areas of activity of a national Agency for Research Integrity is presented.

# 1. Principles of Research Integrity

The TORs should raise awareness for the Standards of Good Scientific Practice among researchers as well as the general public. The "European Code of Conduct for Research Integrity"[1] (available in Albanian language as well[2])
defines four principles of research ethics and  integrity on which good research practice should base on:

- "**Reliability** in ensuring the quality of research, reflected in the design, the methodology, the analysis and the use of resources.
- **Honesty** in developing, undertaking, reviewing, reporting, and communicating research in a

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[1] See http://ec.europa.eu/research/participants/data/ref/h2020/other/hi/h2020-ethics_code-of-conduct_en.pdf

[2] See https://www.allea.org/wp-content/uploads/2018/06/ALLEA-ALbanian_European-Code-of-Conduct-for-Research-Integrity_FINAL.pdf

transparent, fair, full, and unbiased way.

- **Respect** for colleagues, research participants, society, ecosystems, cultural heritage, and the environment.
- **Accountability** for the research from idea to publication, for its management and organisation, for training, supervision and mentoring, and for its wider impacts." (p.3)

The Observation of this Code – formulated by All European Academies (ALLEA) and released in March 2017 - is **mandatory** for all project partners in the context of H2020.

# 2. Topics and Guidelines

Guidelines for good research practice are derived from these principles and are aimed at preventing research misconduct. Research misconduct can cover a broad spectrum of acts which can have potentially harmful effects beyond the sphere of science. Its most detrimental forms are fabrication, falsification, and plagiarism. Other frequent forms of research misconduct include the misuse of research data, authorship-related misdemeanors, inadequate leadership and mentorship, and failure to adequately deal with alleged cases of research misconduct. Following international good practice, the topic of Research Integrity is covering the following issues:

- **Misconduct in the Research Process**
- **Publication Process and Authorship**
- **Responsibility of Supervisors and the Supervised**
- **Data Management**

## 2.1 Misconduct in the Research process

The most common cases of misconduct in the research process are **fabrication** (making up results and recording or reporting them) **and falsification** (manipulation of research materials, equipment, or processes, or changing or omitting results such that the research is not accurately represented in the record). Researchers should:

- Record and document both the research process and the results
- Ensures that the single investigation steps are reproducible
- Collect data and material in a transparent way

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The following infographic is taken from The Office of Research Integrity (ORI) of the U.S. Department of Health and Human Services. ORI explicitly encourages the sharing and distribution of these resources. The infographic emphasizes some possible red flags of research misconduct. These factors do not necessarily mean research misconduct is occurring but should be considered warning signs that fabrication and falsification might be going on in the research process. Especially in experimental research, one should turn suspicious if:

- The findings can't be replicated by others
- Raw data can't be produced when requested and
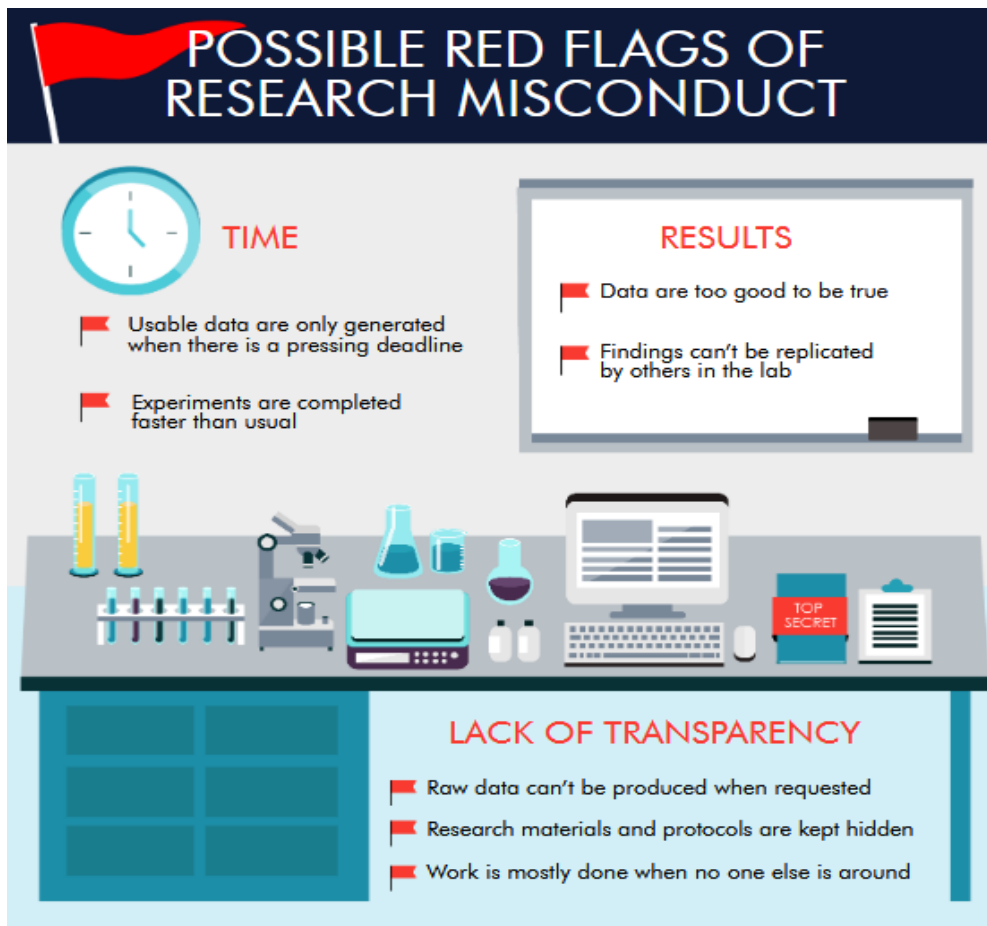- Research materials and protocols are kept hidden

## POSSIBLE RED FLAGS OF RESEARCH MISCONDUCT

**TIME**

- Usable data are only generated when there is a pressing deadline
- Experiments are completed faster than usual

**RESULTS**

- Data are too good to be true
- Findings can't be replicated by others in the lab

**LACK OF TRANSPARENCY**

- Raw data can't be produced when requested
- Research materials and protocols are kept hidden
- Work is mostly done when no one else is around

*Figure 1: Possible red flags of research misconduct, Source: ORI*

## 2.2 Publication Process and Authorship

Another serious case of scientific misconduct is **plagiarism** which is defined as the appropriation of another's ideas, processes, results, or words without giving proper credit i.e. citing the source and originator. Ethically writing covers:

- The proper citation of all sources
- The use of primary literature instead of secondary sources
- The presentation of unbiased information

Furthermore, authors should take the contributions of other persons into account by naming those who made a major contribution as co-authors, „honorary authors" or "gift authors" (e.g. the head of the unit) however, should be excluded.



*Figure 2: Ethically writing, Source ORI*

## 2.3 Responsibility of Supervisors and the Supervised

Persons who supervise research projects should ensure a research environment that enables junior researchers to adhere to the Standards of Good Scientific Practice. Supervisors should be

- Respectful, available and approachable (an open and responsive communication with the supervised should be established, which promotes research integrity and discourages questionable research practices)
- Supportive (training and guidance should be provided)
- Honest and responsible (the team´s data should be reviewed)



*Figure 3: Responsibility of Supervisors, Source ORI*

## 2.4 Data Management

Many disciplines (including social sciences and humanities) use secondary data and information (e.g. scientific literature, grey literature, websites) as well as primary data, which will be recorded and collected during research activities.

All data collection should respect EU legislation concerning data protection and privacy legislation defined by the General Data Protection Regulation 2016/679 (GDPR) and the ePrivacy Directive (2002/58/EC) and the European Code of Conduct for Research Integrity. All research should be conducted by ensuring respect for the participants and their dignity, protecting their values, rights and interests and fair distribution of research benefits and burden.

The creation of a **Data Management Plan** (DMP) is **mandatory** for all projects in the context of H2020. Such a plan is a formal document that specifies how research data will be handled both during and after a research project. It identifies key actions to ensure that research data are safe, sustainable and – where possible – accessible and reusable.
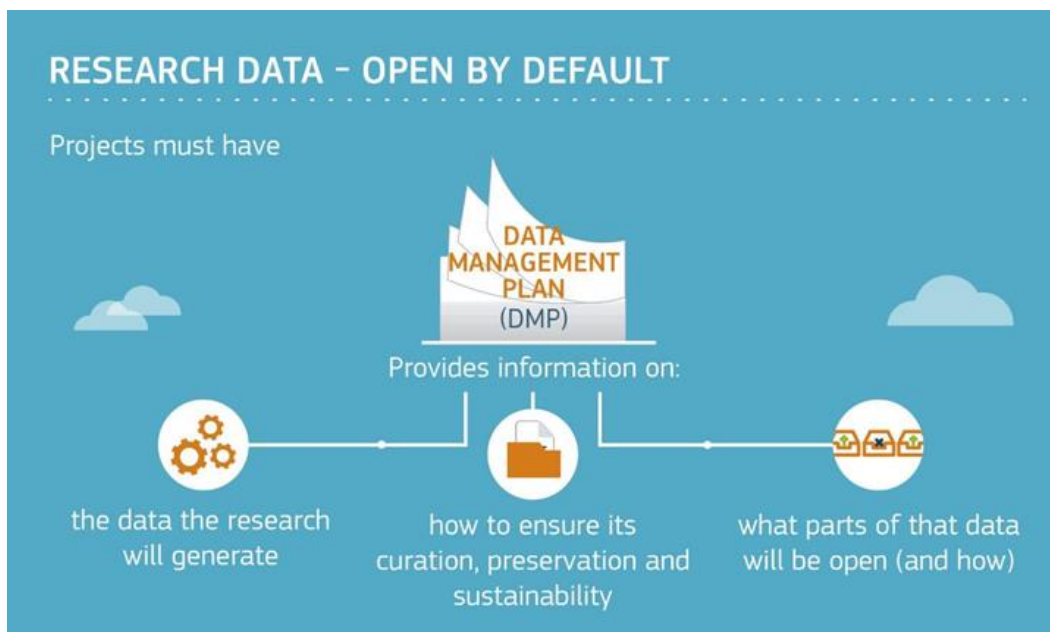


*Figure 4: Data Management Plan, Source: EC*

# 3. Implementation

Aligned with European rules, based on The European Code of Conduct for Research Integrity  as well as on practice in Austria and most other European countries, research integrity could be established in Kosovo according to the following proposal:

## 3.1 Institutional arrangements at the University´s level

**Ethic Councils or Committees** located at Universities´ level (partly already established in Kosovo, namely at the Universities of Prishtina, Prizren and Peja) could handle all topics of research ethics and integrity and are staffed by internal University personnel. Smaller Universities, other HEIs or research institutions could nominate a person (research integrity officer) or could cooperate with larger ones in order to build critical masses.  These general Ethic Committees should be the first address for researchers, students, teachers and all staff concerning all ethical issues and enshrined in the University's Statutes.

- The Ethic Committees at universities´ level should deal with a broader range of ethical issues (not research ethics and integrity only but questions of general compliance as well)
- This includes ethical and regulatory considerations concerning the collection of big data, the protection of privacy as well as intellectual property issues.
- Representatives from various academic disciplines should be included.
- Researchers, students, teachers and all staff should avail themselves of the Committees´ services if their research activities touch on ethically relevant aspects and may wish to ensure that their research does not involve any potentially unethical and/or adverse effects for the persons or animals involved or the environment.
- The Ethics Committees should be tasked with ensuring compliance with ethical principles in research.
- This includes **the review of ethics applications** (see e.g. the ethics appraisal scheme of the European Commission[3]) which are submitted for planned research projects.

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[3] see http://ec.europa.eu/research/participants/docs/h2020-funding-guide/grants/from-evaluation-to-grant-signature/grant-preparation/ethics_review_en.htm)

Furthermore, some European universities founded **Ombuds Offices** to ensure compliance with Good Scientific Practice. The Ombuds Offices consider themselves as a first contact point for researchers wishing to lodge a complaint about scientific misconduct. Issues which can be brought to the University Ombuds Office are:

- Miscommunication between supervisors, coworkers, employees, and/or students

- Interpersonal, intercultural, and group conflicts

- Perceived ethical dilemmas

- Perceived unfair treatment or bullying

In addition to the institutional arrangements at universities´ level, most European countries have established a national agency for Research Integrity. Such an agency investigates alleged violations of Good Scientific Practice and proposes measures and sanctions. The services can be used by all universities, research funders and single researchers as well. In case of the Austrian OeAWI[4] , a total of 23 public universities, 4 universities of applied sciences, 7 non-university research institutions and 4 research funding agencies act as members of the agency.  The agency´s work is based on Guidelines for Good Scientific Practice, Rules of Procedure and Statutes which are fully aligned with the European Code of Conduct. The OeAWI introduced Ombudsmen in Higher Education organisations, trains scientists, scholars and students, and established a commission to tackle investigations of alleged violations of Good Scientific Practice. OEAWI´s commission is comprised of a total of six members (from abroad to guarantee independence from the Austrian research landscape) whose expertise covers key branches in science and research such as the humanities, social sciences, life sciences, medicine, natural sciences and technology, law.

Based on Austrian and European[5] good practice, a national agency could also be established in Kosovo.

## 3.2 A National Agency for Research Integrity

The development of a proper system in Kosovo needs to adapt the existing examples to a smaller research place. Too much bureaucracy and overcomplicated rules should be avoided, nevertheless, alignment to the European regulations should be guaranteed to a large extent.

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[4] https://oeawi.at/about-the-oeawi/?lang=en
[5]  Another very recent example is the new version of the Netherlands Code of Conduct for Research Integrity:
http://www.vsnu.nl/files/documents/Netherlands%20Code%20of%20Conduct%20for%20Research%20Integrity%202018.pdf

A national Agency for Research Integrity should be established to ensure Good Scientific Practice in Kosovo´s higher education and research. It should strengthen responsibility in research and focus on investigating and preventing misconduct in research.

Therefore, the services and tasks should comprise[6]:

- Advising and training (training programmes can be carried out with the help of international expertise and networks ( e.g. the EU projects ENERI (European Network of Research Ethics and Research Integrity) and VIRT2UE (Virtue based Ethics and Integrity of Research)
- Informing about international (European) rules and practices
- Investigating alleged violations of Good Scientific Practice
- Proposing measures and sanctions in cases of Non-compliance

The Agency should deal with cases of (alleged) research misconduct connected to a Kosovar institution or to a researcher working in Kosovo. A **commission** including international expertise should be established to tackle the investigations. The staffing of the commission is a crucial point: To avoid a waste of resources, the number of members should be limited – nevertheless, a representative sample of disciplines should be presented and at least one member should come from abroad. The commission´s work should be confidential (protecting both the complainants' and the accused persons' identities) independent and objective.

The investigation should be followed by a final statement containing a summary of investigation results and recommendations of further actions as well. It is up to the institution concerned to take further measures and apply sanctions.

The following picture shows a possible architecture and the division of work between the national agency and the committees at Universities´ level.

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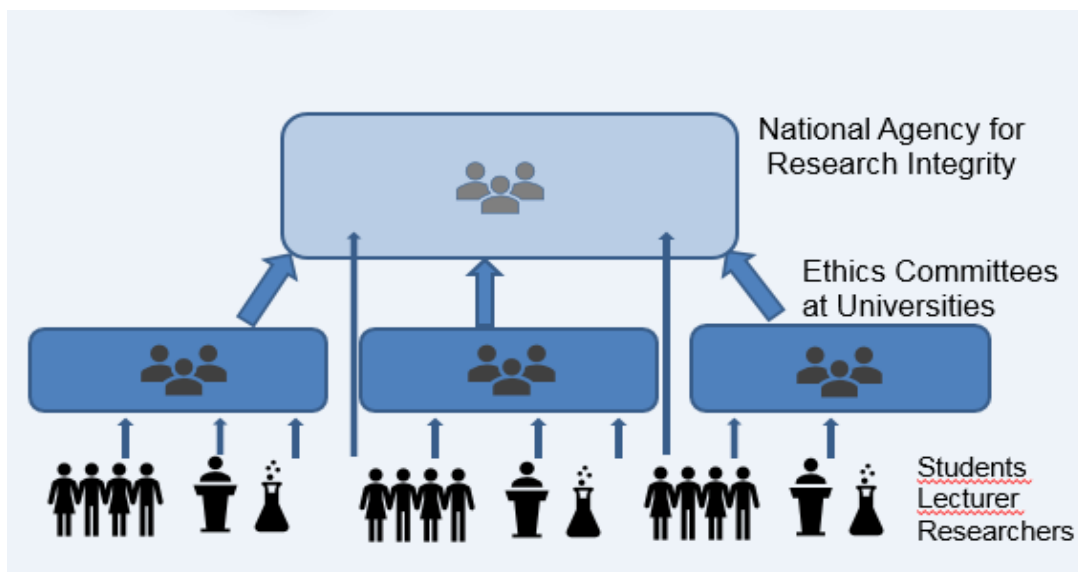
[6] see https://oeawi.at/about-the-oeawi/?lang=en

*Figure 5: Overall architecture, Source: Own presentation*

## 3.3 Non-compliance: measures and sanctions

Non-compliance with the rules and standards undermines professional responsibility, which harms the research process and the relationship between individual researchers, and possibly also trust in and the credibility of the research.

The institutions concerned should be responsible for any measures and sanctions. Nevertheless, the range of measures is large and spans from penalties such as demotion or dismissal to a simple reprimand.

In order to set up a transparent set of measures, the National Agency for Research Integrity should publish a list of possible measures and sanctions which should be applied for different cases of misconduct. In this respect, the differentiation between "**research misconduct**", "**questionable research practice**" and "**minor shortcoming**"[7] along with clear assessment criteria may be helpful.

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[7] see Netherland´s Code of Conduct for Research Integrity
http://www.vsnu.nl/files/documents/Netherlands%20Code%20of%20Conduct%20for%20Research%20Integrity%202018.pdf