

Code of Professional Standards and Ethics in Science, Technology, and the Humanities: Interpretation

In their activities¹, Members² who undertake the actions below to the standard expected of a reasonable, professional, ethical researcher or scholar in the same circumstances³ would comply with the Code.

Statements in italics are the standard as set out in the Code.

Members are obliged:

Honesty, integrity and professionalism

1. *To behave with honesty, integrity and professionalism when undertaking their activities.*

To meet this standard, Members should —

- a. honestly represent their research goals and intentions; and
- b. present the results of their research without falsification (including by deliberate omission) or conscious bias; and
- c. fairly represent and not suppress the intellectual, material and practical contributions of others to their work and results; and
- d. take ongoing responsibility for the contents of publications and reports authored by them; and
- e. preserve research records in order to allow examination by bona fide critics; and
- f. ensure all claims of their own or others' qualifications and experience are accurate and truthful; and
- g. not commit plagiarism, or assist or condone acts of plagiarism by others; and
- h. be fair and unbiased in their activities, in the application and communication of their knowledge, and in developing their professional view; and
- i. make evident those statements that are speculative or interpretive, and avoid undue simplification, in their reports or expressions of their professional view; and
- j. avoid and oppose any selective manipulation or presentation of results to meet the perceived needs or requirements of employers, clients, funding agencies, the media or other interested parties; and

¹ Activities means research, scholarly and professional activities including, but are not limited to, activities in employment, consulting, contracting and in voluntary roles.

² Members include Honorary Fellows, Fellows, Companions, Professional Members, Associate Members, Student Members, Honorary Members, Regional Constituent Organisations (Branches) and Constituent Organisations, but does not include Affiliate Organisations or Friends of the Society. Membership of a Regional Constituent Organisation or a Constituent Organisation of itself does not make a person a member of the Society.

³ Circumstances includes consideration of the type of Membership held.

- k. avoid or declare real or potential conflicts of interest, and where appropriate, record them; and
- l. reject and oppose any inappropriate inducement, including receiving in their own right anything of substantial value from any third party, or giving or promising to give anything of such value to any third party, where doing so might compromise or might reasonably be seen to compromise the integrity of their, or that other party's, research or other activity; and
- m. recognise their obligation to uphold ethical and professional standards across the research community including raising concerns about adherence to applicable standards with the researchers involved or on matters of sufficient gravity, reporting their concerns about suspected misconduct, substandard or irresponsible research practices to the relevant authorities.

Competence and good practice

2. *To only claim competence commensurate with their expertise, knowledge and skills, and ensure their practices are consistent with relevant national⁴, Māori⁵ and international standards and codes of practice in their discipline or field.*

To meet this standard, Members should —

- a. present themselves as competent only within their relevant areas of expertise, knowledge or skills; and
- b. maintain the currency of their relevant knowledge and skills in any area in which they claim to be competent; and
- c. ensure their practices are consistent with any relevant national, Māori or international codes of practice or standards pertaining to their activities and
- d. act with cultural intelligence⁶ and intellectual rigour in their activities; and
- e. ensure that activities they undertake in other jurisdictions meets both the ethical standards pertaining in Aotearoa New Zealand and those of the jurisdiction in which the activities are undertaken.

Care and diligence

3. *To undertake their activities diligently and carefully.*

To meet this standard, Members should —

- a. ensure that their proposed research or scholarly methodologies are fit for purpose; and
- b. be diligent and careful in their activities to ensure that their methodologies are proficiently applied and undertake sufficient checking to minimise undetected mistakes or errors; and

⁴ E.g. within Aotearoa New Zealand, the standards of the New Zealand Psychological Society, the Association of Social Science Researchers, the New Zealand Association for Research in Education, and Engineering New Zealand.

⁵ As set out, for example, in Te Ara Tika Guidelines for Maori Research Ethics.

⁶ Cultural intelligence means the capability to relate and work effectively across cultures.

- c. report to their employer, funder and/or client as appropriate when there are insufficient resources to undertake their activities in accordance with the relevant standard or code of practice; and
- d. accept responsibility, including for rectification where practicable, if mistakes, errors or poor practice are discovered in their activities or results, or in the activities or results of those whose activities they have supervised; and
- e. take reasonable steps⁷ to protect others from harm (including cultural harm) and guard against unconscious bias during the course of their activities.

Responsibilities in the public interest

4. *To support the public interest by making the results and findings of their activities available as soon as it is appropriate to do so, by presenting those results and findings in an honest, straightforward and unbiased manner, and by being prepared to contribute their knowledge or skills to avert or lessen public crises⁸ when it is appropriate to do so.*

To meet this standard, Members should —

- a. encourage employers, funders and clients to permit public disclosure of the results of their activities unless there are legitimate and lawful reasons for confidentiality but, nevertheless, always ensure that confidentiality is maintained when it is legitimately required by the employer, funder or client; and
- b. within the caveat of a., ensure the communication of the results of publicly-funded research at the earliest appropriate opportunity; and
- c. inform, as appropriate to the circumstances, their employer, funder and/or client, if they consider that there is an unacceptable risk of adverse consequences for the public interest arising from any contractual conditions that limit the public disclosure of the findings from their activities and, if practicable, seek relief from or reconsideration of the relevant contractual condition; and
- d. not knowingly suppress negative research results, and endeavour to publish and/or notify affected parties of any negative results or results that may not support present theories or interpretations of previous results; and
- e. support the publication and dissemination of all competent research even when the conclusions drawn by the authors are contrary to the Member's own opinions or to the currently accepted consensus; and
- f. to the extent it is practicable, ensure that public statements derived from their activities are accurate, especially in communicating the potential impacts of the research; and
- g. where reasonably practicable, be prepared to contribute in a public crisis, if either the risks or consequences can be substantially reduced or averted by application of their expertise, knowledge and skills.

⁷ In this context, “reasonable steps” does not include suppressing research findings or scholarly output that may challenge the activities, views or beliefs of groups of people.

⁸ In this context, public crisis means a situation in which there is an unacceptable risk of significant harm to people, or of substantial and widespread damage to property or the environment.

Responsibilities to partners, participating and affected communities⁹

5. *In undertaking their activities, to endeavour, where practicable, to partner with those communities and mana whenua for whom there are reasonably foreseeable direct impacts, and to meet any obligations arising from the Treaty of Waitangi.*

To meet this standard, Members should —

- a. endeavour to identify potentially affected communities, hapū or iwi prior to commencement of the activity and, where practicable, ascertain whether they wish to participate; and
- b. where practicable and appropriate, involve any participating community, hapū or iwi in the development of the aims, design of the activity and the selection of means for its execution; and
- c. where practicable and appropriate, both involve and adequately resource participating communities, hapū and iwi as partners in the activity and respect their rights and cultural practices; and
- d. recognise and respect any established rights and interests of participating or affected communities, hapū or iwi, in intellectual property, mātauranga¹⁰, or of materials, samples, data or information gathered or developed during the research, including obtaining necessary permissions to use existing mātauranga and giving effect to any established right to participating or affected community, hapū or iwi ownership of new knowledge created during the activity; and
- e. endeavour, where practicable, to share those results and findings that are specific to the participating or affected community, hapū or iwi with them in advance of publishing or otherwise communicating the results and findings to others.

Responsibilities to participating people

6. *To safeguard the health, safety, wellbeing, rights and interests of people involved in or affected during the conduct of their activities.*

To meet this standard¹¹, Members should —

- a. assess and minimise foreseeable hazards and safeguard the safety and health of people involved in, or likely to be affected during the conduct of their activities; and

⁹ An “affected community” is an identifiable community for which there are reasonably foreseeable direct impacts, which has sufficient internal organisation to make engagement at a community level practicable, and a “participating community” is one which has assented to engagement without imposing conditions that would unreasonably restrict the proposed activities.

¹⁰ Mātauranga Māori is the intellectual capital generated by whānau, hapū and iwi over multiple generations. It is a shared-community knowledge that is embedded in lived experience and carried in stories, song, place names, dance, ceremonies, genealogies, memories, visions, prophesies, teachings and original instructions, as learnt through observation and copying of other community members. It is a holistic system of orally passed knowledge, concepts, beliefs and practice. Mātauranga Māori, mātauranga ā-iwi, mātauranga ā-hapū, and mātauranga ā-whānau are dynamic, innovative, and generative systems of knowledge.

¹¹ Obtaining approval of the proposed protocol for involving human participants from an accredited committee that assesses proposals against widely accepted codes of good practice (e.g. those for health research at www.hrc.govt.nz); or having quality assurance of the protocol undertaken by a competent committee constituted for that purpose, and following the approved protocol, would normally meet the expectations set out in 6 b. to i. but not necessarily all those under a.

- b. only involve people as participants in any proposed activity if the potential benefits sufficiently outweigh the risk of harm to those participants; and
- c. design and perform their activities according to an approved research protocol which conforms to widely applied good practice in their discipline, and which describes how the following ethical principles for human participants have been addressed:
 - 1. disclosure of research aims,
 - 2. respect for personal autonomy by informed and voluntary consent,
 - 3. respect for the rights of privacy and confidentiality,
 - 4. respect for the vulnerability of some participants,
 - 5. minimisation of harm, including cultural harm,
 - 6. avoidance of conflicts of interest,
 - 7. respect for established property rights including intellectual, material, financial and cultural, and
 - 8. social and cultural responsibility; and
- d. disclose the research aims to participants, normally in advance of the research, but at a later time only if it can be justified through a relevant authority that such disclosure would adversely affect either data quality or the validity of the research method, and that all regulatory requirements can still be met; and
- e. give highest priority to the welfare¹² of participants, including ensuring that there are sufficient protections (including, where relevant, insurance) for participants who may suffer injury or be harmed as a result of participation in research; and
- f. disclose any vested interest in a trial to any entity from which approval or quality assurance is sought, and to participants; and
- g. refer the matter to the appropriate authority should any unexpected ethical issue arise and, if necessary, be prepared to stop the research and not restart it until the authority's approval to do so has been obtained; and
- h. avoid coercion, and fully inform potential participants of their rights to refuse participation without negative consequences, and to withdraw from the research at any time; and
- i. ensure that any overseeing committee or authorised individual has access to trial data as they accumulate in order to assess the risk/benefit ratio and whether the trial should be discontinued because the re-evaluated ratio is no longer acceptable.

Responsibilities for the welfare of animal subjects

- 7. *To ensure that the three Rs (Replacement, Reduction and Refinement) are considered at all stages of their activities involving animals, minimise the impacts on animals used in those activities and in so doing support the welfare and wellbeing of those animals.*

¹² Including their health, mental and cultural wellbeing.

To meet this standard¹³, Members should —

- a. investigate possibilities for using alternatives and avoiding the use of animals at all; and
- b. use the minimum number of animals required for scientific validity; and
- c. design and perform their activities according to an accepted research protocol or code of conduct that meets the requirements of the Animal Welfare Act 1999¹⁴, conforms to widely applied good practice in their discipline, and addresses the following ethical principles for animals:
 1. undertaking a comprehensive review of previously published research to ensure there is a new and justifiable need to use animals,
 2. undertaking a comprehensive review of available research methodologies and animal handling practices to select the most effective research method and animal handling practices,
 3. selecting the most appropriate animal species,
 4. where practicable, endeavour to partner with Māori in activities involving as subjects or likely to significantly affect taonga species¹⁵ or fauna indigenous to Aotearoa New Zealand,
 5. minimising harm or distress which will be inflicted on any animal and ensuring any such harm is outweighed by the realistic benefits likely to accrue,
 6. using appropriate and approved methods of anaesthesia, analgesia and tranquilisation on animals subjected to invasive procedure,
 7. undertaking supervision of the animals to ensure they are fed and cared for to safeguard their health and comfort,
 8. ensuring the competence of all persons handling animals or undertaking the research through adequate training and supervision, and
 9. ensuring the research is sufficiently well resourced so if an adverse or unforeseen event was to occur the welfare of the animals can be assured; and
- d. disclose any vested interest in a trial to any entity from which approval or quality assurance is sought; and
- e. refer the matter to the appropriate authority should any unexpected ethical issue arise and, if necessary, be prepared to stop the research and not restart it until the authority's approval to do so has been obtained; and

¹³ Obtaining approval of the proposed protocol for using animals from an accredited committee that assesses proposals against widely accepted codes of good practice such as those established under the Animal Welfare Act 1999; or having a quality assurance of the protocol undertaken by a competent committee constituted for that purpose, and following the approved protocol, would normally meet the expectations set out in 7 other than those set out in 7 c.4 in relation to taonga species or fauna indigenous to Aotearoa New Zealand.

¹⁴ Or any comparable successor legislation to the 1999 Act.

¹⁵ Taonga species are species of particular cultural significance to Māori generally, an iwi or a hapū.

- f. ensure that any overseeing committee or authorised individual has access to trial data as they accumulate in order to assess the risk/benefit ratio and whether the trial should be discontinued because the re-evaluated ratio is no longer acceptable; and
- g. share their own experiences to assist other researchers in giving effect to the three Rs in their own activities; and
- h. disseminate any negative results to prevent unnecessary use of animals for research of a similar purpose to that in which the negative results occurred.

Responsibilities to manage data and samples¹⁶

8. *To develop, and implement so far as they are reasonably able¹⁷, a management plan to ensure the integrity, retention, secure storage, appropriate and transparent use of data and samples gathered or developed during their activities.*

To meet this standard, in development and implementation of their management plan, Members should —

- a. recognise differing types of data and samples, including personal and community data, and identify situations where both individual and community permissions are required; and
- b. recognise the mana¹⁸ that Māori communities, iwi and hapū have over data and samples collected from and about them, their communities, cultural knowledge and resources, including respecting any relevant rights to ownership, governance and control of use of the data or samples; and
- c. recognise and disclose the intellectual property that may exist in any data or samples, and ensure that the established rights of the intellectual property owner are recognised and observed; and
- d. ensure that all conditions under which consent has been given, including any limitations on future use of the data and samples, are recorded and those records securely linked to the data or samples; and
- e. ensure or require that all conditions of consent are met whenever the data and samples are accessed, used, collated, interpreted or presented; and
- f. ensure that if data or samples collected for one restricted purpose are proposed to be used for another that any practicable steps are taken to extend existing consents or obtain new consents; and
- g. label and/or annotate data and samples collected by them to enable their accurate interpretation by others; and

¹⁶ In this context, data and samples includes collated information, data that is collected or measured, samples or specimens of material collected for analysis, and results derived from analysis of raw data.

¹⁷ This obligation expires when the Member is no longer able, in practical terms, to influence the ongoing management of the information, data, samples, materials or derived results gathered or developed during their activities, when their employer assumes responsibility on their behalf, or when the data or samples are transferred to a recognised long term data or sample repository which assumes responsibility for their further management.

¹⁸ Māori data sovereignty principles have been published by Te Mana Raraunga: <https://static1.squarespace.com/static/58e9b10f9de4bb8d1fb5ebbc/t/5bda208b4ae237cd89ee16e9/1541021836126/TMR+Ma%CC%84ori+Data+Sovereignty+Principles+Oct+2018.pdf>.

- h. endeavour to safeguard the privacy of individuals and segmented groups when data sets are collated or aggregated with other data; and
- i. endeavour to minimise the risk of data harm¹⁹; and
- j. where practicable, lodge samples of any newly discovered flora and fauna in recognised national collections²⁰ or with appropriate authorities.

Responsibilities to colleagues

9. *To demonstrate and encourage ethical behaviour and high professional standards amongst their colleagues.*

To meet this standard, Members should —

- a. provide comment in a respectful way to colleagues on the quality of their work or on their proposals, manuscripts and papers, and treat all information gained in such activity as privileged and confidential; and
- b. appropriately acknowledge and fairly record the intellectual, cultural, material and practical contributions of others to their work and results; and
- c. avoid falsely, vexatiously or maliciously impugning the reputations of colleagues or otherwise compromising or denigrating them in order to achieve commercial, professional or personal advantages; and
- d. ensure that those they supervise or guide comprehend both the need to further develop their own knowledge and skills and the behavioural norms of a professional researcher or scholar in the discipline or field.

Harassment, bullying and malice

10. *To not harass²¹, bully or act with malice towards individuals or groups of people.*

Responsibilities for sustainability and guardianship of the environment

11. *To take reasonable steps to prevent their activities leading to significant avoidable or unjustified degradation of the environment, and where appropriate to contribute to improved conservation, protection and sustainability.*

To meet this standard, Members should —

¹⁹ Data harm is adverse effects caused by uses of data (including big data) that may impair, injure, or set back a person, entity or society's interests.

²⁰ For example, taxonomic collections held in museums, Crown research institutes or universities.

²¹ Harassment is conduct that unjustifiably disturbs or upsets another. It is characteristically repetitive and may be physically or psychologically harmful to the victim. It is exacerbated when the consequences of not accepting the behaviour may be disadvantageous to the victim. Forms of harassment include but are not limited to: verbal comments that reinforce social structures of domination (related to gender, gender identity and expression, sexual orientation, marital and family status, disability, physical appearance, body size, culture, ethnicity, nationality, age, religion or lack thereof, beliefs or socioeconomic status etc); sexual images in public spaces; deliberate intimidation, stalking, or following; harassing photography or recording; sustained disruption of talks or other events; inappropriate physical contact; unwelcome sexual attention; and advocating for or encouraging any of the above behaviour.

- a. identify and assess the impacts of their activities on the environment, and take reasonable steps to avoid or mitigate avoidable or unjustified degradation; and
- b. where practicable, inform decision makers, mana whenua and others likely to be significantly affected of any major environmental impacts or foreseeable consequences for the environment of their activities; and
- c. not impair the ongoing conservation of unique or valued features, components and systems within the Aotearoa New Zealand natural environment; and
- d. not impair the ongoing protection and conservation of artefacts, places, or areas of cultural or historical significance; and
- e. where practicable, partner with Māori as kaitiaki in activities likely to affect taonga species, or flora and fauna indigenous to Aotearoa New Zealand; and
- f. support improved sustainability through seeking to use resources efficiently, and where practicable, through re-use and recycling.