

Resolution of Public Consultation Comments for

ICRP Publication 153: Radiological Protection in Veterinary Practice

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Background

ICRP is grateful for the time and effort taken to review and comment on draft publications during their public consultation period. Active public consultations are a valuable part of developing high-quality publications. Comments are welcome from individuals and organisations, and all are considered in revising the draft prior to publication.

To ensure transparency, comments are submitted through the ICRP website and visible by visiting www.icrp.org.

Public Consultation

This draft report was available for public consultation for three months, ending 18 March 2022. Responses were received on behalf of eight organisations and four individuals (see annex).

In addition to the responses from public consultation, comments were received from ICRP Committees 3 and 4 as well as the Main Commission before and after consultation. Prior to consultation, comments were also received from American Veterinary Medical Association (Council on Veterinary Service), American College of Veterinary Radiology Radiation (Protection Review Committee), European College of Veterinary Diagnostic Imaging, and the Heads of European Radiation Protection Authorities working group on veterinary applications.

The revised report was approved for publication by the Main Commission in September 2022, with agreement on some final revisions.

Resolution of Comments

The many constructive comments received during public consultation are gratefully acknowledged and have helped the authors improve the report. It has been revised throughout and in particular:

- Figures deemed extraneous were removed (former Figs 2.4, 3.3, 3.5, 3.6). Former Fig. 3.2 was also removed as comments suggested it could be confusing or easily misinterpreted. Former Annex B was also removed as some commenters considered it to be too specific.
- New, modern photographs were added to complement the historical photographs (specifically, new Figs. 3.1, 6.2, 6.3, 6.4)

- The literature review was expanded and on the order of fifty references were added. In some instances, this was to provide additional support for existing content, and in other cases additional, concise points were added.
- Information was added as available from ACVR and EVBS as to number of relevant veterinary specialists/services (a global database is not available).
- Phrasing was adjusted throughout for clarity and consistency, e.g., “veterinary exposure” was unclear, so the specific phrase was not used; instead, phrasing was changed to “exposures received in a veterinary setting” or similar. Similarly, some extraneous or potentially confusing phrasing was removed.
- A brief discussion of research animals was added in Chapter 6 (section 6.1.4) to clarify that this topic extends beyond radiological protection in veterinary practice and thus the report, with complementary language added to §45 and §81.
- Language was added to clarify that the DRLs as used in human medicine may be adapted to veterinary practice rather than necessarily adopting the same exact formulation; that is, a similar, comparative (and proportionate) benchmark is needed (§54, 83, 111, 129).
- Some paragraphs, or sections of paragraphs, were rearranged slightly for clarity (e.g., section 3.2.1, §40, 86); Chapter 4 (Ethics and Values) was restructured to be more consistent with the ongoing work of Task Group 109 (Ethics of Radiological Protection in Medicine).
- Clarity was added to Section 6.1 that the three levels of justification for animal patients need to be considered in the broader context of risks to workers, members of the public, and the environment (§89).
- Clarity was added to Section 6.2 that “economic and societal factors” as mentioned in the current principle of optimisation encompass animal welfare.
- Additional mention of the need for a graded approach was included (§108, 145, 156).
- Explicit mention of dose constraints was incorporated into the text regarding optimisation and application of dose limits (§111, 144)

Opinions on the content of the report and its usefulness were generally in agreement that the subject was useful, but there was some disagreement surrounding (a) what the scope/structure of the report should be (and corresponding level of detail) and (b) the usefulness, necessity, or extent of protection of the animal patient. There was also some concern expressed that there was an overemphasis on ethics.

With respect to the scope of the report, there was some feedback requesting additional practical guidance, whereas other feedback requested less practical guidance. The report strikes a balance between these preferences by providing only a few practical examples to improve clarity in the points being made. With respect to the structure of the report, it is purposefully parallel to that of *Publication 105 (Radiological Protection in Medicine)* for consistency. Some commenters felt like the draft report was too long; the report is comparatively short for an ICRP publication, and we believe the current length is necessary to ensure clarity in the discussion.

The primary concern expressed regarding protection of the animal patient was related to the implementation of said protection potentially not being proportionate or consistent with a graded approach. As included in the bullet points above, we believe that the clarification of prior phrasing and inclusion of additional references should help address these concerns.

With respect to the inclusion of ethics, the intent of Chapter 4 and associated annex is not to replace veterinary deontology or the core ethical values of *Publication 138*, or to suggest that

those reading are unfamiliar with ethics, but to provide clarity in how the approaches or existing discussions related to ethics are complementary and applicable. Part of the mandate for the task group included “ethics applied to protection of animals and plants in the environment,” necessitating a broad scope discussion (Annex B). As the first ICRP publication related to veterinary practice, we also feel that it is important to outline fundamental, foundational ethical values relevant in this context.

Annex: Consultation respondents

Responses were received on behalf of the following organisations: Norwegian Radiation and Nuclear Safety Authority; International Atomic Energy Agency; UK Health Security Agency; State Office for Nuclear Safety (CZ); Swedish Radiation Safety Authority; Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection; Radiation and Nuclear Safety Authority Finland (STUK); UK Society for Radiological Protection. Responses were received from the following individuals: Jaiki Lee; Petr Papírník; Roger Coates; Kharman Akram Faraj.