

Harmonisation of the Care and Use of Animals in Field Research

Gardermoen, 21 – 22 May 2008

A consensus document from the participants

Introduction

An international consensus meeting was held in May 2008 at Gardermoen, Oslo, to discuss the care and use of animals in field research. A total of 52 participants from Norway (43), Great Britain (4), Canada (2), Germany (2) and Sweden (1) attended.

The specific aims of the meeting were:

- to provide a forum for dialogue between stakeholders (regulators, researchers and animal welfarists).
- to increase focus on "the 3Rs" (*Replacement, Reduction, Refinement*) of Russell & Burch (http://altweb.jhsph.edu/publications/humane_exp/het-toc.htm).

The meeting was jointly organised by:

- The Norwegian Animal Research Authority (www.fdu.no).
- The Norwegian Institute for Nature Research (www.nina.no).
- The Norwegian Polar Institute (www.npolar.no).
- Norecopa (Norway's national platform for the 3Rs, www.norecopa.no).

The presentations held at the meeting are available on Norecopa's website. Norecopa aims to advance the 3Rs in animal research and testing, and facilitate cooperation between stakeholders. A further aim of the meeting was therefore to identify tasks for Norecopa in the area of field research. Although research on captive wild animals also raises ethical and welfare issues, this subject was not addressed at the meeting.

This document summarises the participants' views on field research and the potential for implementation of the 3Rs in the field. It is a consensus document that has been circulated to all participants for approval.

1. Strengths of field research

1. Field research is generally performed in the animals' natural environment, usually while they continue their natural behaviours. This generally leads to better quality science with a high level of animal welfare, giving results that are more applicable to free-living animals in the field.

2. Much field research is more observational than experimental in nature, seeking to quantify key parameters of the animal's life history.
3. Many field researchers have a great personal affection for the species they study and are highly interested in conservation. They may get to know many of their research subjects as individuals and are often highly knowledgeable about their species.
4. There is a general acceptance in society for some degree of field research, either for conservation purposes or to increase human knowledge.
5. Field research can benefit conservation and sustainable management. It can also increase people's knowledge of and respect for the world around them.
6. Field research mainly involves studies on the target species themselves, unlike basic research in the laboratory where the animals used are "models" for humans or other animals.
7. The results of field research are often immediately available and can be integrated quickly in management programmes.

2. Weaknesses of field research

1. Some field researchers are not aware of the 3Rs or have not received formal training in the concept or its implementation. The 3Rs are also sometimes perceived as a tool designed for research on animals in the laboratory. Emphasis on the 3Rs is often lacking in applications for animal research.
2. Traditional thinking can hinder the implementation of the 3Rs in field research. Beliefs that wild animals are more stoic or resistant to infection on the basis of their observed behaviour, rather than scientific knowledge, can lead to inadequate perioperative care and provision of pain relief.
3. Assistance from research animal specialists is not as readily available as it is in many laboratories.
4. Field researchers are often focussed more on populations rather than the individual. This can potentially have negative welfare consequences for individual animals.
5. Capture and selection of specific individual animals is often difficult to achieve.
6. Current statistical methods often require large animal numbers, which can be difficult to achieve under field conditions.
7. There is a general lack of research on the welfare implications of field studies, for example quantifying the stress of capture and handling, the effects of telemetry

devices, and recovery from surgical procedures. These aspects are currently poorly reported in the literature.

8. There are major problems with assessing the welfare of wild animals in the field, due to lack of access to the animals and because many species are adapted to conceal signs of suffering or poor health.
9. Knowledge of welfare indicators for the species that are commonly used in field studies is often sparse. Validation of these indicators is challenging, due to the logistics of working with animals in the wild and the desire to minimise handling time.
10. There are currently very limited options for publishing negative results, which means that other researchers may continue to use unsuccessful protocols or techniques.
11. Legislation often lacks good definitions of key issues such as “animal”, “research”, “non-physiological state” and guidance on acceptable techniques (e.g. for capture, blood sampling, marking for identification, anaesthesia and humane killing). More guidelines and refinements to commonly used techniques are needed, as well as clear statements on which procedures need a licence.
12. There is too little dialogue between researchers and regulators. Researchers often consider regulators to have insufficient knowledge to be able to assess their applications. Regulators feel that researchers do not always provide sufficient information (for example on the potential harm to the animals) to make a decision.
13. Researchers must often make rapid decisions in the field with respect to changing protocols or animal numbers, which are difficult to predict and include in project applications.
14. There is an inherent concern in society for wild animals, which are perceived as being owned collectively and known to be vulnerable to the effects that humans have on the environment. This applies particularly to wildlife research that may cause pain, suffering or distress. Researchers are therefore not always open to the public about their studies, due to fears of animal rights activism or because of a perceived threat to academic freedom.
15. Lack of funding for field research is still a problem, including studies designed to implement the 3Rs in, for example, methods for capture, handling and observation.
16. Politics often determine wildlife policy and those areas of field research that receive the most funding.

3. Tasks for field researchers

Researchers should:

1. review and analyse studies where there are animal welfare or ethical issues, for example those with unacceptable levels of mortality, to put in place measures that will avoid repetition of these events.
2. develop and adopt methods that can lead to some reduction in the numbers of animals used in invasive research, such as camera trapping and the collection of faeces or hair for DNA analysis.
3. consider new techniques such as the use of bio-loggers, drop-off collars or imaging as possibilities for refinement, if they are used in such a manner that they do not cause pain, suffering or distress, or lead to an increase in animal use.
4. help develop more training courses specifically designed for wildlife researchers.
5. encourage cooperation and communication with ethologists, animal welfare specialists, farm and laboratory animal researchers, zoo specialists and statisticians.
6. cooperate with industry to produce equipment that is less disruptive to the animals' normal way of life.
7. cooperate with animal protection organisations, with the aims of improving animal welfare and the ethical review process.
8. arrange more meetings with all stakeholders to address specific issues relating to the necessity and justification of wildlife research, harm-benefit assessments and the application of the 3Rs.
9. help to produce and disseminate more guidelines and protocols for a wide range of species and types of wildlife research, with input from all stakeholders including regulators, researchers, relevant industries (e.g. telemetry device manufacturers), veterinarians, animal technologists and welfare organisations. These guidelines should include advice on how to fill in application forms for field research.
10. aim for better dialogue with the regulators and funding bodies to ensure that the application process runs more smoothly for all concerned, and that the ethical and animal welfare issues are addressed more effectively.
11. use the public's interest in wild animals to produce constructive, pre-emptive statements that explain the purpose of their research and methods being used,

acknowledging potential harms and highlighting how the 3Rs have been implemented.

12. acknowledge and respect public concerns. They should also concede that some people will never find it acceptable to conduct field research using wild animals, no matter how well it can be justified with a minimum of harm.

4. Tasks for Norecopa

Norecopa should:

1. arrange further meetings on a regular basis (every 1-2 years) where all stakeholders are represented, including regulators, researchers, relevant industries, veterinarians, animal technologists and welfare organisations.
2. be an arena for discussion of the improvement of all aspects of wild animal use, including necessity, justification, ethical issues, guidelines and implementation of the 3Rs.
3. encourage harm-benefit analysis of experiments involving wildlife.
4. collect, review and stimulate the production of guidelines and protocols for field research, recommending those that represent best practice for all of the above issues.
5. stimulate the production of better guidelines for the completion of application forms.
6. communicate and liaise with the Norwegian Animal Research Authority and Norwegian Research Council on all of the issues mentioned in this document.