Questionnaire for experts and organisations on the preliminary findings of an impact assessment of options for the revision of the Directive for the protection of animals used in experiments

Aims of this questionnaire

The expert questionnaire serves to verify, redirect and complete the preliminary findings of the impact assessment of certain options to revise the existing legislation on the protection of animals used for experimental and other scientific purposes (Directive 86/609/EEC).

To whom it is addressed

This questionnaire is addressed to experts in the area of animal welfare, animal testing, animal science, natural sciences (especially biology, medicine, pharmacology and toxicology), legal and economic affairs related to these areas and who are in the position to either confirm the identified impacts or provide factual, quantifiable information to the contrary.

How the answers are used

The answers will be used by the European Commission to complete the impact assessment of the revision of Directive 86/609/EEC on animals used for experimental and other scientific purposes. An impact assessment aims at providing a transparent and rational basis for political decision-making. It consist of several steps: problem identification, data gathering, development of options for legislative changes, screening possible impacts of each of these options, gathering further information, refining the impact analysis and possibly refining the options. It is then for political decision makers to choose the best options in the light of their likely predicted impacts.

In this project, we are at the stage where preliminary findings about the impact of certain options need to be verified and further data collected. The impact assessment will be finalised in the autumn of 2006, the political decisions leading to a legislative proposal by the European Commission can be expected towards the end of the year, leading to an adoption of the Commission proposal in the first quarter of 2007.

Structure of the questionnaire

The questionnaire contains twelve chapters about the critical areas of the Directive that could be revised. Each chapter contains a summary of the current situation, an explanation of any problems, an outline of options to address these problems, and the preliminary findings about the impacts that would occur if a particular option was to be implemented. Since the questionnaire covers a wide range of issues, please feel free to fill in only those parts which are applicable to you and/or your organisation.

What we are interested to receive

The purpose of this questionnaire is to verify whether the preliminary findings about the likely impacts are correct. If you support the preliminary findings by answering "Yes" or if you abstain by answering "No opinion", you can voluntarily provide further factual / quantitative information in an open text box at the end of each section.

If, however, you do not support the preliminary findings by answering "No", you are required to provide further arguments accompanied by factual and quantitative data and if possible

the source of your information. "No" answers will be included in the statistics and taken into account only if accompanied by an appropriate factual justification.

What we are not interested to receive

This questionnaire does not provide a forum for general political statements. These will be taken into account at a later stage in the political decision-making process, not at the current stage when preliminary findings about the impact of certain options need to be verified or contradicted to allow the Commission to focus on areas where it still has to refine its analysis. Therefore, it is not useful to submit the same answers many times because what counts are the arguments, facts and figures themselves that are submitted, not the number of times they are submitted.

Confidentiality

If you want to keep your name and organisation confidential, **you** are responsible for ensuring that you do not mention the confidential information in any of the open text fields in questions 4 to 32 and that you have clicked the appropriate confidentiality box at the beginning of the questionnaire. The Commission will publish the responses to the open text fields on the Internet without any editing (but keeping the name of the submitter confidential if the appropriate box was ticked. Further information can be found in the privacy statement available on the introductory page of the internet consultation.

Scoring of impacts

The strength or weakness of each impact (low, moderate, high, neutral impact) is expressed by a number of pluses and minuses in the questionnaire:

+++	strong positive impact
++	moderate positive impact
+	slight positive impact
0	neutral, no impact
-	slight negative impact
--	moderate negative impact
---	strong negative impact
- -> +	initially negative impact turns into a positive impact after some time

Definitions for some terms used in the document

Term	Definition for the purposes of this consultation
Technique:	A technical act on one or more animals for an experimental or other scientific purpose and which may cause that animal or those animals pain, suffering, distress or lasting harm. Examples of technical acts would be gavage, injection e.g. saline or other substance, laparotomy, withholding of food/water.
Procedure	A combination of one or more technical acts carried out on an animal for an experimental or other scientific purpose and which may cause that animal pain, suffering, distress or lasting harm.
Experiment	See procedure.
Project	A coherent programme of work aimed at meeting a defined scientific objective or objectives and involving a combination of one or more procedures.

Genetically altered/modified animals**:**

	An animal in which the heritable DNA has been intentionally altered, or the progeny of such an animal(s) or of an animal with a mutation recognised as harmful. This includes animals produced by genetic modification or by induced mutagenesis, or animals created by nuclear transfer procedures, as well as harmful mutant lines arising from spontaneous mutations. This definition excludes animals with changes that are not heritable, such as gene therapy interventions or DNA immunisations.
Harmonisation	Applying the same legislative requirements in all EU countries (or in some cases within a Member State)
Humane killing	A method of killing that causes no avoidable pain, distress or other suffering to the animal(s) concerned.
In vitro	Literally meaning in glass, an experimental technique that may involve animal organs, tissues and cells taken from dead animals.
In vivo	Experiments involving a living animal with its whole body systems intact in order to study what happens in the body itself
Regulatory testing	Testing required by national, European or international legislation.
Three Rs	Reduction, Refinement and Replacement of animal experiments by methods that either reduce the number of animals required for the same result; refine the methods to reduce pain, suffering and/or distress caused to the animals; and replace methods by those not using live animals.

Practical instructions to fill in the questionnaire:

1. Due to the fact that this questionnaire aims at collecting factual and quantifiable data, the replies need to be prepared in advance in order to complete the interactive questionnaire on the Internet, which only allows 90 minutes for its completion.
2. We therefore recommend you download the Word file of the questionnaire and fill it in using Word. That will allow you to carefully prepare your answers to the open text questions and verify whether you have kept the maximum number of characters (1000 characters which equals about 15 lines for each open text field or roughly half a page of A4). You can download the Word version of the questionnaire here. [link to website] or the PDF version here [link to document].
3. For technical reasons, the European Commission can only ensure a timely consideration of your contribution if it is submitted in the format of the online questionnaire via the internet.
4. After preparing all the answers in Word, please open the electronic questionnaire and fill it in. It is useful to begin with the closed questions and then copy and paste the answers you have developed in Word into the open text fields of the electronic questionnaire. You will have 90 minutes to fill in the complete electronic questionnaire and to submit it (after 90 minutes, the system will automatically close which could lead to a loss of answers which were not yet submitted).
5. Please note that you should not use the "Back" button in the upper left and corner of your screen to navigate the online questionnaire because this will lead to a loss of all

the data that you have already inserted. For navigation, you should rather use the buttons "Next" and "Previous" at the bottom of the questionnaire page.

6. Before final submission of the electronic questionnaire, please make sure that you ticked the correct confidentiality box in Question 2 and that you did not mention your institution's name anywhere in a text field, if you wanted to keep it confidential.

7. If any of the compulsory fields have not been filled in, the system will not allow you to submit the questionnaire but will re-direct you to the problematic answer and give you an opportunity to correct it. An error message will appear in purple red colour under the question in which a problem occurred.

8. After the successful submission of the questionnaire, a confirmation message will appear on your screen and you can print your answers.

Thank you for your participation and valuable contribution to this process!

Sections:

Questionnaire for Internet consultation

I. Scope

A. Introduction

I.a) Current provisions of Directive 86/609/EEC

"Animal" covered by the scope of the Directive is considered to be a living non-human vertebrate, including free-living larval and/or reproducing larval forms. The types of procedures covered by the scope are:

- Use of animals in experiments which may cause it pain, suffering, distress or lasting harm;
- In areas of applied research, development, manufacture, quality control and regulatory purposes;
- Diagnosis of disease;
- Creation of a transgenic line.

I.b) Current situation in Member States

A significant number of animals are currently used in basic research, education and training within the EU. Out of the total 10.7 Mio animals used annually for experiments in the EU, approximately 3.8 Mio animals (35%) are used in this respect. These animals are mainly used by universities and private research institutes working in accordance with high animal standards. 80% of Member States have covered basic research under national regulation.

It is estimated that 30% of the experiments and tests involving laboratory animals done in private sector establishments falls under basic research. For universities and other private research institutes, the share of basic research amounts to 75%. Around 3.2% of all animals are used in the fields of education and training.

Around 40% of Member States do not have legislation in place to cover animals killed for their organs and tissue. In most cases, euthanasia of animals for *in vitro* scientific work is not considered an animal experiment. In some Member States, such as Sweden and the Netherlands, these animals are included, whereas in some other Member States animals killed for *in vitro* experiments only have to be reported.

The situation regarding the inclusion of invertebrates and foetal forms is even more diverse. At least 70% of Member States do not include these species, whereas Germany fully includes both vertebrates and invertebrates, though there is no obligation for authorisation/ethical evaluation of projects with invertebrates.

I.c) Trends and implications

During the last 20 years since the introduction of Directive 86/609/EEC a shift from *in-vivo* to *in-vitro* experiments can be observed. This has led to an increase in animals bred for the primary purpose to be killed for their organs and tissues. The use of fetal and embryonic forms has also increased. Preliminary analysis shows that around 175,000 fetal and embryonic forms of mammalian species (at the stage of at least 2/3 of gestation) are used in the EU per year (excluding fish fry). Due to the increasing acceptance of the Three Rs principle a further shift into these directions can be expected.

I.d) Problem dimension

Basic research is not covered by the current Directive. Neither does the current Directive cover animals killed for organs and tissue, nor invertebrates and foetal/embryonic forms.

The different levels of animal protection between Member States are undermining the objectives set out in the Protocol to the Treaty of Amsterdam which formally recognises the welfare of animals as sentient beings. Even though 80% of Member States cover today basic research under their national legislation the area of application differs significantly. Whereas in several Member States all scientific work in basic research involving vertebrate animals is covered, other Member States exclude, for example, field studies and some nutrition studies.

The scientific developments during the last 20 years since adoption of the Directive have led to activities at national level to improve national legislation. However, these national legislative acts have result in a fragmented regulatory environment in Europe and consequently to varying competitive frameworks between Member States.

I.e) Potential solutions

The options could include extending the scope of animals and procedures covered under the current Directive to create a uniform regulatory environment within the EU for at least 3.8 Mio animals currently not covered by the Directive. This would consequently result in a more competitive level playing field in this respect.

Do you support this overall analysis? Yes

B. Options and their impacts

- **Option 1: Extend the scope to cover animals used in basic research**

1.1. The extension of the scope to cover animals used in basic research would significantly improve the welfare of 500,000 animals (15% of all animals used for basic research) in 5 Member States not currently covering basic research while only creating moderate administrative costs. Any costs as detailed below will therefore only affect 5 Member States.

Do you support this overall analysis? Yes

Detailed impacts

1.2 Animal welfare: +++

A significant increase in animal welfare for 500,000 animals due to better breeding and housing and care conditions as well as treatment during and after experiments.

Do you support the preliminary findings Yes/

1.3 Control: +++

Improved control on the use of these animals due to inclusion into authorisation and ethical review criteria.

Do you support the preliminary findings Yes

1.4 Regulatory compliance: 0

Since most Member States (80%) already cover basic research under national legislation, the additional administrative burden for Member States due to authorisation and ethical review would be low.

Do you support the preliminary findings No opinion

Private sector

1.5 Costs due to authorisation: -

Costs for private establishments due to authorisation currently amounts to 3% of total costs for all projects currently under the scope of the Directive. An extension of the scope to include basic research would increase total project costs in basic research by a comparable amount.

Do you support the preliminary findings No opinion

1.6 Delays due to authorisation: - -

The delay due to authorisation procedures for projects which are currently covered by the Directive amounts to an average of 70 days for private establishments. It can be assumed that the same delay would occur for projects under basic research.

Do you support the preliminary findings No opinion

1.7 Costs due to ethical review: -

Costs for private establishments due to ethical review currently amounts to 2% of total costs for all projects currently under the scope of the Directive. An extension of the scope to include basic research would increase total project costs in basic research by a comparable amount.

Do you support the preliminary findings No opinion

1.8 Delays due to ethical review: -

The delay due to ethical review procedures for projects currently covered by the Directive amounts to an average of 30 days for private establishments (which are included in the delay due to authorisation). It can be safely assumed that the same delay would occur for basic research projects.

Do you support the preliminary findings No opinion

Public sector

1.9 Costs due to authorisation: -

Costs for public establishments due to authorisation currently amounts to 4% of total costs for all projects currently under the scope of the Directive. An extension of the scope to include basic research would increase total project costs in basic research by a comparable amount.

Do you support the preliminary findings No opinion

1.10 Delays due to authorisation: - -

The delay due to authorisation procedures for projects which are currently covered by the Directive amounts to an average of 100 days for public establishments. It can be safely assumed that the same delay would occur for basic research projects.

Do you support the preliminary findings? No opinion

1.11 Costs due to ethical review: -

Costs for public establishments due to ethical review currently amounts to 2.5% of total costs for all projects currently under the scope of the Directive. An extension of the scope to include basic research would increase total project costs in basic research by a comparable amount.

Do you support the preliminary findings? No opinion

1.12 Delays due to ethical review: -

The delay due to ethical review procedures for projects currently covered by the Directive amounts to an average of 90 days for public establishments (which are included in the delay due to authorisation). It can be safely assumed that the same counts for basic research projects.

Do you support the preliminary findings? No opinion

1.13 Justification [open text]

- **Option 2: Extend the scope to cover animals bred for the <u>primary purpose</u> of their tissue and organs to be used in experiments or other scientific purposes <u>with</u> an exemption for authorisation if euthanasia is performed by competent person using a method appropriate to the species**

  2.1 The extension of the scope to cover animals bred for the primary purpose of their tissue and organs would significantly improve the welfare of the animals involved. It can be expected that a small number of companies (breeders) will specialise in providing these services thus keeping additional administrative costs and consequently product costs low.

  Do you support this overall analysis? Yes

Detailed impacts

2.2 Animal welfare: +++

A significant increase of the animal welfare due to inclusion under the protection of the Directive for their breeding, housing and care and the application of standardised methods of euthanasia performed by competent persons.

Do you support the preliminary findings? Yes

2.3 Use of alternatives: ++

Inclusion of these animals would provide an indication of the uptake of alternative techniques (replacement/*in vitro/ex vivo*)

Do you support the preliminary findings? Yes

2.4 Public accountability and transparency: +++

Inclusion under the scope would provide for a more complete picture of animal use in the EU and thus provide better information to the general public and policy making.

Do you support the preliminary findings? Yes

2.5 Concentration of services: 0

The extension of the scope would lead to a concentration of companies providing organs and tissue. Exemption from authorisation is a major incentive for companies providing organs and tissue. It is not feasible for all companies to employ competent persons to perform this service using methods appropriate to the species. Only a few companies can be expected to specialise in this work. Breeders are best equipped to provide this service by performing standardised methods of euthanasia. The number of breeders is relatively low in Europe, most breeders are organised multi-nationally and are supplying Europe-wide. Increased costs to meet requirements for humane methods of euthanasia would not lead to a significant increase in product prices due to their relatively low share of total costs.

Do you support the preliminary findings? No opinion

2.6 Regulatory compliance: 0

The possibility to exempt humane killing under specific conditions from authorisation would not increase the cost for Member States

Do you support the preliminary findings? No opinion

2.7 Cost of experiments using tissue and organs: +

The costs of experiments at company and institution level would decrease due to economies of scale at the supplier-level.

Do you support the preliminary findings? No opinion

2.8 Justification [open text]

- **Option 3: Extend the scope to cover selected invertebrates species (*Cyclostomes, Cephalopods and Decapod crustaceans)***

  3.1 The extension of the scope to cover selected invertebrates species would significantly improve the welfare of the animals involved, whereas the regulatory compliance costs and additional administrative burden for user establishments is low due to their low share in total project costs.

  Do you support this overall analysis? No opinion

  Detailed impacts

  3.2 Animal welfare: ++

  The inclusion in the Directive of selected invertebrate species throughout their life-cycle would lead to an increase of animal welfare for these animals (in breeding, housing and care, during and after experiments).

  Do you support the preliminary findings? Yes

  3.3 Control: +++

  The inclusion of selected invertebrates would lead to a better control of the use of these animals due to the application of already existing authorisation and ethical review criteria to a wider range of animals.

  Do you support the preliminary findings? Yes

  3.4 Regulatory compliance: -

  The inclusion of selected invertebrates would lead to low additional administrative costs for most Member States. First analysis shows that about 1,000 experiments or scientific procedures with these species are carried out in the EU per year. An assumed even distribution among member states would result in an average of 40 additional experiments per country and thus a low increase in costs for authorities.

  Do you support the preliminary findings? No opinion

  3.5 Cost to user establishments: - -

  The inclusion of selected invertebrates would lead to a cost increase of a maximum of 7.5% of the total costs (due to additional statistical reporting requirements, as well as authorisation and ethical review procedures) for those companies and institutes, doing experiments primarily based on invertebrates

  Do you support the preliminary findings? No opinion

3.6 Justification [open text]

The Animal Procedure Committee recommended that the common octopus be brought into the UK Animal Scientific Procedures Act (A(SP)A) in 1992. The Animals (Scientific Procedures) Act (Amendment) Order (1993) brought this change into effect. In 2001, the Committee recommended that all cephalopods should be included in the Act as the addition of only one species, *Octopus vulgaris*, appeared to be anomalous. See APC (2002) *Minutes from APC meeting*, February 2002, available at: http://www.apc.gov.uk/reference/feb02.htm. As yet, no other invertebrate species have been included in the A(SP)A.

- **Option 4: Extend the scope to cover mammalian foetal and embryonic forms from the last third of gestation until birth)**

4.1 The extension of the scope to include mammalian foetal and embryonic forms from the last third of gestation would significantly improve the welfare of the animals involved, whereas the regulatory compliance costs and additional administrative burden for user establishments is low due to their low share in total project costs.

Do you support this overall analysis? Yes

Detailed impacts

4.2 Animal welfare: ++

Foetal and embryonic forms are increasingly used for animal experiments in Europe. The welfare of foetal and embryonic forms can be increased, if they come under the protection of legislation during the last 1/3rd of gestation.

Do you support the preliminary findings? Yes

4.3 Control: +++

The inclusion of foetal and embryonic forms would lead to a better control of their use due to the application of already existing authorisation and ethical review criteria to a wider range of animals.

Do you support the preliminary findings? Yes

4.4 Regulatory compliance: -

Most Member States do not cover foetal and embryonic forms under national legislation. It is estimated that yearly 175,000 foetal and embryonic forms of mammalian species are currently used in the EU (excluding larvae). The inclusion of these forms would lead to a 1.5% increase in administrative costs for the Member States because the share of foetal and embryonic forms in total animals is very low.

Do you support the preliminary findings? No opinion

4.5 Cost to user establishments: -

The inclusion of foetal and embryonic forms would lead to a cost increase of a maximum of 7.5% of the total costs (due to additional statistical reporting requirements, as well as authorisation and ethical review procedures) for those companies and institutes, doing experiments primarily based on these species.

Do you support the preliminary findings? No opinion

4.6 Justification [open text]

- **Option 5: Extend the scope to cover animals used in education and training**

5.1 The extension of the scope to include animals used in education and training would significantly improve the welfare of the animals involved, whereas the regulatory compliance costs and additional administrative burden for user establishments is low due to their low share in total project costs.

Do you support this overall analysis? No opinion

Detailed impacts

5.2 Animal welfare: +++

Current statistics show that approximately 340,000 animals per year are used in the areas of education and training. The inclusion of education and training would lead to a high increase of animal welfare for these animals throughout their life-cycle (breeding, housing and care, during and after experiments).

Do you support the preliminary findings? No opinion

5.3 Control: +++

The inclusion of animals used for education and training would lead to a better control of the use of animals due to the application of already existing authorisation and ethical review criteria to a wider range of animals.

Do you support the preliminary findings? No opinion

5.4 Regulatory compliance: 0

Since most Member States already cover education and training under national legislation the additional administrative burden due to authorisation and ethical would be low.

Do you support the preliminary findings? No opinion

5.5 Justification [open text]

II. Authorisation of projects

A. Introduction

II.a) Current provisions of Directive 86/609/EEC

In case an experiment may cause prolonged and severe pain, it has to be declared and justified to, or specifically authorised by, the authority.

II.b) Current situation in Member States

It is important to note in this context that terms "authorisation" and "ethical evaluation" are interlinked. This is especially important when discussing delays due to "authorisation". In majority of cases, if not all, the authorisation process includes key elements for ethical evaluation.

It is not possible to separate the two in a meaningful manner and in a way that would be applicable throughout the EU. Therefore the stated "delays due to authorisation" are considered to cover also delays due to ethical evaluation and these are both detailed in this section. Consequently the section on ethical evaluation will not go into any quantitative data on delays.

Authorisation procedures are quite different in Europe, and particularly long in some Member States. In general, currently 21 Member States, covering nearly 90 % of animal use, require authorisation of projects.

The regulatory setting for project authorisation in Europe is, however, complex. In most Member States, authorisation is primarily granted at a national level with Germany, the Netherlands, Belgium, Finland, Greece and Spain having explicitly decentralised systems of authorisation. Authorisation is mostly granted either to registered establishments or to individuals carrying out animal experiments. Most Member States also have some forms of authorisation systems at the individual project level, mostly in combination with authorisation for establishments and personnel.

Ethical evaluation of the project is often a prerequisite for authorisation.

In some Member States the procedures to obtain the first authorisation are significantly different from the procedures used for renewal of an existing licence.

II.c) Trends and implications

First analysis shows that the costs of authorisation of projects are approximately 3 to 4% of the overall costs of an animal experiment. Most stakeholders agree that well informed authorisation procedures are required for a good prior evaluation of a project's possible negative consequences for animal welfare. Transparent and well informed authorisation procedures also contribute to the quality of the results of animal experiments. First analysis evidence shows also that authorisation requirements are far less important reasons for out-sourcing animal testing than for instance the different levels of wages and specialised expertise in different Member States and 3rd countries.

II.d) Problem dimension

The current Directive does not require compulsory authorisation of projects.

The average delay of an experiment due to an authorisation in Europe is between 70 and 100 days, with significant differences between Member States varying from 0 up to 200 days. This naturally results in an uneven level playing field for user establishments in different countries and on the individual circumstances.

One of the main reasons is the lack of transparent criteria and standards for the authorisation procedures. Most Member States authorities have no clear standards in terms of timing of procedures and often also the criteria for decision-making are – at least from the applicants' point of view – open for interpretation.

It is reported, that even in Member States with high and transparent regulatory standards, up to 70% of all applicants are asked to provide additional information during the authorisation procedure. Considering, that these 70% do not include correspondence with the applicant to improve the project during the ethical evaluation process, this clearly shows the necessity to enhance the quality of authorisation procedures as such.

II.e) Potential solutions

Regarding the large differences in authorisation practices in Europe, a level playing-field should be established to guarantee comparable minimum requirements for authorisation.

The introduction of compulsory authorisation for individual projects could be a highly effective instrument for enhancing animal welfare but only if minimum requirements are defined and implemented by all Member States. These minimum criteria could include:

1. Compliance check systematically assessing elements such as

   - the authorisation of the establishment is valid
   - the authorisation of the personnel is valid
   - the competence of personnel is demonstrated
   - housing and care standards are complied with
   - an animal welfare officer works in the establishment
   - a veterinary surgeon is named and available on request
   - the latest inspection report confirmed compliance
   - the statistical reporting obligations have been complied with during the previous reporting period
   - a scheme for local ethical review process throughout the project lifetime is in place

2. Supporting opinion by a detailed ethical evaluation of the respective project(s)

3. Setting a deadline during which the authorising body is required to reply to an application.

For the purposes of the revision of the Directive, the elements of authorisation and ethical review do not overlap but complement one another (see section on Ethical Review). The way in which authorisation would be granted in relation to ethical evaluation (e.g. centralised, decentralised, parallel, separate) could be determined by Member States taking into account their current infrastructure.

Do you support this overall analysis? Yes

B. Options and their impacts

Option 1: Authorisation of individual projects with compliance check

Overall preliminary assessment

1.1 Preliminary assessment shows an overall positive impact: Authorisation of individual projects can increase animal welfare significantly, due to an assurance that minimum legal requirements are met by the applicants. A reduction of unnecessary experiments may occur. No increase in project delays is to be expected if the authorisation procedure is implemented in an efficient way and the objectives harmonised throughout the EU Member States. It should also be noted that in the current systems some duplication of activities occurs which, if avoided via restructuring using best practises as examples, could result in further savings in the administrative burden.

Overall assessment: positive

Do you support this overall analysis? Yes

Detailed impacts

1.2 Animal welfare: +++

The authorisation of individual projects would lead to a high improvement in animal welfare for the approximately 750,000 animals used in those 4 Member States who do not yet have a system of project-authorisation due to a better and more systematic check of compliance with the legal requirements to ensure animal welfare.

Do you support these preliminary findings? Yes

1.3 Animal welfare (additional impact): ++

It can be expected, that also for the remaining 10 M animals moderate improvements in animal welfare will take place, because the definition and compliance check of transparent and harmonised criteria will provide more valid information.

Do you support these preliminary findings? No opinion

1.4 Control and transparency +++

The authorisation of individual projects with a compliance check would lead to a high improvement of authorisation procedures, due to an increase in transparency of the relevant authorisation requirements which contribute positively to an acceleration of the existing procedures.

Do you support these preliminary findings? Yes

1.5 Control and transparency (additional impact): +

The introduction of a fixed deadline for authorisation bodies to respond to authorisation applications would not impact negatively the quality of authorisation, because improved and transparent criteria would lead to

better structured and more comprehensive applications, thus speeding up the decision making process.

Do you support the preliminary findings? No opinion

1.6 Competitiveness and level playing field for companies and institutes: +++

A requirement to respond to authorisation applications within a fixed period, would have high positive impacts on European companies and research institutes, due to an increase in competitiveness in the international arena, where faster processing times can be observed currently.

Do you support these preliminary findings? No opinion

1.7 Competitiveness and level playing field for public sector: ++

Average delay due to authorisation is slightly higher for public (90 days) compared with private (70 days) applicants, moderate positive impact can thus be expected for public sector, due to a level-playing field for all applicants in Europe

Do you support these preliminary findings? No opinion

1.8 Public accountability and transparency: +++

The authorisation of individual projects would have high positive impacts on public accountability. This would be achieved via increased public confidence in the infrastructure to ensure minimum level of animal welfare in animal experiments.

Do you support these preliminary findings? Yes

1.9 Regulatory compliance to Member States with no project authorisation: - - -

Authorisation of individual projects based on compliance check would lead to high administrative compliance costs for those Member States such as Sweden, Denmark and Ireland who currently have authorisation systems exclusively based on establishment- or personal level.

Do you support these preliminary findings? No opinion

1.10 Regulatory compliance to Member States with existing project authorisation: - → +

The costs for the 21 Member States, covering 90% of animals used in experiments, already practising project-based authorisation (in most Member States in combination with institutional or personal licences) would be low to medium. This would be achieved via improved quality of applications which would in the medium-term speed up procedures and reduce administrative costs for double-checking the information given in them.

Do you support these preliminary findings? No opinion

1.11 Costs to private sector: **-**

There would be a low increase of direct costs at private establishment level (at present authorisation procedures count for about 3% of the overall project costs), as private applicants would have to provide better structured and confirmed information already in the application form.

Do you support these preliminary findings? No opinion

1.12 Costs to public sector: **-**

There would be a low increase of direct costs at public establishment level (at present authorisation procedures count for about 4% of the overall project costs), as public applicants would have to provide better structured and confirmed information already in the application form.

Do you support these preliminary findings? No opinion

1.13 Justification [open text]

- **Option 2: Authorisation of a group of projects for regulatory testing**

Overall preliminary assessment

2.1 Preliminary assessment shows an overall positive impact of this element. Authorisation of groups of projects for regulatory testing (without exemption for ethical evaluation) would reduce the average costs of this type of projects at the company and institute level due to economies of scale. These positive impacts would also occur at the level of authorisation bodies in Member States, due to a more flexible and efficient handling of the authorisation procedures for this type of projects.

Overall assessment: positive

Do you support this overall analysis? No opinion

Detailed impacts

2.2 Users: +++

Authorisation for groups of projects would highly reduce costs of product-licensing at user (private/public) level, due to economies of scale in regulatory testing.

Do you support the preliminary findings? No opinion

2.3 Competitiveness and SMEs: +++

Authorisation of groups of projects would have high positive impacts on the economic competitiveness especially on SMEs, due to a reduction in the delays for product based on regulatory testing.

Do you support the preliminary findings? No opinion

2.4 Competitiveness and research: +++

Authorisation of groups of projects for regulatory testing would have high positive impacts on the competitiveness of Europe as research place, due to far more flexible procedures, leading to a quicker transfer from innovation to products.

Do you support the preliminary findings? No opinion

2.5 Competitiveness of industry and innovation: +++

Authorisation of groups of projects for regulatory testing would have high positive impacts on the competitiveness of relevant industry in Europe, due to far more flexible procedures, allowing a quicker marketing of new products.

Do you support the preliminary findings? No opinion

2.6 Administrative costs for users: +++

Authorisation of groups of projects for regulatory testing would have high positive impacts on the reduction of administrative burden for companies and public institutions, due to less paperwork and statistical reporting

Do you support the preliminary findings? No opinion

2.7 Regulatory compliance: ++

Authorisation of groups of projects would reduce the administrative expenditure for this type of project at the level of Member States authorisations bodies, due to more efficient procedures.

Do you support the preliminary findings? No opinion

2.8 Public image: - - -

Authorisation of groups of projects for regulatory testing would have high negative impact on the public image of industry, due to a high public awareness of the suffering of animals in regulatory testing.

Do you support the preliminary findings? No

2.9 Animal welfare: 0

Animal welfare would not be compromised since the key elements would be addressed via the ethical evaluation.

Do you support the preliminary findings? No opinion

2.10 Duplication of testing: 0

There would be a low risk of increased duplication of regulatory testing, as a result of decreased individual control at project level due to the characteristics of duplication in regulatory testing area (see section on duplication). Duplication of testing is mainly addressed during ethical evaluation (cross reference to section on ethical review).

Do you support the preliminary findings? No opinion

2.11 Justification [open text]

Extract from Nuffield Council on Bioethics (2005) The ethics of research involving animals (London: Nuffield Council on Bioethics) on the importance of openness and transparency.

2.29 The underlying assumption of most Western states is that a system of representative democracy is the most appropriate model to devise policies that are compatible with the wide range of views held by members of the public. Nonetheless, controversies remain in many areas, and parliamentarians and policy makers are required to justify their decisions, especially in areas where there is no consensus. In order to keep the public committed to democratic institutions and processes, all stakeholders need to have, as far as possible, access to relevant information (see Box 13.4). It is also necessary to offer credible and legitimate opportunities to contribute views that policy makers should consider in their decisions. An atmosphere of openness and transparency is crucial in this respect.

2.30 Until recently, most scientists were reluctant to engage with the public. Some have had concerns about the possibility of becoming victims of aggression. Others may have decided that explaining or justifying their research to lay people was unnecessary. Currently, there is a small, but increasing number of academic and industrial scientists, and scientific institutions involved in animal research who are more willing to engage in public debates about their work, particularly in relation to ethically sensitive matters. They take a proactive stance in explaining their research, the reasons for conducting it and the beneficial outcomes that they anticipate for society.[40] For example, the Roslin Institute, whose researchers cloned the sheep Dolly in 1996 (see paragraph 5.28–5.29), invited representatives of the press and the public to visit its laboratories, in reaction to the controversies about research involving reproductive cloning. The Institute also aims to increase knowledge about animal research among non-scientific or non-technical staff who interact with the local community. The CRO HLS has also generally increased openness. When a new senior management team was appointed in 1998, several measures were adopted in recognition of the fact that until then there had not been sufficient engagement with the public. Visits are now regularly organised and have included local groups, schools and colleges, as well as Members of Parliament. All visitors are usually invited for a tour of the animal facilities. The company has also been involved in several television documentaries in which members of staff have given interviews. We welcome such initiatives. They help to improve understanding about issues raised by animal research and reduce secrecy and lack of transparency, which are frequently associated with animal research and which pose a major obstacle to informed debate. However, there is also a view that, in some instances, increased openness focuses disproportionately on the benefits of animal research, offering a 'sanitised' account which ignores the welfare implications and possible suffering of the animals.[41] Equally detailed information about both scientific benefits and implications of research for animal welfare is fundamental to achieving an informed debate. As a general principle, we conclude that freedom of information is essential to debate for its own sake. It would therefore be desirable for the public to have, as far as possible and subject to appropriate levels of safety for those involved in research, access to detailed information about the kinds of animal research, the number and species of animals used in specific research projects, the full implications in terms of pain, suffering and distress for the animals involved, and the intended benefits of the work. This information should be provided in a clear and accessible form. We consider ways in which such information could be supplied in more detail in paragraphs paragraphs 15.25–15.52.

III. Ethical Review

III.A. Ethical Evaluation of projects

A. Introduction

III.A.a) Current provisions of Directive 86/609/EEC

In the current Directive there are no provisions for ethical evaluation such as harm benefit analysis, while the severity of experiments is referred to under the re-use of animals. However, the Three Rs ethical framework for animal research is included in Article 7 of the Directive.

III.A.b) Current situation in Member States

About 21 out of the 25 Member States already have some system for Ethical Evaluation in place. 13 Member States require ethical evaluation through national legislation.

These systems, however, differ to a great extent. There are big variations in the way ethical evaluation is carried out in Member States. Differences can be seen e.g. in the level at which ethical evaluation is implemented, the legal status of the system, the elements that are integrated in the evaluation process, etc. Different combinations of these elements can be observed within the 25 Member States.

This counts as well for the time taken for ethical evaluation, which varies significantly between Member States with an average of around 35 days. However, since it is not possible to differentiate the reasons for delays due to "authorisation" and "ethical evaluation" the duration of these processes is discussed under section “authorisation of projects”.

III.A.c) Trends and implications

Ethical evaluation is frequently mentioned as one of the key instruments to improve the welfare of laboratory animals. It aims at ensuring that the use of animals is justified, weighing the scientific or educational value of the experiment against the potential effects on the welfare of animals involved (harm-benefit analysis). The benefits of ethical evaluation usually seem clear to those involved, but it is difficult to provide an objective (or quantitative) assessment of the value of the outcomes of the evaluation in practice. It is seen as having a high potential for contributing to a substantial reduction of unnecessary testing and set relevant incentives to increase the use of the concept of the Three Rs. Most stakeholders agree that ethical evaluation procedures are required for a good prior evaluation of the project’s possible negative consequences on animal welfare. Transparent and well informed ethical review also contributes to high quality of the results of animal experiments, as well as to reducing animal numbers and animal suffering.

The number of laboratory animals covered by compulsory ethical evaluation is based on figures of animal use in 2002: Out of the 14 countries that provided the EU with figures for that year 9 required ethical evaluation. This covers 7,385,351 animals out of a total of 9,036,808 laboratory animals reported in 2002: this means that ethical evaluation was already mandatory for 81.7% of the animals.

These numbers cover the old Member States with the exception of France.

In 79% of 14 Member States that responded to the questionnaire the Three Rs are part of the ethical review, but it is unclear how this is implemented.

In 57% of these Member States harm benefit-analysis is part of the ethical review and 55% of these Member States have a severity classification system in place. These Member States however are responsible for about 73% of animals used in 2002.

III.A.d) Problem dimension

The current practice on ethical evaluation and the level of protection of laboratory animals differs very much across the EU making it difficult to compare the situation in the different Member States. It is clear though that, if (some) basic elements of ethical evaluation are not sufficiently covered, the opportunities for the implementation of the Three Rs are not fully exploited and animal welfare and good science cannot be optimised.

Furthermore, it is also unclear how under the current structure in which neither ethical evaluation nor authorisation is required by the national legislation e.g. compliance with the requirement to use an alternative replacement method (if one is reasonably and practicably available) is ensured.

The differences in national procedures also mean that the administrative burden varies significantly, this exposing animal users in different Member States to an uneven competitive environment.

III.A.e) Potential solutions

Most of the stakeholders already agree that the existence of an effective ethical review process for scientific uses of animals should be mandatory in every European country. An important option for the revision of the Directive is to make ethical evaluation of projects mandatory.

The revised proposal could in this case set minimum requirements for ethical evaluation such as:

Implementation of the Three Rs in which every project has to be critically evaluated to see if the concepts within the Three Rs framework has been sufficiently taken into account. Minimum elements could include

- Justification of the scientific objectives
- Justification of the proposed use of animals and procedures
- Origin, numbers, species and life-stages of animals with justification
- Demonstration of lack of alternative replacement methods
- Demonstration of competence of persons involved in the project
- Use of anaesthesia, analgesia and other pain relieving methods
- Reduction, avoidance and alleviation of any other form of animal suffering from birth to death
- Housing, husbandry and care conditions
- Use of early and humane endpoints
- Experimental strategy and statistical design to minimise animal numbers and animal suffering
- Life time experience and re-use of animals
- Avoidance of duplication of procedures

Severity classification of procedures which aims at categorising the experiments by the level of physical pain, physiological perturbation, or mental distress they may inflict on an animal.

Whereas some Member States systematically apply severity classification, most Member States have little or no experience in this area. Consideration should therefore be given to minimum requirements. In addition, it would be beneficial to give practical guidance for this severity assessment.

Harm-benefit analysis at a project level aims at quantifying, not in mathematical terms, the cost to the individual animal in terms of suffering, pain, distress, suffering etc and the likely benefit of the experiment to humans, animals and the environment.

Harm benefit analyses should particularly take into account the scientific and societal benefits of the project and the harms inflicted on animal(s).

In addition, potential advantages of a **retrospective reporting** of the benefits and harms in all projects would provide a further option.

Do you support this overall analysis?Yes

B. Options and their impacts

- **Option 1: Compulsory ethical evaluation of projects with minimum requirements**

Overall preliminary assessment

1.1 The preliminary assessment shows an overall positive impact of this option for the revision of the Directive. The introduction of a compulsory ethical evaluation has a positive impact because it has a high potential of improving both animal welfare via the Three Rs and scientific standards because of the prior evaluation of the research design. It could provide an incentive to science and industry to innovate according to the concept of the Three Rs.

Although the introduction of a severity classification system would be time consuming for countries that do not have such a system in place, the benefits are likely to outweigh these costs since it would improve and speed up the harm benefit analysis after the initial work of setting it up.

Introducing a harm benefit analysis would be responsible for a part of the total delay of the ethical evaluation and would increase the administrative burden for the Member States who do not have such a system in place. Yet, the overall preliminary assessment is positive due to the important impact harm benefit analyses can have on the reduction of suffering of animals, as well as their numbers. In this way animal research may be more cost effective, and also increase the value of research funds.

Overall assessment: positive

Do you support this overall analysis? Yes

Detailed impacts

1.2 Animal welfare: +++

The ethical evaluation of projects would lead to a high improvement in animal welfare because it improves the implementation of the Three Rs approach and increases the awareness of persons involved in animal experimentation.

Do you support the preliminary findings Yes

1.3 Animal suffering: +++

Introducing harm-benefit analysis as important element of the ethical evaluation process would have a high positive impact on improving animal welfare in research projects due to the prior assessment of the relevance of testing versus the suffering and the number of animals involved.

Do you support the preliminary findings Yes

1.4 Transparency: +++

The introduction of compulsory ethical evaluation with minimum requirements would highly increase transparency regarding the use of laboratory animals by standardising the information that is requested in order to evaluate the project.

Do you support the preliminary findings Yes

1.5 Societal concerns: +++

Introducing the Three Rs as important element of ethical evaluation would highly promote the awareness of personnel of the possibilities of implementing the Three Rs, thus creating a basis for “feeling better” about the work they do.

Do you support the preliminary findings No opinion

1.6 Reduction in animal numbers: ++

Introducing the Three Rs as important element of the ethical evaluation process would have a medium impact on the decrease in animal use.

Do you support the preliminary findings No opinion

1.7 Quality of science: ++

The ethical evaluation of projects would lead to an increase in the quality of experiments, due to a more systematic prior evaluation of the research objectives and design and the fact that researchers have to assess the importance of the research compared with the costs in terms of animal suffering. The quality of science could also be enhanced by “refinement” resulting in more reliable animal models via reduced stress.

Do you support the preliminary findings Yes

1.8 Level playing field: ++

Ethical evaluation with minimum requirements would have a medium impact in working towards a level playing field, resulting in a less diverse competitive environment between different Member States.

Do you support the preliminary findings No opinion

1.9 Innovations: ++

The inclusion of the Three Rs in the ethical evaluation process can give an impulse to the innovation of techniques that are in line with the Three Rs.

Do you support the preliminary findings No opinion

1.10 Regulatory compliance: - -

Compulsory ethical evaluation with harm benefit analysis of projects may lead, in the short term, to a high increase in the administrative burden in those Member States that have, up until now, not had a system for ethical evaluation in place.

For the EU as a whole the impact is small because of the fact that only 5% of the animals used are not covered by ethical evaluation. This percentage is based on figures of animals used in 2002 in the “old” Member States with the exception of France.

Do you support the preliminary findings No opinion

1.11 Competitiveness: - -

Compulsory ethical evaluation with the introduction of Three Rs and harm benefit analysis would have a medium impact on the competitiveness of enterprises (especially SMEs) who may have to increase personnel capacities for the procedure and could risk to losing competitive advantages (time) in product development and the reduction of freedom of research.

Do you support the preliminary findings No opinion

1.12 Administrative burden: - -

Introducing the Three Rs and harm benefit analysis would result in a medium impact on administrative costs for enterprises and especially SMEs due to the fact that resources need to be diverted to administration instead of product/process innovation.

Do you support the preliminary findings No opinion

1.13 Delay of projects: -

The introduction of a severity classification system would have a negative impact for those Member States that do not have such a system in place due to the delay that will occur in the beginning because of the many different procedures that must be evaluated.

Do you support the preliminary findings No opinion

1.14 Societal impacts: -

The introduction of a severity classification system may have a negative impact on the ethical evaluation process, because it may lead to a mathematical rather than to a more considered approach to the evaluation process.

Do you support the preliminary findings No opinion

1.15 Justification [open text]

Comments on the minimum requirements for ethical evaluation

The minimum requirements for ethical evaluation should also include the source of the funding, the probability of achieving the goals of the research, and the grounds on which alternatives have been rejected.

- **Option 2: Introduction of retrospective analysis of all projects to record deviations and evaluate factual harm and realized benefits**

Overall preliminary assessment

2.1 Where harm benefit analysis is done prior to the research, retrospective analysis is done after the research has been finalised to evaluate the results and to compare it with the predicted harm and benefit. Retrospective analysis gives the opportunity to learn from the past in order to improve future research projects and will provide more accurate information.

Preliminary results indicate that introduction of retrospective analysis for all projects would however lead to a high increase in costs in the short and medium term while it is yet uncertain if the objectives of "learning from mistakes" and achieving more accurate data collection on severity and benefits are met. Potential benefits can be expected to become visible only after several years.

Overall assessment: negative

Do you support this overall analysis? No

Detailed impacts

Detailed preliminary assessment:

2.2 Transparency: +++

Introducing retrospective analysis would highly increase the level of transparency of research projects due to the fact that researchers have to provide information on the results of their research i.e. if they have achieved their scientific objectives. This may provide either negative or positive results and both may be valuable.

Do you support the preliminary findings Yes

2.3 Quality of science: +++

Introducing retrospective analysis has a high potential for improving the quality of research in the long term.

Do you support the preliminary findings Yes

2.4 Reduction of animals: ++

Introducing retrospective analysis has a high potential in reducing the number of laboratory animals in the long term.

Do you support the preliminary findings No

2.5 Reduction of animal suffering: ++

Introducing retrospective analysis has a high potential in reducing the amount of animal suffering in the long term.

Do you support the preliminary findings No

2.6 Duplication of experiments: +

Introducing retrospective analysis could contribute to prevent duplication of experiments.

Do you support the preliminary findings No opinion

2.7 Cost to establishments: - - -

Introducing retrospective analysis would highly increase research costs for enterprises in the short and medium term.

Do you support the preliminary findings Yes

2.8 Costs to national authorities - - -

Setting up an infrastructure for retrospective analysis would create high costs for national authorities due to the fact that no such system is in place yet.

Do you support the preliminary findings Yes

2.9 Competitiveness: - -

Introducing retrospective analysis would have a medium impact on the competitiveness of enterprises (especially SMEs) and research establishments due to the costs connected to this evaluation and the fact that a certain level of openness regarding research data is requested.

Do you support the preliminary findings Yes

2.10 Justification [open text]

The ethical review process in institutions in the UK undertakes a retrospective review of licensed projects where appropriate.

The extract below from Nuffield Council on Bioethics (2005) The ethics of research involving animals (London: Nuffield Council on Bioethics) discusses the importance of making available retrospective information about animal experiments.

15.25 The *Annual Statistics of Scientific Procedures on Animals,* published by the Home Office, have an important role in providing information about animal experimentation. At the same time, there is wide agreement that the data are presented in ways that are not readily accessible to lay people, and that the presentation could be improved. In particular, the *Statistics* have been criticised for not providing clear answers to the following questions: (i) what is the nature, level and duration of pain, suffering and distress actually experienced by animals used in the different kinds of procedures? and (ii) how many animals are used in procedures and related activities?

15.26 It is not possible to answer the first question, because information about welfare implications is only provided prospectively, in the process of the licence application (see paragraph 13.14). By definition, it is not possible to know in advance how animals will be affected in practice, and data from separate interim or retrospective analyses are not reported publicly.

15.28 Information about the suffering that animals involved in procedures experience in practice is unsatisfactory. **We recommend that the Home Office should make retrospective information about the level of suffering involved during procedures publicly available. In gathering this information the Home Office should also obtain and make available, retrospectively, information about the extent to which the scientific objectives set out in applications have been achieved.**

III.B. Ethical Review Process and National Body

A. Introduction

III.B.a) Current provisions of Directive 86/609/EEC

The current Directive does not include any requirements regarding the ethical review process (i.e. how reflection on the ethical standards on the use of animals, or how the process of the ethical evaluation should be organized).

III.B.b) Current situation in Member States

To bring ethical evaluation into practice a system of ethical review committees has been created in most of the Member States. The level at which they are established and their remit however differs. The most common system within the EU, is based on local committees combined with a committee at a national level

National level
15 out of the 25 Member States have a mandatory national ethical review committee in place. The remit of these committees however differs.

Local level
In 6 EU Member States (falling to 5 in 2006, because of a change in the law in one of these MS) local (institutional) review is mandatory (by virtue of statute or other binding requirement) and so all institutions in these countries carry out such local ethical review - though sometimes committees are shared between institutions. In the remaining countries there is no legal or other administrative requirement for local ethical review [with the exception of Spain with such a requirement in three administrative regions and, nationally, in all State research centres].

But in at least 9 other European Member States ethical review processes are voluntarily established in some institutions.

III.B.c) Trends and implications

An ethical review process is frequently mentioned as an important instrument to improve the welfare of laboratory animals. Ethical evaluation aims at ensuring that the use of animals is ethically justified, weighing the scientific or educational value of the experiment against the potential effects on the welfare of the animals involved. However, ethical review process is becoming increasing important tool in ensuring that wider aspects of breeding and keeping of animals for the purposes of research and science incorporate fully the Three Rs for the benefit of the welfare of the animals concerned.

III.B.d) Problem dimension

The existing, highly varied systems result in non-harmonised practises both within a country and between Member States. Under these conditions it is difficult to compare them and to verify that animal welfare is fully taken into account. Also the highly diverse situation creates a situation of there not being a level playing field. It leads to an imbalance of administrative burden between the different Member States and thus to an uneven competitive environment.

III.B.e) Potential solutions

The revised Directive could aim at a higher level of harmonisation within and between Member States, creating an improved level playing field for research and industry, and at the same time aiming at improved welfare for animals.

A combination of a national body for co-ordination of ethical review matters within the Member States and a local ethical review process at an establishment level would be preferable. This would ensure a solid implementation of ethical review requirements.

The tasks of a national body could include:

- Establishment and publication of requirements for ethical evaluation of projects and local ethical review process
- Act as an appeal body
- Promotion and co-ordination of Three Rs approach at a national level to help ensure good animal welfare and good science, at minimum cost

Do you support this overall analysis?
No opinion

B. Options and their impacts

- **Option 1: Introduction of a national ethical review body with a minimum harmonised remit**

Overall preliminary assessment

1.1 The introduction of a national ethical review body with a minimum harmonised remit would have a mainly positive effect on the quality of ethical evaluation within Member States and would provide a certain level of standardisation without losing the flexibility of MS to take national differences into account.

Overall assessment: positive
Do you support this overall analysis? No opinion

Detailed impacts

1.2 Transparency: +++

The introduction of a national review body with a remit to establish and publish requirements and guidelines for the ethical evaluation of projects and the local ethical review process would have a high positive impact on increasing the transparency of animal experimentation.

Do you support the preliminary findings No opinion

1.3 Quality of science: ++

Setting minimum harmonised requirements for ethical evaluation and ethical review processes at establishment level would have a medium positive impact on improving the quality of research in institutes.

Do you support the preliminary findings No opinion

1.4 Public accountability and objectivity: ++

A national review body would have a medium positive effect on public opinion concerning animal experimentation because it has no direct interest in the establishment and can therefore guarantee a certain level of independence and act as a neutral appeal body.

Do you support the preliminary findings No opinion

1.5 Level playing field and harmonisation of the European market: ++

The introduction of a national review body with a minimum harmonised remit would have a medium impact on the harmonisation of requirements and therefore on creating a level playing field within and across Member States on ethical review.

Do you support the preliminary findings No opinion

1.6 Costs infrastructure: - -

Member States where a national ethical review body is not yet compulsory will face a medium increase in the overall research costs in the short term in setting up such a body.

Do you support the preliminary findings No opinion

1.7 Cost infrastructure: -

The increase of costs in most Member States would remain low since 15 out of 25 Member States already have a national review body established.

Do you support the preliminary findings No opinion

1.8 Justification [open text]

- **Option 2: Introduction of a compulsory ethical review process in each establishment**

Overall preliminary assessment

2.1 The introduction of a compulsory ethical review process in each establishment (breeding, supplying and user) would highly increase the level of animal welfare in the medium and long term as well as increase the administrative burden at institute level in the short term. The latter would apply only for countries that do not have ethical review process in place at establishment level.

Overall assessment: positive

Do you support this overall analysis? yes,

Detailed impact

2.2 Animal welfare +++

The introduction of a compulsory ethical review process in each establishment would have a high impact on improving the level of animal welfare via a on-going ethical review process ensuring latest information on Three Rs is readily available and adequately applied.

Do you support the preliminary findings Yes

2.3 Increase the level of the ethical discussion and awareness in relation to animal testing ++

Introduction of a local ethical review process would allow the possibility of a debate about ethical aspects within and between different establishments, to exchange best practices and to better anticipate new developments on animal welfare.

Do you support the preliminary findings Yes

2.4 Work satisfaction +

Introduction of a local ethical review process will increase the work satisfaction of those involved in working with laboratory animals via a more constructive and animal welfare friendly atmosphere with an on-going focus on the Three Rs and good science.

Do you support the preliminary findings No opinion

2.5 Costs for establishments - - -

Setting up the required infrastructure for a local ethical review process will in the short term highly increase research costs for establishments that do not yet have such a system in place

Do you support the preliminary findings No opinion

2.6 Justification [open text]

The extract below from *Nuffield Council on Bioethics (2005) The ethics of research involving animals (London: Nuffield Council on Bioethics)* discusses how the Ethical Review Process (ERP) in the UK could be enhanced:

15.60 The ERP has the potential to make a greater contribution to the identification, promotion and implementation of the Three Rs and could play a more proactive role in identifying best practice and helping to facilitate exchange of information. When the ERP was established in 1999, one of its main objectives was to promote the application of the Three Rs (see paragraph 13.23). However, in practice, many ERPs focus on the review of licence applications, and although this includes consideration of the Three Rs in relation to the specific project, there is potential for a more general contribution. For example, some ERPs have dedicated Three Rs groups that review husbandry and procedural issues. We acknowledge that some organisations, particularly the LASA and the RSPCA, have organised meetings for ERP members in the past to assist this process. We support this approach and **recommend that these two organisations, together with other stakeholders**

where appropriate, identify a systematic and sustainable strategy to ensure that the ERP contributes most effectively to developing best practice in the Three Rs.

IV. Housing and care standards

A. Introduction

IV.a) Current provisions of Directive 86/609/EEC

Annex II of Directive 86/609/EEC contains non-binding guidelines for the housing and care of laboratory animals which are identical to that of Appendix A in the Council of Europe Convention for the protection of vertebrate animals used for experimental and other scientific purposes (ETS 123). The Directive requires full regard to be paid to these guidelines.

IV.b) Current situation in Member States

The Member States have implemented the non-binding guidelines in a varying manner. In some Member States they are considered as minimum compulsory, in others they maintain the non-binding status of guidelines. 10 Member States have ratified the Europe Convention 123 covering 91% of animal use in the EU.

The preliminary findings have demonstrated that 22% of private establishments and 20% of public establishments have already upgraded their facilities to meet with the revised guidelines.

IV.c) Trends and implications

In 1998 the EU became a Party to Council of Europe Convention ETS 123. The Council of Europe is currently revising Appendix A to this Convention to better reflect the scientific developments in animal welfare and to implement current best practice in the field. The revised guidelines have significant increases to the cage sizes and emphasis on group housing and enrichment.

The revised Appendix A will apply to those countries who are parties to the Convention, currently only 12 out of the 25 Member States. After the adoption, however, also the Community would need to update these guidelines. Therefore, those Member States who are not Parties to the Convention would need to pay regard to the revised guidelines.

IV.d) Problem dimension

Since the current, and the revised guidelines, are non-binding, there is no assurance for minimum animal welfare requirements to be met, e.g. in terms of space allowance. This is not in line with the requirement to take into account animal welfare requirements as per the Animal Welfare Protocol to the Treaty.

Some Member States consider these guidelines as a compulsory minimum whereas others use them purely as guidance. This places establishments (breeding, supply and user establishments) into a significantly different cost environment depending on the Member State in which they are located, consequently distorting the internal market.

IV.e) Potential solutions

The revision of the Directive could envisage elements of the revised Appendix A as the minimum standard with a transitional period for implementation. This would bring the Directive in line with current scientific and technical knowledge, increase

animal welfare and create a competitive level playing field within the EU (and between EU and non-EU countries who are Parties to the Convention).

Many of the general provisions and recommendations of the revised Appendix A for health, transport, quarantine, acclimatisation, isolation, watering, feeding, cleaning, records and identification are procedures that are already in place in many establishments, as these are integral parts of good scientific/laboratory practice to obtain reliable and reproducible scientific results. Major changes required are mostly related to the new cage sizes, the mandatory use of environmental enrichment, and the mandatory group housing and socialising of animals.

Do you support this overall analysis? No opinion

B. Options and their impacts

Overall preliminary assessment

1.1 Compliance with ETS 123 guidelines would increase animal welfare through better housing and care standards thus leading to better and more reliable scientific results as well as to improvements in the mental wellbeing of personnel.

Preliminary findings indicate that 22% of establishments in private sector and 20% in public sector have already adapted, thus the impact would be borne by around 80% of user establishments in both sectors.

Do you support this overall analysis? No opinion

Detailed impacts

1.2 Animal welfare: +++

Adaptation to the revised guidelines has positive animal welfare effects. This can be observed in reduced stress levels, increased tranquillity, and consequently easier and faster handling of animals.

Do you support the preliminary findings? No opinion

1.3 Science: ++

Increased animal welfare leads to animals suffering less from birth until death, and experiments with more precise and reliable results. Also, the variability of results of animal experiments may decrease, which in turn might lead to a reduction in the number of animals used.

Do you support the preliminary findings? Yes

1.4 Societal concerns: +

Increased animal welfare due to the revised guidelines has a positive impact on animal care takers', technicians' and scientists' mental well being.

Do you support the preliminary findings? No opinion

1.5 Level playing field: ++

Minimum standards would ensure a level playing field by reducing unfair competitive advantages for establishments in countries which are not bound by the same standards.

Do you support the preliminary findings? No opinion

1.6 Public accountability and ethical concerns: +++

Standards based on current best practice and latest scientific knowledge on the welfare of animals would help in improving the public perception of animal experiments.

Do you support the preliminary findings? Yes

1.7 Upgrading costs for establishments regarding smaller animals: -

Evidence from European establishments which have already adapted to the revised guidelines indicates that the implementation has permanently increased the daily housing costs for rodents by about € 0.02 per animal.

Do you support the preliminary findings? No opinion

1.8 Upgrading costs for establishments regarding larger animals: - - -

Evidence from European establishments which have already adapted or plan to adapt to the revised guidelines indicate, that for larger animals (non-human-primates and other larger mammals) on average a one-time investment of Euro 4,500 per animal was required to plan, design, and adapt their facilities to the new guidelines resulting in an increase of daily housing cost of about € 1,- per animal.

Do you support the preliminary findings? No opinion

1.9 Length of transitional period: 0

If existing facilities and equipment do not conform to the revised guidelines, these should be upgraded within a reasonable period of time, taking into account animal welfare priorities and financial and practical concerns. Preliminary findings suggest that more than 70% of all establishments are able to comply with the revised guidelines within 48 months. A transitional period of 5 years from now would therefore allow all public and private establishments, including small- and medium-sized establishments, to comply.

Do you support the preliminary findings? No opinion

1.10 Justification [open text]

V. Transparency / Access to Information

A. Introduction

V.a) Current provisions of Directive 86/609/EEC

Directive 86/609/EEC requires only that a statistical report be made periodically publicly available.

V.b) Current situation in Member States

In most countries, public information is made available through yearly reports published by the respective Ministry. As a minimum, these reports include basic statistical information required to be reported to the European Commission. Ten Member States, covering 35% of all animal use, make licence information available to the public; four Member States make ethical evaluation reports publicly available. Some establishments publish more detailed information in their annual reports or sustainability reports.

V.c) Trends and implications

The right of access to information is essential for a civilised society. If citizens are to exercise their democratic rights, and to make informed choices, they must have access to political, social, scientific and economic information. The principle of public access means that the general public and the media are to be guaranteed an unimpeded view of activities pursued by the government and local authorities. A basic principle behind most freedom of information legislation is that the burden of proof falls on the body asked for information, not the person asking for it. The requester does not usually have to give an explanation for their request, but if the information is not disclosed a valid reason has to be given. In many countries, privacy or data protection laws may be part of the freedom of information legislation.

V.d) Problem dimension

A few countries such as Sweden, Denmark, and The Netherlands have implemented extensive public rights to information through their freedom of information legislation. In principle, these rights would enable interested members of the public to access extensive information on authorised projects except company and personal details. Intellectual property rights and other trade secrets are also considered restricted information and are not made available under freedom of information legislation.

Preliminary analysis shows that a majority of stakeholders would expect the revision of the Directive to include more public rights/better access to information. From their point of view, great caution should be exercised that more transparency is not used for political gain by animal rights extremists. It is also feared that this might lead to security issues for personnel. Most stakeholders point out that increased legislation in this area must be balanced against intellectual property rights concerns.

V.e) Potential solutions

The revision of the Directive would incorporate minimum requirements on transparency and public accountability by requiring non-confidential information

on ethical evaluations and project authorisation decisions to be made publicly available.

Do you support this analysis?Yes

B. Options and their impacts

Overall preliminary assessment

1.1 Making non-confidential information publicly available would substantially improve accountability and the public image of the sector. Provided that personal safety issues and intellectual property rights are adequately considered, direct and indirect costs for user establishments and authorities would be low.

Overall assessment: positive

Do you support this overall analysis? Yes

Detailed impacts

- **Option 1: Relevant, non-confidential information from the ethical evaluation reports and project authorisation decisions to be made publicly available**

1.2 Public accountability and transparency: +++

Compulsory publication of non-confidential information from ethical evaluation reports would support the public right to information, improve accountability of establishments and the public image of the industry as a whole.

Do you support the preliminary findings? Yes

1.3 Image of research and animal experimentation: +

Compulsory publication of non-confidential information from ethical evaluation reports would potentially improve the public image of the research community as a whole.

Do you support the preliminary findings? Yes

1.4 Cost to establishments: -

Since the information for the ethical review process is already available, additional administrative burden and reporting costs for establishments would be low.

Do you support the preliminary findings? No opinion

1.5 Regulatory compliance: -

Since the information to be made public is already available, additional administrative burden and reporting costs for Member States authorities would be low.

Do you support the preliminary findings? No opinion

1.6 Fear of extremist activity: 0

Most stakeholders expressed concerns about personal safety if detailed information is made public. However, experiences from countries with extensive freedom of information legislation are rather positive with no increase in extremist activity reports. If references to establishments and personnel would be considered confidential, fear for personal safety would be unfounded with no additional costs associated to it.

Do you support the preliminary findings? No opinion

1.7 Competitiveness: 0

Stakeholders also expressed concerns about negative competitive effects if detailed information containing trade secrets and intellectual property rights are made public. If reference to trade secrets and intellectual property rights would be considered confidential, fear of competitive disadvantages would be unfounded and associated costs zero.

Do you support the preliminary findings? No opinion

1.8 Justification [open text]

Extract from Nuffield Council on Bioethics (2005) The ethics of research involving animals (London: Nuffield Council on Bioethics) on the provision of information on research involving animals in the UK:

15.22 Members of the research community who use animals in their work frequently refer to evidence from opinion polls to support their claim that most people support research on animals because of the benefits to humans. They take the view that more information on the benefits of research involving animals would help engender further support from the public. Those who are fundamentally opposed to research involving animals, and those who are primarily concerned about the pain and suffering it may cause, also use evidence from opinion polls to support their views. They often claim that most people would share their views if only they knew more about the welfare implications of research. While evidence from opinion polls should be treated with some caution (paragraph 1.16), many people would like more information on research involving animals, some asserting that it takes place in secret (see paragraph 2.19).

15.23 One response to this situation would be to improve transparency and openness, which should serve the interests of all the various parties concerned with issues raised by animal research. Freedom of information is crucial to informed debate in democratic pluralistic societies (paragraph 14.63). Increased openness and transparency should therefore be encouraged, subject to safeguards for confidentiality of proprietary information and assurances that the safety and security of those involved in animal experimentation will not be compromised. Such an approach would also be consistent with the requirements of the FoI Act (Box 13.4).

15.24 We therefore consider first how provision of information by the Home Office can be improved, especially in relation to the presentation of the *Statistics*, details about granted licences for research and the way the cost-benefit assessment is carried out. We then explore ways in which discussion between those involved in research and interested stakeholders can be improved; consider issues raised by the conduct of public debates on

animal experimentation; and review the role of scientists, campaigning organisations and teachers in education and higher education. We also comment on the practice of using violence and intimidation as means of protest against animal research.

Provision of information by the Home Office

Statistical information about the number of animals used and the suffering involved

15.25 The *Annual Statistics of Scientific Procedures on Animals,* published by the Home Office, have an important role in providing information about animal experimentation. At the same time, there is wide agreement that the data are presented in ways that are not readily accessible to lay people, and that the presentation could be improved. In particular, the *Statistics* have been criticised for not providing clear answers to the following questions: (i) what is the nature, level and duration of pain, suffering and distress actually experienced by animals used in the different kinds of procedures? and (ii) how many animals are used in procedures and related activities?

15.26 It is not possible to answer the first question, because information about welfare implications is only provided prospectively, in the process of the licence application (see paragraph 13.14). By definition, it is not possible to know in advance how animals will be affected in practice, and data from separate interim or retrospective analyses are not reported publicly.

15.27 Information about the degree of pain and suffering can, in some sense, be inferred from the *Statistics* about the severity bands assigned to granted project licences. These are classified in one of three bands: *mild, moderate* or *substantial* (see Box 13.3). But over the five-year period of a project licence, a range of different protocols, themselves assigned different severity limits, may be carried out. It is questionable how meaningful it is to average out the different limits under one band, in order to provide the public with accurate information. For example, it may be the case that a project that contains ten mild protocols, each involving 10,000 animals, and one protocol with a substantial severity limit involving 50 animals, would still be classified as mild.[3] Furthermore, it has also been suggested that the category of moderate protocols 'appears to be something of a catchall, covering a wide range of the more invasive procedures'.[4] We make the following observations.

15.28 Information about the suffering that animals involved in procedures experience in practice is unsatisfactory. **We recommend that the Home Office should make retrospective information about the level of suffering involved during procedures publicly available. In gathering this information the Home Office should also obtain and make available, retrospectively, information about the extent to which the scientific objectives set out in applications have been achieved.**

15.29 The terminology used to describe the severity of projects and individual protocols and procedures is not straightforward and therefore difficult for members of the public to understand. **We recommend that the annual** *Statistics* **should provide case studies of projects and procedures that were categorised as *unclassified, mild, moderate* or *substantial*. Case studies should also include examples of animals used over extended periods of time and should describe not only their immediate involvement in research but also the range of factors that influenced their life experiences, such as the conditions of breeding, housing and handling** (see paragraph 4.31).

15.30 **The current system of severity banding for project licences and the severity limits for procedures should be reviewed, particularly the use of the *moderate* category which covers a wide range of different implications for animal welfare. For the general public, the category *unclassified*, which refers to protocols and procedures involving terminally anaesthetised animals, is too vague to be informative, and should be clarified.**[5]

15.31 The *Statistics* give details about the total number of *animals* used for the first time in a year, and the total number of *procedures* initiated in that year (paragraph 13.27). As we have said, the term *procedure* refers to a wide range of activities, with very different implications for animal welfare which may arise from breeding, the withdrawal of blood, or experiments where death

can be the endpoint. It is not straightforward to infer from the number of procedures undertaken how many animals have experienced what kind of pain, suffering or distress.

15.32 The humane killing of animals by means set out in Schedule 1 of the A(SP)A, for whatever purpose, is not itself a licensed procedure. Animals killed in this way are therefore not recorded in the *Statistics*. Many would argue that possession of a life is a morally relevant feature, and that it is therefore important to provide information about the number of animals that are killed humanely (paragraphs 3.47, 13.26 and 14.5).

15.33 We realise that the system of collecting data about the numbers of animals used in research is very complex and that care needs to be taken to avoid making existing administrative processes more onerous. **Nevertheless, we think it highly desirable to present clearer information about how many animals of a particular species experience pain, suffering and distress, to what degree, and for how long. We therefore recommend that the *Statistics* be revised to provide this information, including details about the number of animals killed under A(SP)A Schedule 1.**

15.34 Further thought is required to identify how changes could be made to improve information about the suffering and numbers of animals involved in research. We are aware that the APC,[6] LASA and the RSPCA together with the Boyd Group[7] are considering these issues at the time of writing. We hope that the Home Office will find our general observations useful in considering the reports from these groups.

Information about licensed research projects

15.35 There has been some discussion about whether or not, and if so to what degree, information about research projects that have been approved by the Home Office should be made available to the public. We note that, following an announcement by the Government in 2004,[8] the Home Office has made available the first anonymised information in the form of *Abstracts of Project Licences*[9] in January 2005. **We welcome the principle of publishing more information, and the decision to make it available in a searchable and publicly accessible database in due course.** We also note that the information provided in the first *Abstracts* varies in content, level of detail and style of presentation. We therefore **recommend that the current form of presentation be reconsidered, to ensure that, as far as possible, meaningful information about the following categories is provided:**

- **the goals and predicted benefits of research;**
- **the probability of achieving these goals;**
- **the numbers and species of animals to be used, and an explanation of why they are**
- **needed at this stage in the project;**
- **what is likely to happen to the animals during the course of the project, including**
- **adverse effects from husbandry, supply, transport and procedures;**
- **what consideration has been given to the Three Rs to achieve all or part of the research**
- **objective(s), and how they have been applied;**
- **on what grounds possible alternatives have been rejected;**
- **source(s) of funding (i.e. public, private or both).**

15.36 Members of the Working Party were unable to agree in which form this information should be provided. While there was a range of views, those at the two ends of the spectrum were as follows:

- Some members, concurring with the views of several animal protection groups, argue that full project licences should be made available, in which only the names of researchers, research facilities and commercially sensitive information have been removed. They believe that this step would be a correct interpretation of the FoI Act (see Box 13.4), and that any further editing of licences would reduce trust in the Home Office, which might otherwise be suspected of operating in non-transparent ways. They assert that access to full, anonymised licences is necessary to allow the public to gauge

the extent of costs to animals, to allow review and challenge of the information and to comment on the way in which the cost-benefit assessment has been made.[10]

- Other members, noting that their view would be shared by most researchers using animals, consider that the current format is, in principle, suitable, although they would like to see less rather than more information made public. Hence, they wish to keep the new practice under close review. They argue that the legislative framework already requires assessment of the acceptability of research by the ERP and the Home Office, and that participation by the public in the regulatory system is not permitted. This system of assessment, together with the assessments made by the researchers themselves, and the funding bodies, is judged to be sufficient. The possibility of increased openness is viewed with scepticism because of fears about compromising accepted standards of confidentiality and commercial and academic competitiveness. Researchers using animals are also concerned that more detailed information about specific research projects could be used by militant activists to identify individuals and research facilities as potential targets.[11] They also argue that the provision of information contained in full, anonymised project licences would not be intelligible and informative to the public, and that shorter summaries would therefore be more effective in providing the public with information.

Information about the cost-benefit assessment

15.37 The common emphasis on the cost-benefit assessment in combination with the system of classification of severity bands sometimes evokes the impression that the Home Office assesses the costs and benefits of each individual experiment or procedure. As we have explained, this is not the case, since assessments take place at the much higher level of protocols and project licences (Box 13.3).[12]

15.38 The APC's 2003 Report, *Review of cost-benefit assessment in the use of animals in research*, provides very useful information about the application of the cost-benefit assessment in practice.[13] The Report also observes that relevant information is spread across several different documents, and recommends that **'there is a need for an easy-to-use, comprehensive list of factors to be taken into account in assessing costs, benefits and scientific validity, that could guide researchers and others engaged in ethical review under the act, such as members of ERPs.'**[14] **We endorse this recommendation.** Since ERPs should, ideally, also include lay people, it is important that this information is provided in a way that is accessible to non-experts. **Such a document would also be of use to the general public and the same information therefore should be provided in an accessible manner on the websites of the Home Office for the general public.** These materials should include specific case studies and also a summary of the *process* of how decisions are made in practice (see paragraph13.16 and Figure 13.1). We address further practical issues concerning the operation of the cost-benefit assessment below (paragraphs 15.54 and 15.56).

VI. Non-human primates (NHPs)

A. Introduction

VI.a) Current provisions of Directive 86/609/EEC

Non-human primates are listed in the Annex I of the Directive requiring them to be purpose-bred. The current provisions state that experiments on animals taken from the wild may not be carried out unless experiments on other animals would not suffice for the aims of the experiment.

Animals listed under CITES can only be used in experiments for research aimed at preservation of the species in question, or essential biomedical purposes where the species in question exceptionally proves to be the only one suitable for those purposes.

Finally, there are specific obligations of individual identification of NHPs and requirement that particulars of their identity and origin must be entered in the records of each establishment.

VI.b) Current situation in Member States

Available data indicates that in 2002 about 9000 non-human primates were used in the 15 “old” Member States which accounted for about 0.1% of all the laboratory animals used in that year. The data shows that more non-human primates were used in the United Kingdom (UK), France and Germany than elsewhere in the Community. The total use of NHPs in the EU 25 is estimated to be close to 10,000 per year: 75-80% of these animals are Old World monkeys (mainly cynomolgus and rhesus monkeys); 20-25% are New World monkeys (mainly marmosets and some tamarins); and some Prosimians (mainly lemurs). Other species used counted for less than 3%.

The use of Great Apes is very limited, with 6 animals in 1999 and zero in 2002. The special situation of non-human primates led to a ban of the use of Great Apes in some Member States (total ban in the Netherlands, Austria and UK (no further licences issued); and a partial ban in Sweden when they can be used only for research relating to their own species.

VI.c) Use and trends

The main biomedical research areas using primates are safety testing of pharmaceuticals, quality control of vaccines, and fundamental research. At present some scientific procedures require the use of primates e.g. for polio or Hepatitis C vaccine production, HIV research and investigations into higher cognitive function. A high proportion of NHP (> 70%) are used in applied studies and regulatory testing, therefore the development and implementation of alternative methods needs to be supported to reduce the number of animals used. Strategies are being developed in order to establish and maintain non-human primate tissue banks and primate-derived cell culture collections in order to optimise the use of this material but these are at present still inadequate to replace a substantial part of NHP in biomedical research.

There are insufficient data available to estimate whether the use of NHPs is decreasing in Europe. In the Netherlands the number of NHPs decreased from

about 400 in 2000 to about 300 in 2004, but the UK there was an increase from about 3700 to 4200 in this period.

The USA, together with Japan, are the main world users of NHPs in research and testing. Most recent statistics show that 52.279 NHPs where used in research, testing and teaching in the USA in 2002. For Japan, no accurate figures are available as no mandatory reporting system is in place.

In 2002, about 60% of the NHPs used for scientific purposes were imported from outside the EU, more than 90% of them being macaques. All these macaques are F2 purpose-bred. Only a small number of the other imported animals are wild-caught or F1, these are species that are only sporadically used for specific purposes. Almost all the NHPs bred in the EU are F2.

The most frequently used NHPs in the EU are macaques (cynomolgus and rhesus monkeys) and marmosets; in the UK the ratio of Old to New World is about 3 : 1. The reproduction cycle for marmoset is 2 – 2.5 year (1,5 - 2 year until breeding age and, 4 months gestation). One litter consists of 2 - 3 progeny. The reproduction cycle for macaques is longer, approx. 4-5 year (4 year until breeding age and 5 - 6 months gestation). A litter usually consists of only one progeny.

VI.d) Problem dimension

Non-human primates are species with highly developed social skills and behavioural manners that are to some extent similar to those of human behaviour. Due to the similarities with human beings, the ethical justification of their use is a sensitive issue and a subject of serious debates. There is increasing (public) concern regarding their potential use in scientific procedures and their welfare is not considered sufficiently assured by the wording of the current Directive.

On the other hand, there is a clear need for NHPs in biomedical research, due to the above mentioned similarities to the human species. For example, they are used to tackle severe diseases such as diabetes, AIDS, malaria, Parkinson's, Alzheimer's etc. Furthermore, they are important for the development and production of new vaccines, where Europe plays a leading role (around 85% of the global supply is produced in Europe).

In their natural habitat NHPs live in complex environments and the social dimension is vital for their well-being. If the physical and social environment is inadequate the NHP is usually not a good model in research. Therefore, animal welfare and quality of science are linked. As a consequence, research on NHPs is more cost-intensive than research on other mammalian species. Special consideration is paid to experiments with Great Apes where the discussion about NHPs is the most controversial. Their use is quite rare, although some scientists are against a total ban because new emerging diseases might make it necessary to use Great Apes for the development of vaccines and treatments.

VI.e) Potential solutions

The main options for the revised Directive could be to reinforce the ban on wild-caught NHPs and to allow only very limited exemptions. A gradual switch to only allowing F2 (second-generation) and following generations of purpose-bred NHPs would be most desirable regarding animal welfare and biodiversity. The use of Great Apes should be highly restricted.

Possible negative consequences have to be taken into account: If research on NHPs would be excessively restricted, private and academic research might be forced to relocate to other countries outside the EU, and loss of employment and scientific know-how might be the consequence. Also the welfare of animals might be negatively influenced by relocation of this type of research. Furthermore, the risk for human patients to be used as alternatives to NHPs in clinical studies might rise.

Do you support this overall analysis? No opinion

Extract from Nuffield Council on Bioethics (2005) The ethics of research involving animals (London: Nuffield Council on Bioethics) on the welfare implications of using non-human primates in research:

4.42 Appropriate social contact and interaction has been demonstrated to be vital for the wellbeing of most commonly used laboratory species. Animals such as primates or dogs have evolved to form social groups with defined compositions and hierarchies. In their natural environment these animals usually have sufficient space to perform their social behaviours and maintain appropriate social distances. However, in the laboratory they find themselves in artificially composed groups and the cage or pen size that is provided in research facilities differs significantly from the space available in their natural habitats. The single housing of such animals requires special consideration.

4.46 Close contact with humans can both improve and impair the welfare of laboratory animals. Social animals such as dogs or primates can benefit from establishing a relationship with staff at research facilities. Establishing appropriate relationships is of special relevance to many types of primate research, where the researchers depend on the cooperation of the animal to perform certain tasks (see Box 5.4). Problems may arise if there is a frequent change in personnel. Appropriate handling of animals is also required when animals are removed and re-introduced to and from their social groups, which can cause fear and distress. Reintroducing animals may result in increased aggressive behaviour, as hierarchies are re-established.

4.47 Restraint for primates is another cause for concern. This is particularly so when animals have not experienced adequate habituation and socialisation to humans, and when those interacting with the animals are not sufficiently familiar with the species-specific behaviour. A number of restraint methods are used for different purposes. For example, restraint chairs are used to support primates in a stable sitting position when the experiment requires that they sit still for a prolonged period of time.[38] If the chair is incorrectly designed it could have an adverse effect on the animal's physiology,[39] and its welfare,[40] as well as on the validity of the scientific study being undertaken. Training the animal with positive reinforcement so that it cooperates during the procedure is important to minimise negative welfare effects.

4.53 Much research involves the sampling of blood. Under ideal circumstances, this procedure only has relatively minor welfare implications for the animals, although it may sometimes cause discomfort, pain and distress, as is the case for human patients. Restraint is usually necessary, which can be stressful. In some cases animals such as primates are trained to cooperate in the process, for example by presenting a limb for sampling. This approach, which constitutes best practice, requires staff to be adequately skilled in the technique, as required by the provisions of the A(SP)A (see paragraphs 13.12–13.13).

4.59 Euthanasia literally means a 'good death', and should not, if it is carried out properly, cause animals any pain, suffering or distress. Whether it is wrong to prematurely end an animal's life is a subject of debate (see paragraphs 3.47–3.49). Apart from the question of whether an animal is harmed by being killed, in the case of sociable animals such as dogs or primates, the implications for other members of the group of losing a group member also need careful consideration.

15.80 On balance, we consider that there is merit in undertaking appropriately designed and presented reviews on the scientific validity of animal research in specific areas. Since the scientific evaluation of animal research is fundamental to the cost-benefit assessment of any research, **we recommend that the Home Office, in collaboration with major funders of research such as the Wellcome Trust, the MRC, the BBSRC, animal protection groups and industry associations such as the ABPI, should consider ways of funding and carrying out these reviews. In devising a strategy, priorities should be identified which, in order to respond to concerns of the public, consider, among other things, the validity of research that falls in the substantial category, and research that involves primates**.

B. Options and their impacts

- **Option 1: Shift to only use of F2 and subsequent generations of purpose bred NHP**

1.1 An amendment of the current Directive could be a requirement to use F2 animals (and subsequent generations) without exemptions, instead of the requirement of using only purpose-bred animals. This restriction may lead to supply problems and increasing costs, depending on the transitional period.

Preliminary assessment shows an overall slightly negative impact of this option in case the implementation would take place at short notice but changes to a slightly positive impact if an acceptable transitional period would be taken into account. Also the positive impact on the welfare of NHPs used in experiments is recognized. Available data indicates that already today more than 90% of all NHPs used in the EU are of F2 generation.

Overall preliminary assessment: neutral

Do you support this overall analysis? No opinion

Detailed impacts

1.2 Animal welfare: +++

The increase in animal welfare would be high as no more wildlife NHPs would be caught and transferred to an unnatural environment.

Do you support the preliminary findings? No opinion

1.3 Public concern: +++

High benefit in public concern as there is considerable opposition to the use of wild-caught NHPs in scientific research.

Do you support the preliminary findings? Yes

1.4 Biodiversity: ++

A ban on wild-caught NHPs would contribute to the protection of biodiversity as all NHPs are listed either in Annex I or II of CITES and therefore (vulnerable to being) threatened with extinction.

Do you support the preliminary findings? No opinion

1.5 Costs for user establishments: - - -

A total ban on wild-caught NHPs for experimental use without transitional period would lead to high negative impacts on research in the period before alternative/additional sources are developed, e.g. through self-sustaining primate breeding centres in the EU or in the origin countries. Therefore, the costs of supply would increase. The supply would have great difficulties in meeting the current demand parallel to reserving a part of the stock for reproduction.

Do you support the preliminary findings? No opinion

1.6 Scientific need - - -

A ban on wild-caught NHPs would have a high negative impact on specific biomedical research programmes (see 1.3) due to supply problems if the transitional period is too short.

Do you support the preliminary findings? No opinion
(If yes please specify current demand and supply, expected needs in the next future)

1.7 Outsourcing of research/competitiveness - -

A total ban, without a transitional period, on wild-caught NHPs would lead to a transfer of research to countries outside the EU.

Do you support the preliminary findings? No opinion (If yes please give an estimate on the extend of this transfer)

1.8 Justification [open text]

Extract from Nuffield Council on Bioethics (2005) The ethics of research involving animals (London: Nuffield Council on Bioethics) on the welfare implications for wild-caught animals:

4.34 Most laboratory animals are bred specifically for the purpose, but some are caught from the wild, especially for use in basic biological research. For example, some wild birds are caught for physiological studies; many *Xenopus* frogs are caught in the wild and some countries still use wild-caught primates (although not the UK) or obtain captive-bred primates from breeders who replenish their breeding stock with animals captured from the wild. In the UK, the use of wild-caught primates is prohibited except where exceptional and specific justification can be established (see paragraph 4.26).

4.35 Capture from the wild imposes significant psychological stress on animals that are not habituated to humans or to captivity. It usually presents a number of risks to the animal and can result in physical injury, shock or even death. In addition to the impact on the target animal, effects on other animals also need to be considered as they may experience stress leading to behavioural disturbances that could leave them open to predation or cause them to abandon their young. This could affect not only other members of the colony in social species, but also animals of other species that are disturbed during the capture process.

- **Option 2: Transitional period**

Less than 10% of the NHPs used in the EU today are not F2 purpose bred and would therefore have to be replaced within a given transitional period. Available data indicates that around 90% of the animals to be replaced would be macaques (cynomolgus and rhesus monkeys). The transitional period should be well-balanced between the needs of the user establishments, the capabilities of the breeders/suppliers to enhance their production and animal welfare and public concerns. The benefits to animal welfare, public concern and biodiversity are not repeated here.

2.1 Transitional period of 0 years

Preliminary assessment: - - -

No transitional period would jeopardize a continuous supply with the subsequent consequences as described above.

Do you support the preliminary findings? No opinion

2.2 Transitional period of 5 years

Preliminary assessment: -

Taking into account the current demand, type of species and their breeding patterns, a transitional period of 5 years should allow most breeding facilities to rise their production and provide enough F2 animals to users. Therefore, the supply should be guaranteed and additional costs should not be significantly high.

Do you support the preliminary findings? No opinion

2.3 Transitional period of 10 years

Preliminary assessment: 0

A transitional period of 10 years should allow all breeding facilities to rise their production and provide enough F2 animals to users even if demand rises significantly during this period. Additional costs should not occur.

Do you support the preliminary findings? No opinion

2.4 Justification [open text]

- **Option 3: Ban of the use of Great Apes with very limited exceptions**

Overall preliminary assessment: positive

3.1 Preliminary assessment shows an overall positive impact of this element: The only real necessity for experiments with Great Apes is the development of treatments for new diseases that might occur. For this purpose, limited but well equipped centralised possibilities of research would be sufficient.
Do you support this overall analysis? No opinion

Detailed impacts

3.2 Animal welfare: ++

A ban on the use of Great Apes would have a positive effect on animal welfare as Great Apes are animals especially sensitive to pain and suffering. However the impact would be moderate since only a very limited number of Great Apes is used within the EU (see 1.c).

Do you support the preliminary findings? No opinion

3.3 Public concern: +++

A ban on the use of Great Apes with only very limited exemptions would lead to a high improvement of the public opinion on ethical aspects in scientific research and improve the image of the industry as a whole.

Do you support the preliminary findings? No opinion

3.4 Research: -

The negative impact on research would be low as already at this stage the number of Great Apes used is extremely low.

Do you support the preliminary findings? No opinion

3.5 Central facility to cope with future demand: - - -

In case of a total ban on the use of Great Apes, a centralised facility for these animals would be required in order to anticipate on future needs. The cost of running such facility with the given uncertainty of future demands would be high.

Do you support the preliminary findings? No opinion

3.6 Justification [open text]

VII. Inspections

A. Introduction

VII.a) Current provisions of Directive 86/609/EEC

User establishments are subject to periodic inspections.

VII.b) Current situation in Member State

All Member States have an infrastructure for periodic inspections. The frequency of inspections varies significantly from one Member State to another.

VII.c) Trends and implications

Inspections are highlighted as one of the main tool for ensuring compliance with legislation and minimum requirements. Some Member States have over the recent years made specific investments to increase the training of inspectors and the frequency of visits. In UK, for example, same establishment can have multiple inspections over a period of one year many of which are unannounced.

VII.d) Problem dimension

The Directive does not specify any frequency of inspection apart from being periodic. Furthermore, the current requirement for inspections only covers user establishments leaving breeding and supplying establishments outside the requirement.

Since there is no EU wide requirement for inspections, it results in a low public perception of levels of compliance and its assurance by the authorities. Furthermore, if inspections are announced prior to the visit, it may result in providing an unrealistic picture of the day to day running of the establishment. In case full compliance is not assured, animal welfare may be compromised.

VII.e) Potential solutions

The revision of the Directive could harmonise the requirement for annual inspections at the level of two of which one could be unannounced. A system of EU inspections could be envisaged.

Do you support this analysis?Yes

B. Options and their impacts

- **Option 1: Twice yearly inspections by national authorities of which one unannounced**

  Overall preliminary assessment: positive

  1.1 The overall preliminary assessment shows positive impacts in terms of increase in animal welfare, public perception and transparency. The costs for Member states would increase moderately, when intensifying the level of inspections.

  Do you support this overall analysis? Yes

Detailed impacts

1.2 Impacts to establishments: 0

The costs for establishments would be very low and confined to a disruption of daily routines on the day of inspection.

Do you support the preliminary findings? No opinion

1.3. Impacts on animal welfare: +++

An increase of the frequency of inspections at Member State level would contribute to an increase in the welfare of the 10M or so animals used in experiments each year, as a result of a better and more systematic evaluation of compliance with legislation and standards.

Do you support the preliminary findings? Yes

1.4 Public accountability and transparency: +++

More inspections at Member State level would significantly contribute to the enhancement of public accountability and transparency, due to a more effective compliance check of the authorisation criteria, which can result in the withdrawal of licences, if the criteria and standards are not met by the respective establishments.

Do you support the preliminary findings? Yes

1.5 Regulatory compliance to Member States: - -

More inspections at Member State level would lead to a moderate increase in administrative costs to Member States, because the enhancement of administrative capacity for inspections would require additional qualified personnel. Member States with centralised systems of authorisation and high numbers of animals used per year (such as France, UK, Italy) would be particularly concerned because of the high share of travelling time involved.

Do you support the preliminary findings? No opinion

1.6 Justification [open text]

Extract from Nuffield Council on Bioethics (2005) The ethics of research involving animals (London: Nuffield Council on Bioethics) on inspections in the UK, half of which are unannounced.

13.20 The workings of the A(SP)A and the granting of the three types of licence described above is currently administered by the Home Office, rather than by other Government departments, to avoid possible conflicts of interest. Many other departments with responsibility for areas such as human health or the environment may be directly involved in animal research, for example by commissioning or funding research. The Home Office, by contrast, has no such involvement and has therefore been given the task of issuing licences. Its Inspectors are required to have medical or veterinary qualifications and are expected to have experience in scientific research. In 2004, there were 30 Inspectors who assisted in advising the Secretary of State in granting licences and any conditions that should be set.

They also provide advice to certificate holders and others with a role under the Act on best practice in laboratory animal welfare. Inspectors make visits to research facilities to ascertain that licence authorities and conditions are being met. They have the right of access to any designated establishment to monitor compliance. At the end of 2003, there were 232 designated establishments in Great Britain. During 2003, the Inspectorate made 3703 visits to departments within establishments in addition to other visits for formal meetings. Over 50 percent of these visits were unannounced.[20]

- **Option 2: EU inspections**

Overall preliminary assessment: negative

2.1 The overall preliminary assessment shows, that EU inspections would not result in a significant increase in animal welfare unless disproportionately high resources were be invested to render these inspections efficient and sufficiently frequent.

Do you support this overall analysis? No opinion

Detailed impacts

2.2 Resource requirements: - - -

Establishment of an EU-Inspectorate on animal welfare would require unrealistically high personnel and financial resources to ensure an effective level of inspections of all establishments in all 25 Member States.

Do you support this overall analysis? No opinion

2.3 Efficiency: - -

An EU inspectorate on animal welfare would not contribute to a more efficient control of compliance, because the differences in authorisation and ethical review systems in the Member States would require different approaches at a decentralized level.

Do you support this overall analysis? No opinion

2.4 Regulatory compliance in Member States: - - -

To be effective and efficient, an EU inspectorate would require harmonised regulatory standards throughout Europe, which would presuppose unrealistic high regulatory compliance costs for all Member States.

Do you support this overall analysis? No opinion

2.5 Justification [open text]

VIII. Education and training

A. Introduction

VIII.a) Current provisions of Directive 86/609/EEC

Article 14 of the current Directive states that persons who carry out experiments or take part in them and persons who take care of animals used for experiments, including duties of a supervisory nature, shall have appropriate education and training.

In particular, persons carrying out or supervising the conduct of experiments shall have received instruction in a scientific discipline relevant to the experimental work being undertaken and be capable of handling and taking care of laboratory animals; they shall also have satisfied the authority that they have attained a level of training sufficient for carrying out their tasks.

VIII.b) Current situation in Member States

All Member States have set (minimum) legal requirements for the competence of personnel working with laboratory animals performing the experiments. Several Member States already specifically refer to their system as being in accordance with the FELASA guidelines for the education and training of persons (Belgium, Slovenia, the Netherlands, Lithuania (B and C category).

Demonstrating/maintaining personnel competence however is required only in approx 35% of the Member States, covering approximately 4 Mio of total animal use in Europe. The other 65% of Member States do not have specific requirements in place for demonstrating/maintaining competence.

VIII.c) Trends and implications

In order to be able to compare the competence of personnel in the different Member States and to work towards mutual recognition, the Directive should include the requirements as set in the “Code of conduct for education and training of persons working with laboratory animals” of the European Convention as adopted by the Multilateral Consultation in 1993.

In the Convention four categories of persons are defined who must have had appropriate education and training.

Category A:	Persons taking care of animals
Category B:	Persons carrying out procedures
Category C:	Persons responsible for directing or designing procedures
Category D:	Laboratory animal science specialists

EU countries that ratified ETS 123 already have agreed:

- to ensure that these guidelines will be circulated among the persons responsible for education and training of those working with laboratory animals;

- to encourage these persons to follow these guidelines in their courses; and

- to encourage those responsible for education and training to establish programmes to allow the fulfilment of the requirements of the Convention for all persons working with laboratory animals.

An innovative method to ensure minimum standards without generating high costs for Member States is the use of e-learning methods. One best practice example from Switzerland in co-operation with one of the major pharmaceutical companies shows that the development and implementation of an e-learning infrastructure to obtain an officially recognized certificate on the Three Rs would costs 150,000 Euro. This includes automated applications and verification of test results.

VIII.d) Problem dimension

Qualified and well-trained personnel are central for good animal welfare, good science, and the human dimension of animal experiments. People working with animals should have a specific authorisation and should be trained specifically, to reduce suffering of animals during the whole lifetime of the projects. This is currently not ensured since the Directive does not give specific requirements for education and training. Consequently, the level of education and training can differ significantly between Member States.

Competence cannot be guaranteed via education and training. However, the current Directive does not specifically address the necessary competence of the personnel. Lack of competence can seriously undermine animal welfare e.g. when performing a procedure or euthanasia on animal, as well as having a deleterious effect on the scientific outcomes and their reliability.

VIII.e) Potential solutions

The revision could incorporate some key elements that should be included in the training requirements appropriate for the different categories of personnel. In addition, it could set requirements for obtaining, maintaining and demonstrating competence and life-long learning.

B. Options and their impacts

Overall preliminary assessment

1.1 Appropriate education and training would improve the implementation of all Three Rs and ensure respect of their welfare requirements of animals before, during and after procedures.

Overall assessment: positive

Do you support this overall analysis? Yes

Detailed impacts

1.2 Animal welfare: +++

Requirement for competence combined with minimum elements for education and training would highly improve the welfare of animals through deeper knowledge, understanding and better skills.

Do you support the preliminary findings? Yes

1.3 Quality of science: +++

Requirement for competence combined with minimum elements for education and training would also enhance the quality of science and research and reduce existing obstacles to horizontal mobility.

Do you support the preliminary findings? No opinion

1.4 Free movement of people/workers: +++

Requirement for competence combined with minimum elements for education and training would assist in reducing existing obstacles to horizontal mobility.

Do you support the preliminary findings? No opinion

1.5 Job satisfaction of personnel: +++

Ensuring competence and knowledge on how to optimise animal welfare and implementation of Three Rs in the daily work would lead to a high job satisfaction of those having direct contact with animals on daily basis.

Do you support the preliminary findings? No opinion

1.6 Additional costs to national authorities: -

Requirements for competence combined with minimum elements for education and training would result only in low additional costs for national authorities, as all Member States already do have systems of education and training in place.

Do you support the preliminary findings? No opinion

1.7 Additional costs to establishments: -

Additional costs for education and training measures would not lead to a significant increase of project costs. The average cost of a training course on Three Rs for instance is not higher than 200 Euro per day (plus loss of labour for the duration of the course)

Do you support the preliminary findings? No opinion

1.8 Justification [open text]

Appropriate education and training would enable those involved with animal research to effectively carry out cost-benefit assessments of their work and to implement the Three Rs, particularly Refinement, wherever possible.

Extract from Nuffield Council on Bioethics (2005) The ethics of research involving animals (London: Nuffield Council on Bioethics):

Cost benefit assessment

15.54 The cost-benefit assessment is at the heart of the regulation of research on animals in the

UK. There is sometimes the view that the assessment is only being carried out by the Home Office, which 'tells the researchers what to do' once it has decided on whether or not a licence application fulfils the criteria of the A(SP)A and is thus, from the regulator's point of view, acceptable. The APC's 2003 Report *Review of cost-benefit assessment in the use of animals in research* observed that this interpretation would be simplistic, since other individuals and committees are involved in assessing directly or indirectly the costs and benefits of a project (paragraph 13.16). The APC therefore emphasised that:

'project licence holders and others involved in study design and initiation bear responsibility for clearly setting out the costs and benefits of their research and carrying out cost-benefit assessments of their work, including critical evaluation of the need for animal studies at all. The roles of other bodies, such as the Home Office, ERP, and, where relevant, APC, are to evaluate, advise, and in some cases adjudicate the researchers' own cost-benefit assessments.'

15.55 We welcome this clarification, which is compatible with our discussion about moral agency (paragraph 3.69). As we have said, it would be wrong to perceive acting morally simply as following rules. Instead, active and continued scrutiny of the costs and benefits is required from all those involved, before, during and after research. This responsibility cannot be devolved to regulators, and, as the APC has emphasised, the system is not intended to function in this way.

Refinement

12.28 Overcoming the constraints and improving the implementation of Refinement requires significant commitment to:

- an open-minded, innovative and proactive approach to developing new Refinements;
- seeking out available information on good practice and implementing it;
- knowing the animals' physiological and behavioural needs and being aware of current
- evidence on how to address these in the laboratory environment;
- anticipating expected *and* unintended adverse effects of all experimental work;
- being familiar with subtle signs of distress or discomfort in the species, strain, phenotype
- and individual animal, and knowing how to alleviate the cause;
- disseminating specific information on Refinement in an accessible way;
- publishing details of Refinement as an integral part of scientific papers in the
- mainstream literature; and
- most importantly, not assuming that *existing* practice is necessarily *best* practice.

IX. Avoiding duplication of animal experiments

A. Introduction

IX.a) Current provisions of Directive 86/609/EEC

Member States shall, as far as possible, recognise the validity of data generated elsewhere, unless further testing is necessary to protect public health and safety.

IX.b) Current situation in Member States

No specific instruments apart from ethical evaluation are employed at the Member States to reduce duplication of testing. Retesting is a legal requirement for general medical products for human and veterinary use. The only instruments possibly contributing to a reduction of duplication in this area are Mutual Recognition Agreements between exporting countries and the EU. However these instruments only cover specific issues and are thus not able to abolish the requirement to test all products coming from that exporting country. For vaccines there is an option for Member States to retest, which 10 – 15 Member States actually use.

IX.c) Trends and implications

One of the leading principles of the Three Rs is to avoid unnecessary testing on animals. However, due to the different laws, administrative procedures in authorisation and inspection arrangements in the Member States, it cannot be excluded, that duplication of testing may occur. First evidence shows, that in Europe approximately 160.000 animals are subject to duplication in regulatory testing each year.

IX.d) Problem dimension

Currently, there is no harmonised approach in Europe to ensure an effective exchange of relevant information and data regarding animal experiments. Authorisation and inspection bodies as well as researchers do not have the necessary overview of objectives and results of all experiments carried out each year on more than 10 million animals in the EU 25 alone. Although it can be argued that scientists usually have an excellent overview of the literature within their respective fields of specialisation, negative results (although equally valuable), however, are usually not reported. Only 25% of all Member States have currently a system of automatic data collection in place.

IX.e) Potential solutions

A significant reduction of duplication in regulatory testing would require changes in numerous legislative requirements at Member State level. This policy approach, however, cannot be addressed by a revision of the given horizontal Directive. Compulsory authorisation of projects and ethical evaluation aims partly to address this problem. However, these are discussed in detail elsewhere in the questionnaire.

In view of this situation, the general approach of a revised Directive regarding the reduction of duplication could be setting-up a centralised EU-wide database collecting information on project authorisation and scientific results in each Member State.

The database could also provide a discussion platform where scientists and inspectors could exchange their experiences, problems and good practices. As far as possible, information on 3rd countries should be collected. This could contribute in increasing the knowledge, especially in basic research, and provide more transparency on “negative results”, not systematically published so far.

The database would not be made public but be restricted to scientists and inspectors only.

Do you support this overall analysis? No opinion

B. Options and their impacts

Overall preliminary assessment: neutral

1.1 Preliminary assessment shows an overall neutral impact of this element: A centralised EU-wide database can help to prevent duplication of testing by providing neutral, timely and comprehensive information about all non-confidential authorised projects in Europe. This can increase both animal welfare and the quality of science, and could make research funding go further as it would avoid having to carry out those experiments that do not need to be duplicated.

However, the resource requirements for establishment, administration and maintenance of such a database coupled with challenges for timely availability of information to ensure usefulness could reduce the efficiency of this option

Do you support this overall analysis? No opinion

Detailed impacts

1.2 Animal welfare – basic research: ++

An EU database would have moderate positive impacts on animal welfare for animals used in basic research, due to more information available on negative results of previous projects not yet published.

Do you support the preliminary findings? No opinion

1.3 Animal welfare – regulatory testing: 0

An EU database would have no positive impacts on animal welfare regarding the approx. 160.000 animals used in retesting of e.g. pharmaceutical products for regulatory purposes per year.

Do you support the preliminary findings? No opinion

1.4 Ethical concerns – basic research: ++

An EU database would assist in the ethical evaluation of projects (outside regulatory testing), because during ethical review competent persons could more easily double check the project information on an EU-wide basis, taking into account results of previous experiments.

Do you support the preliminary findings? No opinion

1.5 Ethical concerns – regulatory testing: 0

An EU database will have no positive impact on the improvement of ethical evaluation of projects in regulatory retesting, because these tests are required by national legislation.

Do you support the preliminary findings? No opinion

1.6 Regulatory compliance: +

An EU database would have low positive impacts on national inspections, due to better availability of comparative information, especially regarding control on group authorisation of projects in regulatory testing.

Do you support the preliminary findings? No opinion

1.7 Administrative burden: - - -

The establishment of an EU database would create a high administrative burden at establishment level due to the need for timely reporting of up-to-date information.

Do you support the preliminary findings? No opinion

1.8 Cost to establishments: - - -

Although 60% of establishments already have internal statistical registration that goes beyond the legal requirements, the additional cost to feed information into such a database would be high, because establishments would be forced to collate it, write it up in an orderly fashion, and provide on-time information.

Do you support the preliminary findings? No opinion

1.9 Administrative costs for Member States: - -

The establishment and maintenance of an EU database would create high, partly temporary, administrative costs for most Member States, as only 25% of all Member states currently have an automated system of data collection.

Do you support the preliminary findings? No opinion

1.10 Resource requirements at an EU-level: - - -

An EU wide database would create high additional administrative burden at EU-level due to the costs involved in establishing, managing and coordinating the system internationally and the need to organise effective data collection (right information in right format) on a regular basis to meet deadlines.

Do you support the preliminary findings? No opinion

1.11 Justification [open text]

The Council questions the assessment of the overall preliminary impacts as neutral. It is possible that the potential long-term benefits gained from establishing a centralised EU-wide database, in terms of reducing the number of animals used in experiments in the EU, would outweigh the costs in terms of resource requirements. The extract below, from *Nuffield Council on Bioethics (2005) The ethics of research involving animals (London: Nuffield Council on Bioethics),* describes the Council's views on duplication, data sharing and the harmonisation of international guidelines:

15.16 Scientific experiments involving animals are sometimes repeated by the same or other research groups. In considering whether the repetition of experiments should take place, it is important to distinguish between *duplication* and *replication* of experiments:[2]

- Duplication of harmful animal experiments is in principle unacceptable. We use the term to describe cases where there is insufficient scientific justification for the repetition. It occurs primarily when the scientist either does not know that another has carried out the experiment or test in question, or when he does know but is unable to attain reasonable access to the information.
- Replication refers to repetition of experiments or tests when this is necessary for sound progress in scientific enquiries. The scientific method demands that research findings need to be corroborated by the same and other research groups in order to establish the validity of the results.

15.17 The Working Party acknowledges that academic competitiveness and commercial confidentiality can sometimes complicate the sharing of information. But at its best, science is an open process, and mechanisms that prevent the sharing of information need to be reviewed carefully in terms of their justification and implications for the use of animals in research.

Duplication

15.68 Another area where there may be potential for reduction concerns the avoidance of duplication of research or testing (see paragraphs 12.6 and 15.16). In some areas, this can be achieved simply by better coordination and dissemination of information. For example, a recent report by the European Commission on the *Evaluation of the Active Substances of Plant Protection Products*[34] observed:

> '4.6 … multiple dossiers. Many different dossiers were submitted for the same substances, unnecessarily multiplying the number of evaluations required. While every effort was made to encourage notifiers to create taskforces and to submit a single dossier per substance, it was not always possible to achieve this. For example, there were 35 notifiers for the active substance glyphosate and 11 dossiers were submitted. This proved wasteful of resources, as the Rapporteur Member State (Germany) had to examine each one. In the event, only four dossiers were considered complete and could be assessed in detail. Ideally, there would have been a single dossier. This would have saved resources both for the various notifiers and for the Rapporteur Member State. It would also have resulted in fewer laboratory animals being sacrificed in duplicated testing. While every effort is still being made to encourage notifiers to create taskforces and to submit a single dossier per substance, it is still not always possible to achieve this. A solution could be to introduce provision in the legislation to avoid duplicate testing e.g. action point 5F in the White Paper on a Chemicals Strategy[35] proposes that any duplicate testing on vertebrate animals will not result in an exemption from the duty to reimburse the party that owns the property rights to the first test.'

15.69 While this is a clear and unfortunate example of duplication, it appears that the extent to which duplication occurs, whether internationally or nationally, is difficult to assess. Those suspecting that there is a substantial and avoidable amount of duplication are concerned that academic and commercial competition and the aim of protecting intellectual property

rights frequently lead researchers to be reluctant to share data. They also assert that many more examples of insufficient coordination, similar to the one described above, could be given.[36] Those who disagree consider that in general there are sufficient mechanisms in place to ensure the avoidance of duplication, such as the publication of peer-reviewed research in scientific journals and presentation at conferences. They take the view that duplication is unlikely to be a widespread phenomenon because funding bodies only support novel research and because both academic and commercial research institutes need to manage resources efficiently, usually implying that only original research is carried out.

15.70 We cannot explore the question of the extent to which duplication occurs, or the feasibility of devising mechanisms that help to avoid the duplication of research in this Report. But we are clear that, in principle, duplication is unacceptable (paragraph 15.16) and we therefore welcome the approach underlying the UK Government's Inter-Departmental Data Sharing Concordat (paragraph 12.6). The Concordat has recently been reviewed by the Government who commented that the agreement had ensured that 'regulators promote data sharing within the scientific community', noting also that there was no evidence that duplication was 'a significant problem in the UK.'[37] The Working Party has not been able to study the review, and is hence not in a position to comment on the Government's view.[38] We note that the APC welcomed the Concordat in its 2003 Report *Review of Cost Benefit Assessment in the Use of Animal Research*[39] but cautioned that it is not yet clear how effective it will be in preventing duplication of animal studies. In particular, the APC was concerned about the voluntary nature of the Concordat, and considered whether more binding measures, such as legislation, will be needed to achieve the Concordat's aims. **We endorse the APC's conclusion that the operation and effectiveness of the Concordat should be monitored carefully and reports placed in the public domain.** The Concordat will be reviewed again in 2006. Depending on the outcome of the review, Ministers should explore whether it would be useful to request the APC to undertake a systematic study addressing in more detail specific issues raised by the possible duplication of research. Such a study could complement and develop further the review of the Concordat, for example by assessing the extent of the problem and, where appropriate, identifying strategies for the avoidance of duplication nationally and internationally. Consideration could also be given to the question of whether duplication occurs because some kinds of data are not made publicly available when experiments fail. It would be especially undesirable if researchers wasted time and effort in duplicating experiments that have elsewhere been found to be unsuccessful. The study could also consider whether funding bodies would have a role in sharing or making available information about past or current research, in order to avoid duplication.

Problems in harmonising international test guidelines

15.84 Many tests involving animals are conducted to provide safety or efficacy data for regulatory authorities, in compliance with national or international legislation (see paragraphs 9.4 and 13.49–13.52). Thus, if various authorities require testing to be carried out using different study designs, a single chemical that is marketed in a number of countries might need to be tested several times. Harmonisation of test guidelines, so that a single study design is acceptable to regulatory authorities in many countries, is a very valuable means of reducing the use of animals in safety and efficacy testing. The ICH [International Conference on Harmonisation of Technical Requirements for Registration of Pharmaceuticals for Human Use] has managed to improve mutual acceptance for the pharmaceutical industry, but much still needs to be done to extend this approach to other product areas.

15.85 In theory, the adoption of guidelines on toxicity testing by the OECD should allow national or supranational regulatory authorities (such as the EPA (Environmental Protection Agency) or FDA (Food and Drug Administration) in the USA, or the European Commission) to incorporate them with minimal change into their own testing requirements. But in practice this has not always been the case. While, the European Commission incorporated new *in vitro* methods for skin corrosivity more than a year before their final review and approval by the OECD, the EPA made changes to the protocols for the three new *in vivo* methods for acute oral toxicity and also to a new OECD-approved *in vivo* method for predicting skin sensitisation (the mouse local lymph node assay). Thus, the EPA delayed acceptance for some time after their adoption by OECD and, in addition, the EPA's requirements for acute oral toxicity and skin sensitisation are no longer harmonised with those of other OECD

Member States.

15.86 The lack of stringent international harmonisation poses problems. In the UK, the Home Office may only grant a project licence for safety assessment according to the use of procedures that are less severe to the animals involved than those described in a relevant OECD test guideline. This approach means that any company intending to register a product such as an agrochemical formulation in the USA is unable to conduct in the UK a substantial number of the tests required by the EPA. In addition, as most companies have policies for animal welfare that encourage the conduct of a single set of safety tests for global registration, the more severe protocols required by the EPA[48] are usually used and, in the case of UK-based companies, some or all of the testing has to be exported to other countries. There are many other examples of individual countries having different safety requirements.[49] Increased efforts must be made to standardise and harmonise testing requirements, in order to ensure that the minimum number of animals is used at the global level. **We therefore recommend that the UK through its National Coordinators at the OECD makes it a priority to identify areas in which harmonisation continues to be difficult and initiates steps to increase adoption of scientifically valid protocols that entail the least adverse welfare costs to the animals involved.** We also note that under the Inter-Departmental Concordat on data sharing, regulatory authorities aim to 'press for agreement on behalf of the UK Government for fullest provisions and procedures which enable data sharing when negotiating, updating and transposing relevant European Directives and when taking part in other international harmonisation processes'. **In order to support the proposed initiative by the National Coordinators at the OECD, we recommend that the UK Inter-Departmental Group on the Three Rs should produce or commission a report on cases where less severe protocols are not recognised internationally, whether for scientific or other reasons, and make suggestions for improving acceptance.**

15.87 International guidelines also have a crucial role with regard to welfare standards of animals involved in research. There is evidence that relevant OECD guidelines do not use important concepts such as what defines a *maximum tolerated dose, severe distress, obvious pain* or a *moribund condition* consistently (paragraph 9.35).[50] Several of the existing OECD test guidelines could also be improved with regard to issues such as environmental enrichment, and conditions of housing, as, for example, some do not specify the requirement for group housing where this would be possible.[51] All these factors can act as potential sources of avoidable suffering for the animals, and **we recommend that the OECD reviews and revises relevant guidelines to achieve greater consistency and to contribute to a wider application of the Three Rs in view of current knowledge.**

X. Use of CO2 for euthanasia

A. Introduction

X.a) Current provisions of Directive 86/609/EEC

At the end of any experiment, it shall be decided whether the animal shall be kept alive or killed by a humane method.

X.b) Current situation in Member States

The Commission has produced guidelines on humane methods of euthanasia. Some Member States use these guidelines as such. Use of CO2 is recommended for killing certain species of animals used in experiments.

X.c) Trends and implications

CO2 is one of the most commonly used method of euthanasia. It is the most convenient method for euthanasia of large number of rodents (quicker, less resources and time-consuming than alternatives). If used in optimal conditions, CO2 may also be less stressful than manipulations required for injections of physical methods. It is also highly reproducible when using appropriate equipments and sage for operators.

Establishments do not use a single method of euthanasia but rather a combination of several methods according to the type of study or the circumstances. For example, if there is a necropsy at the end of a toxicology study, the animal may be anesthetized with a suitable method, and then exsanguinated. If there is no necropsy, CO2 is used (on conscious animals), or pentobarbital over-dosage, if less than 2-3 animals are to be killed at the same time.

X.d) Problem dimension

The Directive itself does not specify nor give any guidance as to the most appropriate methods of killing per type of species. According to the latest research, CO2 is aversive to all vertebrates, some species find even low (10-20% by volume in air) concentrations aversive. The Panel on Animal Health and Animal Welfare of the European Food Safety Agency has in its opinion recommended to use CO2 only when animal is first rendered unconscious via another method. Banning the use of CO2 as the sole agent would, however, have significant economical impacts due to its wide use.

X.e) Potential solutions

For animal welfare reason, the revision could incorporate the list of humane methods of euthanasia to be used for experimental animals. Within the list of methods, the use of CO2 could be prohibited without rendering the animal unconscious prior to its use.

B. Options and their impacts

Overall preliminary assessment:

1.1 The overall preliminary assessment shows that prohibition to use CO2

without rendering the animal first unconscious by a use of another method, or by use of anaesthetic gases in combination with CO2, would greatly increase animal welfare but would also be associated with higher costs.

Overall assessment: +

Do you support this overall analysis? No opinion

Detailed impacts

1.2 animal welfare: +++

The use of anaesthetic gases such as halothane to render animals unconscious before applying CO2 greatly reduces the suffering of animals. In this respect the impacts to animal welfare would be high especially when considering the large numbers of animals this would concern.

Do you support the preliminary findings? No opinion

1.3 Impacts to establishments: -

The use of anaesthetic gasses such as halothane or isoflurane can be effective but are more expensive than CO2 alone. One-time Investments between 13.000 Euro and 25.000 Euro depending on the configuration are required for a complete anaesthetic setup for rodents including an active scavenging system.

Do you support the preliminary findings? No opinion

1.4 Justification [open text]

XI. Statistical reporting

A. Introduction

XI.a) Current provisions of Directive 86/609/EEC

Member States are required to collect and as far as possible periodically make publicly available statistical data on the number and kinds of animals in selected categories as per the scope of the Directive and regulatory requirements for animal testing.

XI.b) Current situation in Member States

Member States have voluntarily committed themselves to report on 8 analytical categories:

- species , numbers and origin of animals used, re-use
- purpose of the experiments
- toxicological or safety evaluation for types of products/endpoints
- animals used for studies of diseases
- animals used in production and quality control
- origin of regulatory requirements for animals used in toxicological and other safety evaluations
- animals used in toxicity test for toxicological and other safety evaluations
- type of toxicity test carried out for toxicological and other safety evaluations.

In addition, 9 Member States report on transgenic animals and 7 report on animals killed for their tissue/organs separately.

XI.c) Trends and implications

The current situation with statistical reporting in Europe is characterised by an increasing quality of data. Since 1991, the Commission has published statistical reports on the use of animals in experiments in the EU. The format for reporting data was harmonised in 1997 at the EU level. Based on this reporting system, both the quality and coherence of data has constantly increased over the years. For the 5th statistical report, covering the year 2005, data is expected from all 25 Member States.

Only 5 Member States, however, have a statistical reporting system based on an automated data-collection. Recent experiences with the introduction of e-government show, that the administrative saving potentials of automated data-processing in terms of a reduction of workload can be estimated at 20%.

XI.d) Problem dimension

The availability of sound data on the number of animals used for experimental and other scientific purposes is essential for public policy-makers working in the field of animal protection. The analysis of the statistical data currently available shows that there are central fields of political and public interest which are not yet covered by the existing statistical reporting system. Genetically modified animals, which are increasingly used in laboratory experiments, are not reported through the existing system, neither are animals killed for their organs and tissues. The severity classes to which animals have been subjected are not identified either.

Finally, the current statistical reporting system only focuses on overall numbers of animals used for experimental and other scientific purposes but there are no data available on how many experiments/projects per institutional category (public/private) are carried out in the EU per year. This makes identification of trends and potential problems difficult as well as hindering good policy making to address these problems.

XI.e) Potential solutions

A revised Directive could increase the quality and usability of annual statistical reporting of the Member States by introducing elements covering:

- genetically modified animals, some invertebrate species and fetal forms (excluding larvae)
- animals killed for the primary purpose of their organs and tissues to be used in scientific procedures
- numbers of projects and types of institutes
- severity classes of the experiments to which animals have been subjected

Do you support this analysis?Yes

B. Options and their impacts

- **Option 1: Inclusion of genetically modified animals, some invertebrate species and fetal forms (excluding larvae) in the statistical reporting**

Overall preliminary assessment

1.1 Preliminary assessment shows an overall positive impact of this element. Although there is no direct impact on animal welfare, a better statistical reporting system would highly contribute to better informed policy-making both at EU and national level. It would also increase transparency and thus provide better information for the general public and in some cases provide an opportunity to improve image for the research community.

Overall assessment: positive

Do you support this overall analysis? Yes

Detailed impacts

1.2 Monitoring and public accountability: +++

An inclusion of genetically modified animals, invertebrates and fetal forms would provide more detailed information thus allowing a better monitoring of their use at Member State and EU level.

Do you support the preliminary findings? Yes

1.3 Image of research and industry: +

An inclusion of genetically modified animals, invertebrates and fetal forms in the statistical reporting would have a positive impact on the image of research and industry because the increase in the use of these animals could be more easily justified in relation to overall

decrease of animal numbers (via the use of more targeted animal models).

Do you support the preliminary findings? No opinion

1.4 Policy making: ++

More detailed statistics on these animals would have a high positive impact for the enhancement of national and European policy-making.

Do you support the preliminary findings? No opinion

1.5 Administrative burden: -

Statistical reporting on genetically modified animals would create low administrative burden for establishments since these animals are already included in the statistics but only not separately recorded. Inclusion of invertebrate species and fetal forms would create moderate temporary to low administrative burden due to small numbers involved.

Do you support the preliminary findings? No opinion

1.6 Justification [open text]

- **Option 2: Inclusion of animals killed humanely for the primary purpose of their organs and tissue to be used in experiments**

Overall preliminary assessment

2.1 Preliminary assessment shows an overall positive impact of this element. Although there is no direct impact on animal welfare, a better statistical reporting system would highly contribute to better informed policy-making both at EU and national level. It would also increase transparency and thus provide better information for the general public and in some cases provide an opportunity to improve image for the research community.

Overall assessment: positive

Do you support this overall analysis? No opinion

Detailed impacts

2.2 Monitoring and public accountability: +++

Inclusion of animals killed for their organs and tissues for research using Replacement alternatives would provide more detailed information on these animals, their species and numbers, allowing better monitoring of the use animals for procedures at Member State and EU level.

Do you support the preliminary findings? No opinion

2.3 Image of research and industry: +

An inclusion of animals killed for their organs and tissues would have a positive impact on the image of research and industry because the purposes, especially in the area of alternative *in vitro* methods, can be better explained to citizens on the basis of statistical evidence.

Do you support the preliminary findings? No opinion

2.4 Policy making: +++

More detailed statistics on these animals would have a high positive impact for the improvement of national and European policy-making regarding the design of future innovation-policy.

Do you support the preliminary findings? No opinion

2.5 Administrative burden to users: -

Inclusion of animals killed for their organs and tissues would create moderate administrative burden for establishments using these species since these are currently not recorded in the statistics. However, the overall administrative burden on the economy would be low, as only around 10% of establishments currently use animals killed for their organs and tissues.

Do you support the preliminary findings? No opinion

2.6 Administrative burden to Member States: - -

As animals killed for their tissues and organs are currently not covered by the Directive, the inclusion of theses species in the statistical reporting would lead to a medium to low short-term administrative burden for the 16 Member States not yet reporting separately on this, as the existing national reporting systems would have to be adopted accordingly.

Do you support the preliminary findings? No opinion

2.7 Justification [open text]

The Council has not recommended that information be recorded about animals killed humanely for the primary purpose of their organs and tissue to be used in experiments. However, the Council did make the following observation and recommendation in its Report, *Nuffield Council on Bioethics (2005) The ethics of research involving animals (London: Nuffield Council on Bioethics):*

15.32 The humane killing of animals by means set out in Schedule 1 of the A(SP)A, for whatever purpose, is not itself a licensed procedure. Animals killed in this way are therefore not recorded in the *Statistics*. Many would argue that possession of a life is a morally relevant feature, and that it is therefore important to provide information about the number of animals that are killed humanely (paragraphs 3.47, 13.26 and 14.5).

15.33 We realise that the system of collecting data about the numbers of animals used in research is very complex and that care needs to be taken to avoid making existing administrative processes more onerous. **Nevertheless, we think it highly desirable to present clearer information about how many animals of a particular species experience pain, suffering**

and distress, to what degree, and for how long. We therefore recommend that the *Statistics* be revised to provide this information, including details about the number of animals killed under A(SP)A Schedule 1.

- **Option 3: Inclusion of numbers of projects and types of institutions in the statistical reporting**

Overall preliminary assessment

3.1 Preliminary assessment shows an overall positive impact of this element. Although there is no direct impact on animal welfare, a better statistical reporting system would highly contribute to better informed policy-making both at EU and national level. It would also increase transparency and thus provide better information for the general public and in some cases provide an opportunity to improve image for the research community.

Overall assessment: positive

Do you support this overall analysis? Yes

Detailed impacts

3.2 Monitoring and policy making: ++

Inclusion of numbers of projects and types of institutions would provide a more comprehensive picture on the overall number and structure of animal experimentation in Europe, thus contributing to a better monitoring at Member State and EU level.

Do you support the preliminary findings? Yes

3.3 Transparency: ++

An inclusion of the number of projects and types of institutions would have a positive impact on public awareness, due to an increase of transparency.

Do you support the preliminary findings? Yes

3.4 Administrative burden to users: - -

Inclusion of numbers of projects and types of institutions would result in moderate administrative burden for establishments in the four Member States which currently have authorisation only on an establishment or personal level, due to the need for restructuring the annual reporting. The cost to the remaining Member States would be negligible.

Do you support the preliminary findings? No opinion

3.5 Administrative burden to Member States: - -

Inclusion of projects into statistical reporting would only lead to a high administrative burden for the five Member States with decentralised systems of authorisation, covering 35% of animal use, for the other

Member States this could be easily established on the basis of the existing statistical data collection system.

Do you support the preliminary findings? No opinion

3.6 Justification [open text]

- **Option 4: Inclusion of severity classes to which animals have been subjected to in the statistical reporting**

Overall preliminary assessment

4.1 Preliminary assessment shows an overall positive impact of this element. Although there is no direct impact on animal welfare, a better statistical reporting system would highly contribute to better informed policy-making both at EU and national level. It would also increase transparency and thus provide better information for the general public and in some cases provide an opportunity to improve image for the research community.

Overall assessment: positive

Do you support this overall analysis? Yes

Detailed impacts

4.2 Monitoring and policy making / transparency: +++

The inclusion of reporting on severity that animals have been subjected to, would provide a more comprehensive picture on the overall number and structure of animal experiments in Europe, thus contributing to a better monitoring at Member State and EU level.

Do you support the preliminary findings? Yes

4.3 Public awareness: +++

The inclusion of reporting on severity that animals have been subjected to, would lead to an increase public awareness, due to a more transparent picture of the actual degree of animal suffering imposed by experiments.

Do you support the preliminary findings? Yes

4.4 Administrative burden to users: -

The inclusion of reporting on severity that animals have been subjected to, would lead to a moderate short-term administrative burden at establishment-level, because data on severity degrees are currently not collected systematically.

Do you support the preliminary findings? No opinion

4.5 Administrative burden to Member States: - -

Since severity classification is not readily available at Member State level and most Member States have only little or even no experience in

this area, there would be high short-term administrative burden for all Member States when implementing the respective reporting system.

Do you support the preliminary findings? No opinion

4.6 Administrative burden to Member States (impact distribution):

- -

An inclusion of severity classes animals have been subject to, would lead to a particularly high administrative burden for the five Member States with decentralised systems of authorisation, covering 35% of animal use, as the establishment and coordination of a decentralised data collection would require more resources than in Member States with a centralised authorisation system.

Do you support the preliminary findings? No opinion

4.7 Justification [open text]

The Council made the following observations and recommendations on improving the annual statistics in the UK in its Report, *Nuffield Council on Bioethics (2005) The ethics of research involving animals (London: Nuffield Council on Bioethics):*

Statistical information about the number of animals used and the suffering involved

15.25 The *Annual Statistics of Scientific Procedures on Animals,* published by the Home Office, have an important role in providing information about animal experimentation. At the same time, there is wide agreement that the data are presented in ways that are not readily accessible to lay people, and that the presentation could be improved. In particular, the *Statistics* have been criticised for not providing clear answers to the following questions: (i) what is the nature, level and duration of pain, suffering and distress actually experienced by animals used in the different kinds of procedures? and (ii) how many animals are used in procedures and related activities?

15.26 It is not possible to answer the first question, because information about welfare implications is only provided prospectively, in the process of the licence application (see paragraph 13.14). By definition, it is not possible to know in advance how animals will be affected in practice, and data from separate interim or retrospective analyses are not reported publicly.

15.27 Information about the degree of pain and suffering can, in some sense, be inferred from the *Statistics* about the severity bands assigned to granted project licences. These are classified in one of three bands: *mild, moderate* or *substantial* (see Box 13.3). But over the five-year period of a project licence, a range of different protocols, themselves assigned different severity limits, may be carried out. It is questionable how meaningful it is to average out the different limits under one band, in order to provide the public with accurate information. For example, it may be the case that a project that contains ten mild protocols, each involving 10,000 animals, and one protocol with a substantial severity limit involving 50 animals, would still be classified as mild.[3] Furthermore, it has also been suggested that the category of moderate protocols 'appears to be something of a catchall, covering a wide range of the more invasive procedures'.[4] We make the following observations.

15.28 Information about the suffering that animals involved in procedures experience in practice is unsatisfactory. **We recommend that the Home Office should make retrospective information about the level of suffering involved during procedures publicly available. In gathering this information the Home Office should also obtain and make available, retrospectively, information about the extent to which the scientific objectives set out in**

applications have been achieved.

15.29 The terminology used to describe the severity of projects and individual protocols and procedures is not straightforward and therefore difficult for members of the public to understand. **We recommend that the annual *Statistics* should provide case studies of projects and procedures that were categorised as *unclassified, mild, moderate* or *substantial*. Case studies should also include examples of animals used over extended periods of time and should describe not only their immediate involvement in research but also the range of factors that influenced their life experiences, such as the conditions of breeding, housing and handling** (see paragraph 4.31).

15.30 **The current system of severity banding for project licences and the severity limits for procedures should be reviewed, particularly the use of the *moderate* category which covers a wide range of different implications for animal welfare. For the general public, the category *unclassified*, which refers to protocols and procedures involving terminally anaesthetised animals, is too vague to be informative, and should be clarified.**[5]

15.31 The *Statistics* give details about the total number of *animals* used for the first time in a year, and the total number of *procedures* initiated in that year (paragraph 13.27). As we have said, the term *procedure* refers to a wide range of activities, with very different implications for animal welfare which may arise from breeding, the withdrawal of blood, or experiments where death can be the endpoint. It is not straightforward to infer from the number of procedures undertaken how many animals have experienced what kind of pain, suffering or distress.

15.32 The humane killing of animals by means set out in Schedule 1 of the A(SP)A, for whatever purpose, is not itself a licensed procedure. Animals killed in this way are therefore not recorded in the *Statistics*. Many would argue that possession of a life is a morally relevant feature, and that it is therefore important to provide information about the number of animals that are killed humanely (paragraphs 3.47, 13.26 and 14.5).

15.33 We realise that the system of collecting data about the numbers of animals used in research is very complex and that care needs to be taken to avoid making existing administrative processes more onerous. **Nevertheless, we think it highly desirable to present clearer information about how many animals of a particular species experience pain, suffering and distress, to what degree, and for how long. We therefore recommend that the *Statistics* be revised to provide this information, including details about the number of animals killed under A(SP)A Schedule 1.**

15.34 Further thought is required to identify how changes could be made to improve information about the suffering and numbers of animals involved in research. We are aware that the APC,[6] LASA and the RSPCA together with the Boyd Group[7] are considering these issues at the time of writing. We hope that the Home Office will find our general observations useful in considering the reports from these groups.

XII. Miscellaneous

1. Social welfare: +++

1.1 A recent Eurobarometer survey shows that many citizens agree that animals should be protected even if this involves significant costs. Other studies also imply that citizens would have a high "willingness to pay" for improved animal welfare and would either accept higher prices for consumer products or even a slight tax increase if they could rely on the fact that animals are really better protected. Increasing animal welfare does therefore increases social welfare.

Do you support the preliminary findings? No opinion

1.1a Justification [open text]

2. Further push for innovative technologies: ++

2.1 Some high-technology areas of research would be boosted by a further promotion of non-animal testing and the Three Rs (for example in vitro, toxicogenomics, QSARs). Companies who develop and produce these alternative tests would benefit from a reform that promotes alternatives. This is in line with the Lisbon strategy, increasing research and innovation in key technologies for the future.

Do you support the preliminary findings? Yes

2.1a Justification [open text]

3. Insurance and direct costs: +

3.1 Increased animal welfare would decrease the risk of violent extremist activity against establishments allowing therefore saving in insurance or direct costs derived from vandalism.

Do you support the preliminary findings? No opinion

3.1a Justification [open text]

4. External health costs: +

4.1 Handling laboratory animals involves health risks for the researchers (e.g. bites, allergies, zoonoses, depressions). It can be assumed that not all of these health costs are fully internalised by the user, some of the health costs are paid by public social security. Replacing animal experiments with non-animal methods, reducing numbers of animals involved in experiments and improving the well-being of animals by refinement, would reduce the external cost to the society.

Do you support the preliminary findings? No opinion

4.1a Justification [open text]

5. International leadership: ++

5.1 Given that a substantial share of world animal experimentation takes place in Europe, higher standards would allow the EU to play an international leadership role to increase awareness and to commit other countries in the medium term to agree to international animal welfare standards (for example within the OECD and the OIE).

Do you support the preliminary findings? Yes

5.1a Justification [open text]

Further detailed questions:

6. Public Relations/Crisis management:

6.1. How much money (as a percentage of the total budget) does your organisation/company allocate in its annual budget to public relations campaigns or projects whose main objective is to respond to criticism or to better communicate business practices related to animal experimentation?

Response [open text]

6.2. Has your organisation/company suffered adversely from anti-animal testing campaigns? If yes, how much money (also in terms of man-days) was allocated to the management of the consequences of such adverse campaign?

Response [open text]

6.3. Has your organisation/company (a) specific post(s) / department allocated to animal welfare? If so, how many people are involved and what is the annual budget of the post(s)/department?

Response [open text]

7. Workers protection and well-being

7.1. In your organisation/company, what is the annual turnover of personnel, not involved in the handling and use of animals in experiments?

Response [open text]

7.2. In your organisation/company, what is the annual turnover of personnel, involved in the handling and use of animals in experiments, who seek a career change which will not involve animal experimentation?

Response [open text]

7.3. In your organisation/company, what is the average number of sick leave days per year of personnel not involved in the handling and use of animals in experiments?

Response [open text]

7.4. In your organisation/company, what is the average number of sick leave days per year of different categories of staff (care takers, technicians,

researchers/project leaders, specialists) directly involved in the handling and use of animals in experiments?

Response [open text]

7.5. In your organisation/company, what is the percentage of sick leave days per different categories of staff (care takers, technicians, researchers/project leaders and specialists) directly related to animals and their handling (such as bites, allergies, zoonoses, depression)?

Response [open text]