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IMPACT ASSESSMENT REPORT


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accompanying the

Proposal for a

COUNCIL REGULATION

on the protection of animals at the time of killing

IMPACT ASSESSMENT REPORT

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EXECUTIVE SUMMARY

Every year nearly 360 millions pigs, sheep, goats and cattle as well as more than 4 billions of poultry are killed in EU slaughterhouses. In addition the European fur industry kills around 25 millions animals while hatcheries kill around 330 millions day-old-chicks. The control of contagious diseases may also require the killing of thousands to millions of animals.

The killing of farm animals is regulated by Council Directive 93/119/EC1 on the protection of animals at the time of slaughter or killing. The directive has never been amended. The present impact assessment will therefore mainly focus on whether the problems have changed and whether the original objectives are still valid.

The starting point of the Commission proposal has been the adoption in 2004 and 2006 of two scientific opinions from the European Food Safety Authority, which suggest revising the technical annexes of the Directive. In parallel the World Organisation for Animal Health adopted in 2005 two guidelines on the welfare of animals at slaughter and killing leading to similar conclusions. As a consequence the Commission mandated an external consultant in 2006 to carry out a study on stunning/killing practices in slaughterhouses and their economic, social and environmental consequences. The study was finalised in 2007. At the same time the Commission conducted consultations of interested parties and Member States. Reports from the Commissions' experts from the Food and Veterinary Office (FVO) were analysed as they reflect the state of implementation of the current directive within the Member States. An internet consultation was also performed from December 2007 to February 2008.

This legislation mainly affects slaughterhouses, fur farming, hatcheries and killing performed for disease control purposes. The meat industry is the most concerned sector since it kills the largest number of animals. This is also where legislative requirements are more detailed and explain why most of the impact assessment focuses on this industry.

The context for killing farm animals has considerably changed since 1993. New technologies have been introduced, new scientific research have been carried out making current standards obsolete in some areas. Animal welfare concerns have also grown in our society and European citizens are increasingly more demanding on this aspect of the food chain. The legal environment has also changed for slaughterhouses with the adoption of the "Hygiene Package", a series of EU legislation on food safety which emphasizes the responsibilities of the food business operators. Massive killing during large animal epidemics have also raised questions on our way to ensure humane killing of animals. In 2006 the Commission adopted the first Community Action Plan on the Protection and Welfare of Animals, introducing new concepts such as the welfare indicators and the need for further research programs and centres of reference on animal welfare.

Specific problems have also been identified with the present EU legislation such as the lack of harmonised methodology for new stunning methods, the lack of clear responsibilities for operators on animal welfare, the insufficient competence of personnel handling animals, or insufficient conditions for the welfare of animals during killing for disease control purposes.

The killing of farm animals is an area subject to EU legislation since 1974 and Community competence has been reinforced in 1993. Consultations from stakeholders and Member States confirm the relevance of Community initiative in this domain. This legislation affects the meat industry, the sector of equipment manufacturers and some farmers' activities. All of them are working at international level and ask for an EU framework.

The general objectives of the initiative attached to this impact assessment is to improve the protection of animals at the time of slaughter or killing, while ensuring a level playing field for all business operators concerned, so that their competitiveness is not affected by discrepancies in their costs of production or their market access. This initiative should also contribute to the Better Regulation/simplification policy.

The specific objectives are to encourage innovation for stunning animals humanely, to ensure better integration of animal welfare in the production process of slaughterhouses, to increase the level of knowledge of personnel concerned and to improve the protection of animals when massive killings occur.

The options range from doing nothing (=baseline= option 1), non-binding recommendations (option 2), amending the directive (option 3) through its technical annexes and reorganising the legislation (option 4).

Slaughtering costs represent a limited part of the total costs of slaughterhouses activities (20%) but could affect their competitiveness. However changes in costs for slaughtering animals are unlikely to affect the final price of meat. Slaughterhouses are already submitted to permanent official inspection through food safety legislation. The current animal welfare legislation does not introduce additional requirements for official inspections. Animal welfare has a positive impact on meat quality and occupational safety. It also represents positive market values. No significant environmental impacts have been identified.

From the comparison of the options it appears that doing nothing (option 1) have a number of negative impacts on the objective pursued. None of them is likely to be achieved by this option. Animal welfare on many aspects is likely to be worsened while businesses will have to operate in an increasingly different environment from Member State to another. Therefore simplification is far from being improved. Innovation will be discouraged by this situation despite efforts made in some Member States. Economic costs on business and authorities will be limited in the short term. But detrimental effects on meat quality, public perception and occupational safety could have long term negative economic impacts on the meat sector.
The comparison between the other options in the light of the objectives makes clearly more advantageous to reorganise the legislation (option 4) while amending the directive (option 3) would bring some benefits and providing non-biding recommendations (option 2) will not suffice to tackle most of the objectives. Therefore option 2 alone can not be considered as to be sufficient way to address the issues, but could be considered interesting as a complementary instrument.

Non biding recommendations (option 2) would in particular contribute to improve animal protection and meat quality. It could also contribute to establish a certain level playing field among businesses but in a very limited way due to the non mandatory nature of the option.

Reorganising the directive (option 4) is the only option where innovation can be encouraged and simplification provided (changing the legal instrument and having a new approach). It is also brings more benefits than amending the directive (option 3) as regards animal protection. It is also the option that is likely to bring the most positive impacts in terms of meat quality, public perception and better working conditions in slaughterhouses.

Options 3 and 4 will generate short terms costs for certain businesses but their effects will depend if specific measures are taken like possible transitional periods or exemption in specific cases.

Environmental impacts are considered to be neutral for all options as there was no evidence during the collection of data of substantial and/or direct effects on environment.

The general monitoring of the legislation on animal welfare is included in the Regulation 882/2004 on official controls of food and feed\(^2\) and this document does not suggest developing at this stage specific instrument that would create administrative burden for the Member States.

1. **Procedural Issues and Consultation of Interested Parties**

1.1. **EFSA opinions and guidelines of the World Organisation for Animal Health (OIE)**

Following a Commission request, the European Food Safety Authority adopted two scientific opinions in 2004\(^3\) and 2006\(^4\) on the different stunning and killing methods to be used for main farm species either for slaughter for human consumption or for disease control purposes.

In parallel, the OIE provided two guidelines on the welfare of animals for the slaughter of animals and for the killing of animals for disease control purposes. The two guidelines have been first adopted in 2005 and revised every year\(^5\). They contain detailed technical requirements for the different aspects of the slaughter or killing of animals. OIE guidelines are not legally binding for the Community but represent a large consensus in the world.

1.2. **External study (FCEC)**

The Commission ordered in July 2006 an external study on the stunning/killing practices in slaughterhouses and their economic, social and environmental consequences\(^6\). The study was finalised in July 2007.

In the framework of the study, major stakeholders such as meat industry associations, competent authorities and animal welfare associations were consulted at European and national level (see Annex I). Individual slaughterhouses, consulting firms, farmers’ organisations and equipment manufacturers were also contacted for that purpose.

For all species studied, there was a global perception among most stakeholders that animal welfare was progressively integrated as one of the key dimensions to continue their business in Europe. In particular this evolution explained the success and the development of new methods of stunning considered more humane like the use of modified atmosphere for poultry or pigs, although such new techniques required much higher investment and operational costs.

1.3. **Consultations of interested parties**

Regular bilateral meetings were also held with the major stakeholders and with a number of scientific, technical and legal experts concerning different aspects of the proposal. Consultations started from July 2006 and included organisations of slaughterhouse operators, organisations of animal together ns of farmers, etc.\(^7\)

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\(^3\) *The EFSA Journal* (2004), 45, 1-29, Welfare aspects of the main systems of stunning and killing the main commercial species of animals.


\(^7\) Main organisations and companies consulted on bilateral basis are listed in Annex I.
The initiative was also publicised\(^8\) through regular presentations at industry forums and at the Commission relevant advisory committees of the Directorate General for Agriculture during the period 2006-2007.

The initiative was also presented at a working group of the Advisory Group for the Food Chain and Animal and Plant Health on 19 December 2007 (see Annex II). The Group\(^9\) contains 36 European organisations from which some of them are directly concerned such as meat industry sector, farmers, retailers, veterinarians and animal welfare organisations.

1.4. **Food and Veterinary Office reports**

Commission experts from the Food and Veterinary Office (FVO) performed regular inspections in order to verify that Member States take the necessary implementing measures to ensure compliance with Community rules. As regards Directive 93/119/EC, FVO experts have regularly visited the Member States for years and collected valuable information on the difficulties of implementation faced at national level. The general report of a series of missions carried out in 2006-2007 to evaluate controls at the time of slaughter and killing provides an overview of the outcomes of the most recent missions\(^10\) and important information on the effectiveness of the supervision by Member States on the enforcement of animal welfare requirements. Annex III provides the list of missions performed on slaughter since 2003.

1.5. **Internet consultation**

Specific webpages\(^11\) were also created on the website of the Commission, providing the background of the initiative as well as a list of the main topics of reflection. Roadmap and timetable of the proposal, terms of reference of the socio-economic study, details of the consultant realising the study were also available on those pages. The report of the study was published on the website in September 2007. The webpages have been regularly updated in order to publish the different position papers of the stakeholders and to stimulate exchange of views. From December 2007 to February 2008 a specific mailbox was opened with an update on the main topics of reflection in order to invite stakeholders to provide their views on the subject.

1.6. **Consultation of the Member States**

The initiative was presented in details to the Member States in the framework of a working group on 25 January 2008. Afterwards some Member States provided

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\(^8\) Round table Seminar on the issue of Slaughter and stunning of animals, 24 July 2007, Markfield (UK) co-organised by the Islamic Foundation and CIWF; General Assembly of the OABA in Paris 12 May 2007; Training Session "Bienesestar animal, Proteccion de los animales en el momento de su sacrificio, Madrid, March 2007; Symposium sur le Veau de boucherie, St Malo, novembre 2006; General Assembly FNICGV, Toulouse, June 2006.

\(^9\) The list of members was published in OJ C 97, 21.4.2005, p. 2.

\(^10\) DG(SANCO)/2008-7974 – GR General report of a series of missions carried out in 20062007 to evaluate controls of animal welfare at the time of slaughter and killing

specific contributions (see Annex IV). An additional questionnaire was sent to all Member States for collecting complementary data from which the Commission received 11 replies (see complementary questionnaire in Annex XIV).

1.7. Inter-Service steering group on the impact assessment

Two Commission inter-service steering groups took place, one at a very early stage of the IA draft (in February 2008) and one at the final stage of the draft (in April 2008). Were invited DG AGRI, TRADE, EMPL, ENV, ENTR, JLS, RTD, LS and SG.

1.8. Follow-up to Impact Assessment Board recommendations

The Impact Assessment was submitted to the Board on 14 May 2008 and discussed at the Board meeting of 4 June. In its opinion, the Board made the recommendations and the document was accordingly redrafted. This includes:

- merging the information of the status quo in a single comprehensive baseline scenario;
- clarifying the links between main and specific objectives;
- clarifying the links between the main options and the possible sub-options;
- applying more consistently criteria for assessing each options;
- identifying better costs for businesses and for public administrations in implementing each option.

2. Problem definition

2.1. Background

2.1.1. Background on the slaughter sector in the EU

Nearly 360 millions pigs, sheep, goats and cattle are killed in EU slaughterhouses as well as more than 4 billions of poultry every year\(^\text{12}\). Slaughter for human consumption may also take place outside slaughterhouses in certain cases (farmed game, derogations, etc.). In addition some productions require the killing of millions animals on a regular basis (around 25 millions for the fur industry\(^\text{13}\) and more than 300 millions for hatcheries) or occasionally (casualties, accidents). The control of contagious diseases may also require the killing of thousands to millions of animals. Details on the different sectors affected are provided in Annex V. Stunning and bleeding methods differ according to species. Details on

\(^{12}\) Based on 2007 statistics, 258 millions pigs, 72 millions sheep and goats and 29 millions bovines are slaughtered in the EU yearly. Based on partial 2007 data there are at least 4 billions poultry slaughtered every year in the EU.

\(^{13}\) Based on 2006 data.
the current stunning/bleeding techniques used in the EU are provided in Annex VI.

2.1.2. Background on Directive 93/119/EC

Directive 93/119/EC provides conditions for the stunning and killing of farm animals. It was never amended since it started to apply in 1995. The Directive applies to the slaughter or killing of animals inside and outside slaughterhouses. Main requirements of Directive 93/119/EC are listed in Annex VII.

2.2. A new context

The general context at the time of adoption of Directive 93/119/EC has substantially changed and motivates the Commission to envisage the revision of this EU legislation. The following considerations have been taken into account:

(1) New technological developments: Since 1993 science and technology in slaughtering farmed animals, for the production of food or other purposes, have noticeably developed (see Annex VIII for examples).

(2) Increasing animal welfare concerns amongst EU citizens:

According to the latest Euro-barometer survey performed in 2006 "animal welfare is an issue which citizens rank highly, giving it 8 out of 10 on average in terms of importance. (...)" This high level of importance given to animal welfare is in line with the result of the first survey where 55% of EU citizens said that they believe animal welfare and protection do not receive enough importance in their country's agricultural policy. This concern has been enshrined in the Treaty with the adoption of the Protocol on the Protection and Welfare of Animals in the EC Treaty of Amsterdam in 1997.

However, when consultation was carried out concerning a possible grading system for slaughterhouses according to different levels of animal welfare standards applied, there was a unanimous opinion from organisations of animal protection as well as from the meat industry that animal welfare standards at slaughter were not negotiable and should be determined by the legislation. According to them, there is a strong expectation amongst consumers that animals are slaughtered correctly but they would be very reluctant, when buying meat, to get information on the details of stunning/killing methods used in order to make their choice.

(3) Changes in the EU legislative context applicable to slaughterhouses: The EU legislative context applicable to slaughterhouses operators has been substantially changed by the introduction of the general food law and the subsequent legislation adopted in 2004 (the so-called "Hygiene

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14 This survey was carried out by TNS Opinion & Social, interviewing 29,152 citizens in the 25 Member States and 4 accession and candidate countries between 6 September and 10 October 2006.

One of the key changes of this set of legislation was to increase the responsibility of food business operators regarding food safety. Officials' role is mainly to ensure that operators develop and implement adequate measures to meet this objective. As a consequence, the legislation is technically less prescriptive but requires more documentation on operational procedures. More details on the Hygiene package requirements are provided in Annex IX.

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(4) The EU has faced in recent years major animal epizooties involving massive culling of animals for controlling the spread of animal diseases (Foot and Mouth Disease in 2001, Avian Influenza in 2003). The massive scale of the killing has generated welfare concerns among the public and underlined the weaknesses of the EU legislation in this regard.

<table>
<thead>
<tr>
<th>Year</th>
<th>Disease and Location</th>
<th>Number of Slaughtered Animals</th>
</tr>
</thead>
<tbody>
<tr>
<td>1997-1998</td>
<td>Classical Swine Fever in the Netherlands</td>
<td>11 millions pigs</td>
</tr>
<tr>
<td>1999-2000</td>
<td>Avian Influenza in Italy</td>
<td>14 millions birds</td>
</tr>
<tr>
<td>2001</td>
<td>Foot and Mouth Disease in the UK (mainly)</td>
<td>10 millions animals (mainly sheep, but also cattle and pigs)</td>
</tr>
<tr>
<td>2003</td>
<td>Avian Influenza in the Netherlands and Belgium</td>
<td>30 millions birds</td>
</tr>
</tbody>
</table>

(5) The Commission adopted in 2006 the Community Action Plan for the Protection and Welfare of Animals 2006-2010 introducing new concepts regarding the initiatives of the Community in this field. Two concepts are particularly relevant:

(a) the introduction of animal welfare indicators. The EU legislation today mainly focuses on input-based parameters to establish welfare standards. Animal welfare indicators are based on animals (outcome based approach) and are different from the traditional input-based approach.

(b) the development of research programs and centres of reference on animal welfare. As animal welfare is a developing science with sometimes complex technical aspects, operators and officials need to

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17 Figures on Classical Swine Fever and Foot and Mouth Disease are extracted from the impact assessment study realised for the new Community Animal Health Strategy (SANCO/10116/2007). Data on Avian Influenza are based on the requests for reimbursement addressed to the Commission by the Member States.


20 For example in the case of electrical stunning, input based parameters could be the current (A), the frequency (Hz), the time of exposure (s) and the voltage (v).

21 This could be for example the scoring of animals falling down in a passageway or the number of animals not properly stunned at the first time.
rely on centres of reference where they can develop their knowledge and request technical assistance when necessary.
(6) **International developments:** The World Organisation for Animal Health (OIE) adopted in 2005 two international guidelines\(^{22}\) on the subject, demonstrating the interest of the world community in providing better information and guidance for slaughtering and killing farmed animals.

(7) **Market-driven developments:** the development of private standards by retailers/major food manufacturers that include animal welfare requirements have led to the application of higher animal welfare standards in several cases. For example, the FCEC study confirms that in the case of poultry retail, demands often exceed national legislation and the development of gas stunning has been mainly motivated by client demands despite higher costs. This has been also observed in the case of pigs. In order to reflect consumer concerns on animal welfare, retailers have progressively integrated this dimension in their requirements including for slaughterhouses within and outside the EU, indirectly affecting third countries exporting meat to the EU.

### 2.3. Specific problems arising from this new context and the application of Directive

#### 2.3.1. Different approaches taken by the Member States on the new methods of stunning creating unsatisfactory welfare conditions and impeding innovation

Directive 93/119/EC lacks technical details for implementation and has never been updated. For example, stunning of poultry through the use of modified atmosphere is now being used at industrial scale while it is not mentioned in the current EU legislation. Techniques for stunning animals with gas or electricity have evolved for different species but technical parameters in the Community legislation have not changed.

This situation has caused unequal and sometimes unsatisfactory welfare conditions amongst EU slaughterhouses. It has also generated fragmentation on the market for certain stunning equipment manufacturers and has contributed to impede innovation.

This is typically the case for the development of Controlled Atmosphere Stunning (see Annexes VIII and X). Similarly the development of water bath stunners using high frequency currents without precise indications in the EU legislation has led in some Member States to improper welfare conditions as highlighted by inspections performed by Commission' experts\(^{23}\).

#### 2.3.2. Different approaches taken by operators in integrating animal welfare rules in their operations

Three main problematic areas have been identified:

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\(^{22}\) See [http://www.oie.int/eng/normes/mcode/en_titre_3.7.htm](http://www.oie.int/eng/normes/mcode/en_titre_3.7.htm)

• **Inadequacy of slaughterhouse facilities**

Slaughterhouses facilities and fixed equipments for restraining and stunning animals are not always designed and built in order to take into account the welfare needs of animals, resulting in useless suffering during handling. A similar problem has been faced for ensuring adequacy of facilities for food safety purposes and one of the key responses of the EU legislation in this area was to introduce a system of pre-approval of slaughterhouses.

According to the FCEC study officials tend to check welfare standards related to the design and facilities of slaughterhouses too late, making changes for operators difficult and costly. This is partly due to the legal text which mixes structural elements with operational ones under the same chapter.

Examples of structural aspects that would need to be introduced in the legislation: a separate accommodation for sick animals, larger passageways for sheep and pigs, water supply in lairage facilities, recording device for electrical stunning apparatus or gas stunning systems, constant current stunners and a number of improvements in shackling lines for poultry.

• **Responsibilities for animal welfare are not clearly defined**

Operators killing animals have not systematically integrated animal welfare as part of their operational objectives. Many operators still rely on the official veterinarians to implement animal welfare standards with unreliable results. A comparable problem has been faced by the EU legislation on food safety and one of the key responses was to increase the responsibilities of the operators through the requirements of specific operating procedures (HACCP\textsuperscript{24}).

• **Lack of knowledge of officials and slaughterhouse personnel**

Despite the fact that training on animal welfare is required by Regulation N° 854/2004, Article 6 of Regulation (EC) No 882/2004 of the Hygiene Package and Directive 93/119/EC, officials in slaughterhouses, mainly in charge of controlling food safety, have developed limited knowledge on animal welfare while the increasing complexity of the stunning techniques have made their tasks of inspection even more challenging. There is a structural problem due to the fact that officials spend most of their time to post-mortem inspection, having little time to develop competence on animal welfare.

\textsuperscript{24} The requirement of implementing Hazard Analysis Critical Control Points principles has been generalised to all food business operators through Article 5 of Regulation (EC) No 852/2004.
As regards slaughterhouses' staff, the study performed by the external consultant indicates even though the EU legislation requires training, implementation is in practice far from uniform as the text does not specify the way it should be done. Meat and poultry slaughterhouses respondents declare that training is mainly provided on a voluntary basis (61% of respondents for the red meat sector and 60% for poultry) without being necessarily approved or supervised by the competent authorities (56% of respondents for the red meat sector and 52% for poultry). In most of the Member States there is no compulsory system of certification by the competent authorities to ensure that proper training is provided to staff.

2.3.3. Unregulated areas with increasing animal welfare concerns

Two areas have been subject to specific concern:

(1) In recent years, massive killing of animals have been carried out mainly for disease control purposes. The insufficient guidance regarding killing for disease control in the EU legislation has raised serious concerns among the public on the efficiency of the methods used and the corresponding depopulation strategy for controlling animal diseases. This concern is mainly due to the risk of insufficient preparedness of the Member States on the welfare aspects and the need of the public for more information on the measures taken to ensure that the welfare of animals is properly addressed.

(2) The current legislation does not contain provisions for farmed fish. Scientists consider that many methods of killing commonly practiced are not acceptable from a welfare point of view. However, this problem will not be addressed with the present proposal for technical reasons. Fish present substantial physiological differences compared to terrestrial animals. In addition technical processes and economic organisation for slaughtering fish can not be assimilated to the ones used for terrestrial animals25. Fish species will be dealt with in a separate initiative later on.

2.3.4. Religious slaughter

The current Directive provides a derogation to perform slaughter without stunning in case of religious slaughter (Jewish and Muslim rites) when it takes place in slaughterhouses. However Sweden, Lithuania, Latvia and some regions of Austria require prior stunning for religious slaughter26.

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25 It should be noted that in the framework of the World Organisation for Animal Health that have developed international codes for animal health and welfare, aquatic animals are subject to a different code than terrestrial animals.

26 Outside the EU, Norway and Switzerland have not authorised slaughter without stunning.
NGOs claim that the derogation is abused by some slaughterhouse operators who slaughter without stunning in excess to the religious market needs. In fact part of the carcass from animals slaughtered without stunning is normally going to the non-religious meat market\(^{27}\). NGOs consider that non-Jewish/non-Muslim consumers need to be informed and they should be given the right to choose meat obtained from animals that have been stunned.

Religious slaughter and animal welfare concerns are presently dealt by a specific Community Research project called DIAREL\(^{28}\) not yet finalised. Animal welfare labelling is also subject to a separate ongoing Commission initiative to determine its feasibility.

As the main objective of the proposal is to take into account the new context and technological developments, religious slaughter will not be subject to specific changes in the proposal and therefore will not be addressed in the impact assessment.

### 2.4. Subsidiarity

The present initiative will not change the scope of the current EU legislation adopted in 1993. The principle of subsidiarity was considered at the time of adoption of Directive 93/119/EC as it was explicitly mentioned in its 9\(^{th}\) recital\(^{29}\). Since then, the relevance of legislation at EU level has not been questioned and consultation with stakeholders has confirmed that further harmonisation is preferred rather than more subsidiarity.

Directive 93/119/EC is based on Article 37 of the EC Treaty on the Common Agriculture Policy as it provides a level playing field on animal welfare for all slaughterhouses in Europe. This legislation directly affects competition between the different operators within the internal market and in particular slaughterhouses within the Community. It also affects Community trade policy since the measures apply to slaughterhouses of third countries which intend to export to the EU.

Besides temporary restrictions due to outbreaks of animal diseases, meat produced in slaughterhouses is freely traded in the EU. Food safety rules have been harmonised and any meat from an approved establishment in one Member State can be sold in another Member State. In addition, in some cases, the lack of harmonisation has created a certain fragmentation of the market concerning the equipment used for stunning the animals (see example in Annex X).

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\(^{27}\) This situation may be due to different reasons. In the case of Halal meat, most Muslim customers in Europe have a limited purchasing power and they tend to buy the cheapest part of the carcass. In the case of Kosher meat, some religious requirements make the use of hindquarters practically difficult (need to extract the sciatic nerve). In addition some slaughterhouses operators may see the slaughtering of lambs without stunning faster to perform increasing their productivity and the possible future markets.

\(^{28}\) http://www.dialrel.eu/

\(^{29}\) "Whereas in so doing Community action must comply with the requirements arising out of the principle of subsidiarity laid down in Article 3b of the Treaty;"
3. **OBJECTIVES**

3.1. **General objectives**

The main objectives at the origin of current EU legislation are still valid.

(1) Improving the protection of animals at the time of slaughter or killing to respond to increasing citizens concerns in this respect\(^{30}\);  
(2) Encouraging innovation and the uptake of new technological developments in relation to stunning and killing techniques,  
(3) Ensuring rational development of production and providing a level-playing field within the internal market for operators, in particular for equipment manufacturers\(^{31}\).

The initiative should also contribute to the better regulation/simplification policy.

3.2. **Specific objectives**

In order to reach those objectives and address the different problems identified, this proposal will aim at the following specific objectives:

(1) Develop a common methodological approach to encourage innovation for stunning/killing animals;  
(2) Ensure a better integration of animal welfare concerns in the production process;  
(3) Ensure that the design of slaughterhouses facilities or infrastructures respecting the welfare of animals;  
(4) Increase the level of competence of operators as well as facilitate the access to technical and scientific information on animal welfare;  
(5) Improve the protection of animals at killing operations performed under a large scale (as for disease control purpose);  

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\(^{30}\) The 5th and 8th recitals illustrate this objective:  
"*Whereas at the time of slaughter or killing animals should be spared any avoidable pain or suffering;*"  
"*Whereas in the declaration on the protection of animals annexed to the Final Act of the Treaty on European Union, the Conference calls upon the European Parliament, the Council and the Commission, as well as the Member States, when drafting and implementing Community legislation on the common agricultural policy, to pay full regard to the welfare requirements of animals;*"

\(^{31}\) The third recital of Directive 93/119/EC: "*Whereas there is therefore a need to establish common minimum standards for the protection of animals at the time of slaughter or killing in order to ensure rational development of production and to facilitate the completion of the internal market in animals and animal products;*"
3.3. **Relationship between objectives and with other EU initiatives**

Specific objective 1 contributes to all general objectives. First of all it improves innovation (general objective 2) and simplification by making a single procedure for approving new stunning methods. Manufacturers will only have to proceed once and according to a transparent system, making innovation easier to commercialise. Secondly it creates a level playing field for manufacturers of stunning equipments (general objective 3) by establishing a common methodology for putting such goods on the EU markets. Finally it by setting up transparent criteria for approving new stunning methods, this objective will contribute to improve animal welfare (general objective 1).

Specific objective 1 is consistent with the EU policy to develop animal welfare standards based on sound scientific basis and to encourage innovation. However, this objective should avoid the possible increase in administrative costs and favour the principle of subsidiarity as much as possible.

Specific objective 2 derives from general objective 1 (improving animal protection) as it is crucial to integrate welfare standards in the daily management of the killing. In addition this objective contributes to create a level playing field for slaughterhouses and other operators killing animals (general objective 3).

Specific objective 2 is in line with the EU policy on food safety towards a simplified legislative framework that has been developed in the recent years with the adoption of the so-called "hygiene package". Emphasis has been given on the responsibilities of food business operators through improved operating procedures, better training and pre-approval of food producing establishments. This objective is also in line with the Community Action Plan on the Protection and Welfare of Animals 2006-2010 which emphasized the importance of outcome based indicators.

Specific objective 3 also derives from general objective 1 (improving animal protection) since good practices can not performed easily in badly conceived or constructed premises. But most importantly this objective is important for achieving general objective 3 since upgrading slaughterhouses infrastructures has an impact on investments and therefore on establishing a level-playing field for slaughterhouse operators.

Specific objective 3 is consistent with the EU approach of the Hygiene Package. This objective should avoid the possible increase in administrative costs, especially for small facilities.\(^\text{32}\)

Specific objective 4 mainly contributes to improve animal welfare (general objective 1) but also to simplification. No progress can be achieved without proper training of personnel. It plays a role in simplification since training is a flexible and efficient way of implementing policies that avoid very prescriptive and complex legislation.

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\(^{32}\) Article 5 (4) (a) of Regulation (EC) No 852/2004 insists that proof of compliance to HACCP principles to the authorities shall take into account the nature and the size of the food business.
Specific objective 4 is also part of the strategy developed in the Community Action Plan on the Protection and Welfare of Animals, which underlines the importance of better awareness and technical knowledge on animal welfare.
Specific objective 5 mainly contributes in implementing general objective 1 on animal protection. Despite that killing for disease control purposes is a relatively occasional, it involves high number of animals and this specific objective is therefore important for meeting general objective 1.

Specific objective 5 is coherent with the need for better crisis preparedness and prevention-led approach that is at the core of the new EU strategy on Animal Health.\textsuperscript{33}

4. POLICY OPTIONS

4.1. The main policy options

4.1.1. The baseline = Do-nothing

The do-nothing option would simply leave the current situation as it is with a possible increased divergence between the legal framework and the current practices; this could lead to preventing innovation and to the creation of barriers for operators, while public concerns of citizens on animal welfare would not be addressed.

4.1.2. Option 2: Adoption of non-biding recommendations

This option would consist in complementing the existing legal framework with the provision of Community guidelines or the recognition of possible guidelines or self-regulatory codes by the industry and market players. These are no binding instruments and provide higher flexibility to operators. Providing guidelines is an attractive option as it does not complicate the legal framework.

Guidelines have been developed at the international level by the OIE\textsuperscript{34} but their practical effects are not assessed. The FCEC study revealed that several retailers or catering chains have been using code of practices on animal welfare as to ascertain that their suppliers meet the expectations of their clients regarding animal welfare. However, today there is no unique pan-European reference on animal welfare that slaughterhouses are referring to.

More specifically this option includes the following sub-options:

(1) Voluntary operational standards for slaughterhouses (specific objective 2). This option would imply providing a great number of technical parameters so that nearly all types of processes and techniques would be covered by the guidelines.

(2) Voluntary standards for slaughterhouses infrastructures (specific objective 3). This sub-option will aim at providing recommendations related to the design of the facilities and the equipments of slaughterhouses in

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\textsuperscript{33} The new strategy is available at: http://ec.europa.eu/food/animal/diseases/strategy/index_en.htm

\textsuperscript{34} For more details on this aspect see for red meat Table 18 of Annex 1 (Part 1) and for poultry p. 28-29 of Part 2 of the study.
accordance with recent scientific and technical findings (in line with the EFSA recommendations and the OIE guidelines).

(3) Voluntary standards for massive killing (specific objective 5). This option would consist in providing specific technical recommendations on the methods that could be acceptable for massive killing.

4.1.3. Main option 3: Amending the Directive

This option would consider revising the annexes without modifying the main legal framework. The general approach and the basic structure of the directive will remain unchanged while technical requirements would be updated according to the latest scientific data.

More specifically this option includes similar options as the previous one (corresponding to the content of the present annexes of the Directive) but in a way which is compulsory:

(1) operational standards for slaughterhouses (specific objective 2).

(2) standards for slaughterhouses infrastructures (specific objective 3).

(3) standards for massive killing (specific objective 5).

4.1.4. Main option 4: Reorganising the legislation

This option would introduce changes concerning the legal text, giving the opportunity to introduce more radical transformations than the previous option. In particular, this option would include modifying the legal nature of the text (regulation vs. directive) and introducing new concepts such as welfare indicators or national networks of reference for animal welfare (for discussion between Directive and Regulation see Annex XI).

This option will make available new approaches such as the following:

(1) New methodology for approving stunning methods (specific objective 1). This could be done by a centralised or a partially decentralised approach. A centralised approach would be to only rely on EU centralised authorisation of new methods of stunning/killing. As there is today no mechanism or institutions responsible for this task, such option would imply a number of structural changes on this approach (e.g. establishment of a specific administrative body or use of an existing agency such as the European Food and Safety Authority). An intermediate option would be to authorise the European Commission to lay down common rules for the methodology while leaving Member States to implement it with more transparency than today.

(2) Improving integration of animal welfare in the production process (specific objective 2) by the requirement for Standard Operating Procedures (SOPs). This approach would be, as in the "Hygiene package" to lay down in the legislation the main objectives and a common methodology under the supervision of the competent authorities, while leaving more flexibility to
the operators in the way they could achieve those objectives (with the possibility for them to adopt guidelines).
(3) Improving integration of animal welfare in the production process (specific objective 2) by the appointment of an animal welfare officer (AWO). This measure consists of introducing an obligation for operators to assign to a specific employee the responsibility for supervising the welfare of animals during the production process (so-called "Animal Welfare Officer"). This person would be responsible for managing animal welfare in the establishment with a sufficient level of power. This would not imply the creation of a new post as many slaughterhouses employ a quality manager for the daily running of their quality system.

(4) Increase the level of competence of operators (specific objective 4) through the introduction of a requirement for a certificate of competence. This measure would consist of setting up, as already implemented in other animal welfare legislation, a system of certification on animal welfare for employees handling animals. The system is already implemented in the UK on a compulsory basis for slaughtermen.

(5) Facilitate the access to technical and scientific information on animal welfare (specific objective 4) by the establishment of national centres of reference. This measure would require Member States to set up a national centre/network of reference where officials and operators could refer to when they need specific technical back up. National networks of reference already exist for other veterinary issues and scientific resources are available on animal welfare in many Member States but they have no formal role in the EU legislation.

(6) Improve the protection of animals at killing operations performed under a large scale (specific objective 5) by the introduction of a harmonised methodology. This option would introduce general principles to enhance logistical preparedness, animal welfare supervision and transparency on the animal welfare performance during killing operations.

5. IMPACTS ANALYSIS

5.1. Identifying the impact/General remarks

As previously presented the scope of the current legislation covers a wide range of activities where slaughterhouses represent the main amount of animals killed. Other activities are also affected but due to the importance of slaughterhouses, the impact assessment will focus on impacts for slaughterhouses only.

The present impact analysis is based on the data collected by the FCEC study, as well as from the consultation of various sources as presented in the first section of this impact assessment (procedural issues). In particular it takes into account opinions expressed by stakeholders and Member States which have been consulted on various occasions and through a complementary questionnaire at a later stage of this work.
The main impacts that have been identified and will be analysed in section 5 are the following:

**Economic impacts:**

- Direct impacts on production costs of slaughterhouses and on their competitiveness – this include analysing the costs implication of the different elements proposed in the options, in particular (1) introduction of an animal welfare officer in slaughterhouses (2) increased training requirements for slaughterhouse employees (3) adaptation to infrastructure of slaughterhouses (4) new authorisation process for new stunning/killing methods (5) setting up Standard Operating procedures and monitoring requirements

- Costs for authorities related to the authorisation of new stunning/killing methods, establishing and running a system of certificate of competence for personnel handling animals at slaughterhouses; setting up national centres of reference; producing a report on animal welfare results during operations of massive killings (for disease control).

- Indirect impacts on the retail price of meat products - based on the conclusions of the FCEC study, no significant impact on price is expected from any change in slaughter practices. Therefore we have not analysed this impact further in the different options

- Impact on meat quality – benefits of animal welfare requirements for meat quality are considerable – potential for such benefits are analysed quantitatively in the baseline option and are therefore not estimated in the detailed impact analysis of policy options

- Impacts on third countries - The impacts of the envisaged changes on welfare animal standards would be limited in third countries, as in most cases they have already high animal welfare standards in place (beyond current EU requirements) and adapted fairly pro-actively to market demands. We have therefore not analysed the variations in impacts for the different policy options in detail.

**Social impacts**

- Animal welfare benefits

- Public perception of animal production and meat products

- Impacts on occupational safety of workers in slaughterhouses
Environmental impacts

- No major direct impact except limited impacts in terms of reduction of spoiled meat (and meat waste)

Data limitations

The stakeholders' consultation delivered only limited information on financial impacts. Generally stakeholders (both industry and competent authorities) claimed that estimation was very difficult or even impossible for them.

The costs to comply with the Regulation are perceived by industries as much higher than administrative costs, and therefore some of them focused their answers on assessing compliance costs. In addition, requirements established in the Directive overlap with other requirements (Hygiene package, Good Manufacturing Practices) and it is often difficult to estimate whether or not a given cost occurs only as a result of an obligation resulting from the animal welfare rules. Even when stakeholders can provide some estimation of overall administrative costs imposed on them by current legislation it is difficult for them to assess how an eventual change of legislation would affect these costs.

Based on these limitations, the assessment of the options has not been carried out using the Standard Cost Model (Annex 10 of the impact assessment guidelines). We have nevertheless tried to quantify to the extent possible the impact of the options on administrative costs by using experience at national level and/or from similar policy areas and by basing calculations on a number of assumptions where appropriate.

5.2. Analysis of the baseline scenario

5.2.1. General remarks on the baseline scenario / qualitative elements

As regards the protection of animals at the time of slaughter or killing, the baseline scenario (i.e. do nothing) is likely to worsen the situation.

Already today due to a number of loopholes of the current legislation, animal welfare is not properly ensured.

Some techniques of stunning or killing are used, sometimes at large scale, without proper scientific assessment; New slaughterhouses are often approved by the authorities without consideration for the welfare of the animals; Personnel slaughtering animals are not always qualified for their tasks and the efficiency of stunning is not regularly assessed on the animals. Officials in charge of controlling animal welfare in slaughterhouses have not enough time and limited skills to perform adequately their responsibilities. Research and innovation on animal welfare at slaughter is sometimes neglected leaving officials and operators without proper information on the optimal way to slaughter animals.

Commercialisation of innovative stunning methods or equipments has been delayed in the past due to lack of harmonised approach, and there is no reason to believe that innovation will be encouraged by maintaining the status quo.
Differences in welfare standards between Member States have been noticed, creating distortion of competition between operators.
To be more specific, the baseline scenario would imply the following consequences, regarding the specific objectives:

As regards the approval of new stunning methods, today they are examined and evaluated by Member States individually without a common methodology. From the legal point of view, the situation is uncertain since the subsidiarity on this aspect is not properly defined in the Directive. In fact Article 13 (2) (b) and Article 18 (2) of Directive 93/119/EC does not clearly ban Member States from approving new stunning methods at national level.

Doing nothing will therefore leave the Member States grant authorisation for new stunning methods. However this situation has up to now delivered unequal welfare outcomes in the EU while creating technical barriers to the commercialisation of positive innovations for the welfare of animals.

This could be illustrated by the emergence of the use of high frequency electrical stunning for poultry where, some Member States have established clear indications while other competent authorities have left local inspectors without instructions. Annex XIII provides an illustration of the impacts on innovation of the baseline scenario in the specific case of controlled atmosphere stunning of poultry (CAS).

Concerning a better integration of animal welfare concerns in the production process, the current rules require that operators must apply legal requirements but the competent authorities are mainly responsible for enforcing the measures through direct control. Therefore there is no incentive for operators to develop their own knowledge and operational procedures with the present legislation. Despite voluntary approaches, this makes outcomes heavily dependent on the level of initiatives and resources of the slaughterhouses and of the competent authorities. Experience derived from inspections performed by Commission experts has indicated very mixed results in this regards. If some efforts have been achieved by the authorities in some Member States and part of the industry has developed pro-active schemes on animal welfare, the situation is far from homogeneous. There are still situations in the EU where the welfare standards are unsatisfactory due to systemic failure of the authorities in controlling operators.

The do-nothing option is likely to worsen the situation by the fact that the current legislation lacks specific details on many aspects of the stunning procedures opening the way for bad practices. This has been observed by the Commission's experts when the central authorities did not provide sufficient technical instructions to their field inspectors. However, even in case of adequate instructions provided by the authorities, current official resources do not allow permanent supervision at places where animals are handled and slaughtered. In addition, other places where animals are regularly killed do not benefit from permanent veterinary inspections (e.g. farms for fur animals, hatcheries, etc.).

Regarding the design of slaughterhouses, the present EU legislation provides for certain requirements that are not in line with new knowledge and upgrading is necessary. In addition the readability of the Directive is presently poor on this
aspect: structural requirements are disseminated among operational ones making the implementation by the competent authorities uneven.
Staff competence in slaughterhouses is critical for the welfare of live animals and there is little evidence that market pressure will increase alone the training of employees handling and killing animals. Nowadays those tasks are physically demanding and often performed by staff with little educational background. According to the FCEC study, training is often provided without supervision of the competent authority and mainly on a voluntary basis. Therefore the situation depends mainly on the initiative taken by the operators.

Competence on animal welfare of officials is also essential. Commission experts have observed serious discrepancies, some officials in the Member States having little knowledge of the basic principles of animal welfare in slaughterhouses, as outlined in recent FVO reports.

Today's legal framework on killing for disease control purposes allows national authorities to take nearly all possible means to perform tasks with little regard to animal welfare issues. Commission experts have found that in some Member States, some methods of killing have been widely used without being scientifically assessed from a welfare point of view. This does not necessarily mean that those methods should be rejected but questions the approach taken by each Member State. Killing for disease control purposes involve public money (included at Community level) and have raised in the past serious public concern on animal welfare grounds.

Doing nothing will perpetrate a situation where massive killing could be performed without necessarily enough consideration for the welfare of animals. This in return could lead to serious resistance on certain aspects of the animal health Community policy (eradication of animal disease through killing infected and suspected animals).

5.2.2. Economic impacts

Production costs of slaughterhouses in the EU and impact on competitiveness

Although the cost structure varies for each slaughterhouse, the data collected by the external consultant indicate that the part represented by the process where live animals are treated in a slaughterhouse is currently limited.

As regards the red meat industry, costs related to the treatment of live animals represent approximately 20% of the total costs for producing a carcase. No major differences were found in the allocation of operating costs between Member States, species or stunning techniques (see Table 1). As indicated, costs were relatively evenly spread between the reception of animals in lairage, and the operations of restraining, stunning and bleeding. In most cases those costs were mainly represented by labour costs.

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35 http://ec.europa.eu/food/fvo/index_en.htm
Competitiveness of the European red meat sector at the time of the study was not homogenous. While the pig sector has not been protected and stakeholders did not express specific concerns on its competitiveness, the picture is more nuanced regarding the beef sector. As it has been supported by import duties, it could be more vulnerable to imports from Brazil or Argentina. However, the EU beef sector presents some competitive advantages (less dependent on feed and better labelling and traceability system) with the present context (higher feed costs/higher demand from consumers). In any event, the welfare requirements for animals at slaughter equally apply to slaughterhouses in third countries which guarantee a level-playing field.

Table 1: Allocation of costs in the slaughterhouse production chain (red meat)

<table>
<thead>
<tr>
<th>Production stage</th>
<th>Median Percentage</th>
<th>Minimum Estimation</th>
<th>Maximum Estimation</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost of reception and lairage of animals</td>
<td>7.0 %</td>
<td>0.6 %</td>
<td>15 %</td>
<td>3.6</td>
</tr>
<tr>
<td>Cost of restraining animals (from the beginning of the passageway until the beginning of stunning)</td>
<td>5.0 %</td>
<td>0.6 %</td>
<td>15 %</td>
<td>3.6</td>
</tr>
<tr>
<td>Cost of stunning</td>
<td>4.2 %</td>
<td>0.6 %</td>
<td>15 %</td>
<td>3.4</td>
</tr>
<tr>
<td>Cost of shackling/ hoisting and bleeding</td>
<td>5.0 %</td>
<td>0.6 %</td>
<td>20 %</td>
<td>5.2</td>
</tr>
<tr>
<td>Cost of all other steps of the slaughter chain until after the first chilling has been completed (may include washing, dechailing / dehinding, evisceration, chilling)</td>
<td>80.0 %</td>
<td>50.0 %</td>
<td>98 %</td>
<td>12.3</td>
</tr>
</tbody>
</table>

Source: Survey of slaughterhouse operators (n=34).

In the poultry industry, the cost linked to the process where live animals are treated at the slaughterhouses (excluding transport – not subject to this legislation) represent between 22% and 7.1% (see reception + shackle + waterbath + bleeding in Table 2). Investment and installation costs are significantly different between waterbath stunners (less than 20,000 €) and controlled atmosphere stunning systems and estimates of additional costs greatly vary (between three and five times higher than electrical systems). There is also a significant difference in running costs between these two major stunning techniques. While running costs for electrical stunning are considered as negligible by the industry (1€/1000 birds), it is more expensive for gas stunning (up to 5€/1000 birds when using Argon or other anoxic gases). On the other hand costs generated by gas stunning system are partly compensated by a number of direct or indirect benefits (greater throughput, increased meat quality and yield, less labour and better working conditions).
Table 2: Allocation of costs in the slaughterhouse production chain (poultry)

<table>
<thead>
<tr>
<th></th>
<th>Mainly chickens (n = 8)</th>
<th>Mainly turkeys (n = 5)</th>
<th>All (n = 13)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transportation</td>
<td>30.3%</td>
<td>28.0%</td>
<td>29.4%</td>
</tr>
<tr>
<td>Reception</td>
<td>6.0%</td>
<td>0.9%</td>
<td>4.0%</td>
</tr>
<tr>
<td>Shackle</td>
<td>9.4%</td>
<td>4.6%</td>
<td>7.5%</td>
</tr>
<tr>
<td>Water bath stunning</td>
<td>2.9%</td>
<td>0.8%</td>
<td>2.1%</td>
</tr>
<tr>
<td>Bleeding</td>
<td>3.7%</td>
<td>0.8%</td>
<td>2.6%</td>
</tr>
<tr>
<td>Other steps</td>
<td>24.4%</td>
<td>44.9%</td>
<td>32.3%</td>
</tr>
<tr>
<td>Waste disposal</td>
<td>7.5%</td>
<td>9.6%</td>
<td>8.3%</td>
</tr>
<tr>
<td>Cleaning</td>
<td>5.0%</td>
<td>3.0%</td>
<td>4.2%</td>
</tr>
<tr>
<td>Depreciation</td>
<td>11.0%</td>
<td>7.4%</td>
<td>9.6%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Source: EU survey of slaughterhouse operators.

According to the external study, the EU poultry industry as a whole (including farming) is relatively uncompetitive and potentially likely to be highly vulnerable. The industry points out two main threats that are higher domestic production costs (feed) and compliance costs with the EU legislation. There is a perception within the industry that slaughterhouses in some third countries are less likely to invest in controlled atmosphere stunning due to a lack of access to credit and a relatively uncertain economic environment. However it should be noted that up to now progress towards better welfare standards in this sector has been significant and due to market pressure.

**Indirect costs: relationship to the price of meat**

As regards cattle, the costs of stunning is considered as representing about 0.02% of the whole sale value of the meat³⁶. For pigs, running costs for stunning by electricity are considered negligible compared to the wholesale value of the meat and it is estimated that gas stunning would only contribute to an additional 0.1% of this value. Those figures do not take into account the fact that the wholesale price does not include other costs (further processing, distribution, and retailers' margins) which can constitute an additional 60% price increase in some markets. Therefore any additional costs on the stunning process are likely to be even more diluted than the figures previously mentioned. The same would apply for poultry meat. The total costs related to the slaughterhouses represented approximately 1/3 of the final costs (ranging between 11 to 42% of the total production cost to the whole bird stage), so overall the live treatment of poultry will represent no more than 6-7% of the final cost. At consumer level stunning costs are also even further diluted³⁷, in particular if meat is sold processed or cut (breast fillet).

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³⁶ Figures of this paragraph come from the FCEC study.
³⁷ Based on a specific estimate, the consultant calculated that the stunning costs, using an upper estimate, could comprises 1.2% of the whole sale price of a whole bird. This percentage would be further diluted by the retailer margin and even further in case of sale by cuts.
Comparison of meat price indices level in 2006 does not indicate that there is a visible correlation between welfare stunning techniques/standards and meat prices. France, Italy, Germany and the UK have indices of similar value (respectively 122 for FR, 118 for IT, 118 for DE and 126 for UK) while the demand for welfare standards have been higher in the UK and Germany (see Annex XII for the complete table).

Administrative costs

Presently, Directive 93/119/EC only imposes compliance costs. There are no administrative costs as there is no information obligation listed in the Directive. Private operators only have to comply with technical rules without the need for registration, reporting or paperwork of any kind.

However, as the present text is a Directive, Member States have sometimes transposed the EU legislation into more specific rules that could lead to administrative requirements. In particular this is the case for derogations granted for religious slaughter that each Member State has administered in a particular way depending on their national context and to a lesser extent of the provisions on stunning equipments or on staff competence.

In addition it is useful to consider that slaughterhouses are submitted to other administrative obligations deriving from the food safety legislation which causes administrative costs both for the private and public sectors (see box below on the Hygiene package). Furthermore in several Member States, the programmes for internal audits, as required by Regulation (EC) No 882/2004 have included animal welfare at slaughter and are showing promising results.

### The Hygiene package and administrative costs

**Private operators**

As animal welfare is integrated into the hygiene package, a number of administrative requirements are applicable to slaughterhouses. They are described in Regulations (EC) No 852/2004 and No 853/2004. From an administrative point of view they imply for slaughterhouses the following obligations:

- being registered and approved by the competent authorities,
- establishing HACCP procedures,
- providing information on the origin of the animals (food chain information),

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38 Statistics in focus Economy and Finance 90/2007, Comparative price levels in 37 European countries for 2006.

39 Article 4 (6) of the Regulation requires competent authorities to perform internal audits.

40 We have listed here only the administrative requirements that relate to live animals in a slaughterhouse.
**Competent authorities**

For the competent authorities, obligations regarding official controls are laid down in Regulation (EC) No 854/2004 and imply amongst others the following administrative tasks (for live animals):

- management of the registration and approval procedures of slaughterhouses (among other food producing establishments),
- audits of HACCP procedures and good hygiene practices,
- performance of specific official controls including on animal welfare, food chain information and ante-mortem inspection.

Although the Hygiene package is relatively new and started to apply from 2006, it should be underlined that some administrative obligations were simply carried over from precedent EU directives.

**Impacts on meat quality**

The do-nothing option has negative impacts in term of meat quality. The positive correlation between the implementation of high animal welfare standards in slaughterhouses and improved meat quality is substantiated by many examples. In particular, blood splashes, bruising and meat maturation problems related to stress (e.g. PSE and DFD\(^1\)) are reduced.

Considering that in the EU-25 in total 238.9 million pigs were slaughtered in 2005, these figures suggest total losses to the EU meat industry due to PSE that could range from 60.5 million EUR to 140.5 million EUR (and an additional 14.2 million EUR for bruises). Quiet, calm handling of slaughter hogs can reduce the incidence of carcasses with PSE muscle by 10% to 12% based on field studies conducted at two packing plants.

Using these figures, **this would imply EU-wide economic loss reduction of 6.05 million EUR to 16.86 million EUR purely due to better handling in the slaughterhouses.**

Similar gains can be had for the beef industry. US data indicates that bruises cost the US beef industry $1.00 per animal on feedlot beef and $3.91 per animal on cows and bulls. 22.2 million heads of adult cattle were slaughtered in the EU in 2005 implying that **bruising could lead to economic losses of between 16.5 million EUR to 64.6 million EUR.** Rough handling at either the slaughterhouse or the feedlot will increase bruising; bruising can occur at all phases of production, including after stunning but prior to bleeding.

**Impacts on third countries**

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**Overview of meat imports in the EU**

\(^1\) PSE stands for Pale Soft Exsudative and DFD for Dark Firm Dry.
Beef was the most imported meat in absolute term in 2005 with 565,000 tonnes (7.20% of the EU production). Most of the imported meat originates from Brazil and Argentina. The EU has become a net importer of beef, in particular due to successive crisis (BSE in the 1990’s, FMD in 2001) as well as a consequence on the implementation of a new tariff policy.

Sheep meat is also largely imported with 284,000 tonnes or 27% of the EU production. Most of the imported meat originates from New Zealand and Australia. On the opposite, there are nearly no importations of pig meat with only 14,000 tonnes in 2005 representing less than 0.1% of the EU production.

Concerning poultry, the import data show that the EU has been increasingly importing cuts and prepared poultry meat (up to 500,000 tonnes in 2002) while the import of carcasses remain limited. However, the total imports from third countries do not represent more than 5% of the EU production. The bulk of these imports come from Brazil and Thailand.

Legally speaking, animal welfare standards of slaughterhouses approved in third countries to export meat to the EU have to be equivalent to the ones of the EU and must be certified by the competent authorities signing the veterinary export certificates (Article 15 of Directive 93/119/EC). In addition these slaughterhouses are regularly visited by Commission's experts who verified the implementation of the different Community rules applicable to them including welfare ones.

In practice, in third countries slaughterhouses from where most EU imports originate, high welfare standards have been developed that go sometimes beyond the current EU requirements. This is due to either governmental initiatives or pressure from their main customers. For example, New Zealand and Australia have developed detailed legislation on animal welfare at slaughter. Equally, South American main beef meat exporters have implemented animal welfare policy in order to satisfy their European customers.

5.2.3. Social impacts

Doing nothing will have long term negative impact on the public perception of animal production and meat. European consumers have been increasingly sensitive to animal welfare issues and they would be shocked if they learn that this is done in a cruel way. Images of cruelty to animals can generate large public outcry and have a negative effect on the activity concerned. This also applies in the case of killing of animals for disease control purposes where the stamping out policy has been questioned by the civil society when animals are killed without proper consideration for their welfare.

In addition the do-nothing scenario will affect occupational safety of workers in slaughterhouses. Handling animals is a difficult and often dangerous job. Large

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42 This was recently the case in the US where the Humane Society US revealed the bad treatment of dairy cows in a Californian slaughterhouses, leading the US federal government to suspend his contract with the firm supplying food for federal program for schools. See http://www.hsus.org/farm/news/ournews/undercover_investigation.html
animals may be dangerous if stressed and manipulation of stunning instruments or knives increases risks for workers. Improved animal welfare standards are likely to improve occupational safety in different ways. Better designed equipment and technology which will lead to calmer animals is likely to create a safer workplace. Proper and reliable stunning also improves workers' safety. Limiting handling with live animals such as in the case of gas stunning of poultry is increasing welfare (no shackling of live birds) while providing better working conditions for employees. Better training on animal welfare is likely to lead to calmer animals, more efficient stunning and lower number of work accidents.

5.2.4. Environmental impacts

No major direct impact of the baseline scenario was identified on the environment (in terms of air quality, energy use or CO₂ emissions) in relation with the different stunning and bleeding techniques. However, there are possible minor indirect negative impacts on the environment of the baseline scenario in case of a lack of application of animal welfare measures which are linked to the decrease of the meat quality.

An indirect relationship may exist between environmental aspects and the improvement of meat quality due to better animal welfare, which may affect the quality and durability of meat. Slaughterhouses which are designed to prevent stress or physical contact with animals may have a higher meat yield and a lower amount of meat that needs to be cut away or discarded. An FAO publication identified this as "perhaps the biggest cause for meat wastage during the production process". Better animal welfare can therefore contribute to reducing spoiled meat, limiting the amount of waste and increasing the efficiency of production.

5.3. Analysis of option 2: non-biding recommendations

5.3.1. Achieving the objectives

Alone, non-biding recommendations are likely to present similar impacts as the previous option, since they do not provide compulsory changes.

There is evidence that the structure of industry concerned and the market demand will not suffice to achieve the different objectives. In particular the FCEC study has indicated that among slaughterhouses, there is still a strong reference to the legislator for animal welfare standards. But there is no unique European based reference for a number of animal welfare guidelines or recommendations that are really put in practice by the operators.

Providing EU recommendations could therefore fill this gap and in particular contribute to partially achieve the following main objectives:

(1) improving animal protection at slaughter (main objective 1),

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(2) encouraging innovation (main objective 2) by promoting the most efficient methods available. In fact bad welfare practices are partly due to ignorance and increasing awareness through EU recommendations could promote the advantages of using new stunning methods. However introduction of innovations is also limited by other factors (investments in particular).

However it will not be able to establish a level-playing field for the industry due to its not binding nature (main objective 3).

More specifically non-biding recommendations could improve the following technical dimensions:

(1) animal welfare operational standards (specific objective 2);
(2) structural design of slaughterhouses (specific objective 3);
(3) the killing for disease control purposes (specific objective 5).

However those objectives will be only partially achieved and a number of important issues will be left unaddressed (approval of new stunning methods, competence of staff). The level of achievement of non-binding recommendations will depend in particular on the possibility of financing of awareness campaign associated with the recommendations.

Therefore this option leaves a number of objectives unaddressed.

5.3.2. Economic impacts

As for the previous option, compliance and administrative costs are likely to be limited due to the voluntary nature of the option and the narrow scope of changes that may be covered by such recommendations. Costs for those companies that follow the recommendations related to introducing animal welfare operational standards, structural design of slaughterhouses and killing for disease control purposes are similar to the ones studied in section 5.5 (option 4). Similarly this option will not create a level-playing field for the different operators.

However since it will make available a number of technical references for improving welfare, it could certainly contribute to improve the situation in particular as regards animal welfare and meat quality. But the effect of such recommendations will depend on their visibility and the publicity given to them.

5.3.3. Social impacts

As regards public perception, non-binding recommendations are certainly not as convincing as legislation. During the consultations, there was a unanimous position amongst stakeholders that increased harmonisation is necessary as regards the protection of animals at slaughter. Killing animals is a non-negotiable matter where a minimum should be provided and guaranteed. Providing non-binding instruments would therefore be well perceived as a complementary measure but probably not sufficient to persuade consumers that welfare is ensured in slaughterhouses.

Concerning occupational safety, it can be assumed that increasing knowledge through guidelines will have a positive effect. However due to the problems identified in this area (hard work, difficulty in recruiting people, etc.), and the limited effect of the current legislation (where no precise requirements are made on training), it can be assumed that non-binding recommendations will not address the competence of operators seriously.

5.3.4. Environmental impacts

This option is likely to have limited impact on environment. As it could indirectly contribute to reduce waste in slaughterhouses, it could be assumed that this option could have a slight positive impact on environment.
5.4. Analysis of option 3: amending the directive

5.4.1. Achieving the objectives

As regards the protection of animals (main objective 1), amending the directive will certainly improve the situation. This option would include in the legislation considerable technical details in line with the latest scientific data available. This would be easy and straightforward to implement for officials and would be legally secure, defining precisely which methods are in compliance or not.

However, this approach would also bring drawbacks as it will increase the complexity of the legal text. Many species are concerned (six main farmed species) and for each species different methods are available. Then each method has many parameters which can be critical. Listing all technical details in the legislation would risk creating a very complex structure altering readability.

In addition, fixing technical details in the legislation would not allow any flexibility in time or depending on a specific process. In some situations, different combinations of parameters\(^{44}\) are acceptable. Therefore due to its legal nature and its technical complexity it is unlikely to encourage innovation (main objective 2).

Since this option will provide a comprehensive set of technical rules, it will ensure a level playing field for the operators (main objective 3) but at a certain cost in term of compliance and flexibility.

In addition amending the directive would address the following specific objectives:

1. It would contribute to a better integration of animal welfare in the process of production (specific objective 2);

2. It would improve the design of slaughterhouses (specific objective 3); This option will be also an opportunity to increase the readability of the legislation on this aspect by clearly identifying structural standards, which will have to be verified during the approval process of a slaughterhouse at a very early stage (foreseen by the Hygiene package) from the operational aspects that relate to the daily work of officials.

3. It would improve the protection during massive killing of animals (specific objective 5). It would create a precise legal framework at EU level, but would not allow the flexibility needed in case of disease outbreaks. Killing animals in disease control situation is often a crisis where despite good preparedness, conditions for carrying out the killings are not optimal due to practical constraints (high number of animals, location difficult to reach, shortage in competent personnel or in equipment, etc.).

\(^{44}\) For example, in the FCEC study the consultant listed 21 different combinations used by slaughterhouses only for chickens based on 5 different electrical parameters.
Therefore this option "Amending the directive" will not address innovation (main objective 2) and will not contribute to simplification. In addition some specific objectives will not be completed by this option (innovation – specific objective 1, competence of operators - specific objective 4).

5.4.2. Economic impacts

This option would represent important compliance costs for operators that will have to adjust their methods to all the requirements. It is very difficult to calculate all costs related to such requirements but certainly this would mean that some operators would have to change their equipments and their modus operandi.

This option will not bring any administrative costs since it will not introduce new information requirements.

Costs for businesses

Compliance costs related to a set of operational standards were not possible to evaluate precisely since they will depend on the final parameters adopted. But due to the diversity of parameters observed in certain techniques, establishing precise operational standards would certainly have noticeable costs due to the lack of flexibility of the legislation.

Compliance costs related to structural standards of slaughterhouses were evaluated by the FCEC consultant. Changes could be introduced concerning in particular the lairage facilities and different stunning equipments. Those measures have been implemented by some slaughterhouses in the EU either on a voluntary basis or were made compulsory through more restrictive national legislation.

According to the FCEC study those measures are considered by most respondents of the red meat sector to be slightly to fairly costly depending on the measures concerned. Those costs are primarily related to investment costs and not operational costs. In absolute terms the consultant however considers that those investments are not very significant compared to the overall investment cost for a slaughterhouse, especially if implemented at the construction phase. Impact on competitiveness was also discussed and most respondents considered that those investments were positive for their competitiveness since they expect economic returns because of improved meat quality and better adequation with customers' demand.

Regarding the poultry sector, the FCEC study indicates that a significant part of the industry has already implemented some of the measures foreseen (between 50 to 80% of the respondents see Figure 2).
Figure 2 – Additional technologies implemented by the poultry industry for waterbath

Those measures have a cost. However, this cost should be seen in light of the depreciation of existing infrastructure and the average change/adaptation of infrastructure in slaughterhouses. If operators renovate and change their infrastructure on an average every 10-15 years, the costs of adapting their infrastructure to animal welfare standards would be absorbed. Therefore a transition period is envisaged.

In addition, it is also important to consider their potentially positive impacts on revenue. Some benefits are, according to the respondents, difficult to quantify such as improved meat quality from birds that are less exposed to stress in the slaughterhouse (arising, for example, from the use of appropriate ventilation in the lairage, low level of lighting in the shackling area or breast plates on the shackling line). The economic benefit of welfare improvement measures depends on the marketing chain. The poultry industry agrees that, in general terms, equipment design to ensure good animal welfare has positive economic impacts.

Costs for authorities

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45 For example, the whole carcass market would demand no visible damage or bruises. In contrast, the fresh portions market would demand no internal bruises. Traditionally, a slight improvement in the value of breast meat, which is the most expensive portion of a carcass, is more valuable than a significant improvement in the quality of, for example, wings. However, increases in the popularity of other products, for example processed wings may change the traditional economic analysis.
These costs are only related to the establishment of technical standards applicable in case of massive killing.
Following a specific questionnaire to the Member States on the issue, only seven provided responses. Most of them declared to use only authorised methods. On the other hand, the ones that have used other methods consider that a lack of flexibility in the legislation would have enormous costs, not only for the authorities but mainly for the society as whole since it will result in failing to ensure proper and rapid eradication of diseases outbreaks.

5.4.3. Social impacts

Detailed and prescriptive legislation will have a positive impact on public perception. They are strongly supported by animal welfare organisations who want to secure precise standards that can be easily implemented and verified by the authorities.

There is no evidence that such approach would be positive or detrimental to occupational safety for workers. However it can be assumed that due to the positive correlation between animal welfare at slaughter and occupational safety, this option would bring some benefits in this regard.

5.4.4. Environmental impacts

Same as option 2.

5.5. Analysis of option 4: reorganising the EU legislation

5.5.1. Achieving the objectives

This option would address all the main and specific objectives since it opens the widest range of possible measures.

The protection of animals at the time of slaughter or killing would be improved through a combination of new measures (main objective 1) that are described below. It will also contribute to encourage innovation (main objective 2) and create the opportunity for establishing a level-playing field for all operators (main objective 3).

It can also contribute to simplification. Simplification will be due to the fact that, if the form of regulation is retained, national legislations will disappear. In addition this option could better integrate the animal welfare legislation applicable to slaughterhouses, in the food safety legislation ("hygiene package") using common procedures and terminology.

Concerning the specific objectives this option will offer a broader scope of possibilities in introducing changes that go beyond the technical aspects of the legislation. In this way it could address all the specific problems identified by introducing new measures:

- A methodological approach to encourage innovation could be developed (specific objective 1)
• A better integration of animal welfare in the production process (specific objective 2) could be envisaged through the introduction of standards operating procedures (SOPs) and the requirement of an animal welfare officer (AWO).
• Design of slaughterhouses could be also improved (specific objective 3) by a more traditional approach (as for amending the Directive);

• Competence of personnel in slaughterhouses could be ascertained through the requirement of a certificate of competence (specific objective 4) as well as by the establishment of national centres of reference as to provide technical support for officials.

• A methodological approach could be established for massive killing (specific objective 5).

More specifically here are how some specific measures attached to this option could affect the completion of the objectives.

**Standard Operating Procedures (SOPs)**

Requirement for SOPs has been favoured in the Food Hygiene package as it was considered as the best option to face the variety of processes in the food business industry. Different species are concerned and within a species, different types of animals are slaughtered. Parameters to stun them depend on their characteristics (live weight, bone structure) but also on the final products to be produced (meat quality). This measure was also favoured by operators during the consultations on the initiative.

Another reason for increasing operators' responsibility is based on the assumption that official checks are limited compared to the overall duration of the production process. Therefore it is better to ensure that operators design and put in place their own quality system instead of imposing external parameters sometimes far from optimal to their objectives.

Advantages of such approach is therefore to provide more flexibility to operators on the way they could achieve the objectives set up by the legislation, while providing official authorities a way to supervise and audit operators quality system instead of focusing on technical details. Such an approach will also be preferable for small and medium-sized operators.

**Animal Welfare Officer (AWO)**

The appointment of a specific employee dedicated to follow-up animal welfare issues has been experienced on a voluntary basis in some slaughterhouses (in the UK) and is also compulsory in some Member States (Austria and Germany). Similarly to SOPs it provides a practical tool for improving animal protection in slaughterhouses while keeping a high level of flexibility, contributing to keep legislation simple.

**Certificate of competence**

This measure would address the need for systematically checking the competence of staff handling animals in slaughterhouses and possibly in other situations.
The positive impact of such measure would be to ensure that competence is assessed independently and that any person having a certificate possesses a common technical knowledge to carry out his/her tasks properly. In addition this would simplify the task of inspection performed by officials at slaughterhouses. This measure is already implemented in the UK in red-meat slaughterhouses with success.
It creates a level-playing field for all slaughterhouse employees (main objective 3) contrary to the present situation where national requirements on training is far from being uniformly implemented within the Member States.

The impact on simplification could be viewed in different ways. From one side it creates an additional administrative burden for businesses. On the other side it goes hand by hand with a simplification of the legislation. Indeed the legislation can not be more flexible if operators do not provide further guarantees on their ability to manage animal welfare on a daily basis. Therefore to a certain extent this administrative burden contributes to make legislation more flexible.

National Centre of Reference

This measure would be complementary to the previous one, as it would address the difficulty for officials in slaughterhouses to have access to a reliable and recognised scientific and technical back-up in their inspections tasks.

A national centre of reference would have the advantages of providing support to slaughterhouse inspectors for any technical or scientific aspects on the welfare of animals at slaughter. In particular this would include the assessment of complex restraining or stunning equipments or technical parameters, as well as other possible related tasks such as ensuring the accreditation of bodies delivering the certificate of competence.

It can be concluded that this measure will contribute to improve animal welfare (main objective 1) and encourage innovation (main objective 2).

Methodology for massive killing

This measure would emphasize legal requirements on a number of principles to be respected rather than precise technical figures. For example at present, contingency plan to eradicate disease do not require any information on animal welfare consideration at killing (stunning methods, etc.). Harmonised methodology would imply better transparency on the preparedness of the authorities to control outbreaks of contagious diseases as well as better reporting on animal welfare when cases occur.

The advantage of such approach would be to keep a certain level of flexibility on the means to be used by the authorities while ensuring a better level of supervision on animal welfare. Another advantage of requiring a reporting on animal welfare would be to promote good initiatives in this domain. Outbreaks of contagious diseases are relatively unusual events within the Community and not all Member States have gained practical experience in killing large number of animals. Therefore better reporting on animal welfare on those occasions would also help in promoting solutions for future outbreaks taking place in other part of the Community.

A methodology for approving new stunning methods

Reorganising the legal framework will also make possible to address the question of innovation (main objective 2).
It could be performed through a centralised or partially decentralised approach.
Scientific assessment on animal welfare at slaughter already exists through the EFSA opinions. However, the current work of the EFSA on animal welfare consists in gathering information already published on specific questions. A centralised approach would therefore require a different type of work which would be the examination of specific application like the ones presented for food additives or medical drugs. This option would have the advantage of providing a full harmonised approach at EU level, and therefore a consistent methodology in assessing any new technology in relation to the slaughter or the killing of animals. It is also likely to provide scientific opinions independent from a national interest.

A partially decentralised system would combine certain advantages. For example, Member States would be allowed to grant authorisation on a national level for a limited period of time, provided that they inform the other Member States and the Commission. In this way, other authorities could assess whether the methodology used is sufficiently robust and reliable and during this period, the applicant could gain experience and refine its method on a commercial scale. After an adequate period the method would be either banned through a decision taken at EU level.

5.5.2. Economic impacts

Compliance and administrative costs for businesses

Based on the data collected, the main compliance costs by order of importance are related to the following measures included in the present option:

– Requirements for upgraded standards for the design of slaughterhouses (see option 3)

– Requirement for Standard Operating Procedures and Animal Welfare Officer

From the external FCEC study, it appears that in the red meat sector, the large majority of slaughterhouses respondents had put in place animal welfare procedures through client requirements (70%) and had their own code of good practice (61%). In particular this includes internal procedures for cleaning stunning equipments, for checking animals on arrival to identify weak animals and for supervising the bleeding procedures. Implementation of a plan of controls for animal welfare based on HACCP was also frequently mentioned as well as the assignment of an employee to be responsible for animal welfare (see below animal welfare officer). Those two initiatives were perceived as the most beneficial for animal welfare by the respondents. Plans of control in particular include practical animal welfare indicators that could be scored on regular basis. Most procedures such as putting in place a quality assurance plan and an animal welfare officer were not considered costly and even considered by the majority of respondents as having a fairly or significant positive impact on the competitiveness of their operations.
The FCEC study revealed similar figures for the poultry sector (69% of the respondents had their own code of practice on animal welfare) but a higher proportion of respondents have implemented animal welfare procedures. Quality assurance plan for animal welfare and animal welfare officer were implemented by almost 70% of the respondents and a number of animal welfare indicators were regularly monitored (with different frequency up to continuous monitoring). Identically most of respondents considered quality assurance plan as no costly or slightly costly (80%).

Disadvantages possibly raised by this option have been pointed out during stakeholders' consultation, following the experience of the Hygiene package. Despite the fact that requirements for procedures and records in the Hygiene package must be proportionate to the complexity and the size of the process envisaged, small businesses were concerned by possible excessive bureaucratic requirements. Therefore, the Commission has presented a proposal to exempt micro businesses from the requirement to establish a reporting system on their HACCP system in place – meaning that the micro businesses would still have to comply with all safety rules, but are exempted from the requirement to report on it as this proved disproportionately burdensome on them. This concern could be transposed equally for animal welfare in a similar approach to align the animal welfare regulation with the principles of Better Regulation.

Administrative costs generated by SOPs are likely to be minor. Slaughterhouses are already subject to the Hygiene package where SOP for food safety are much widely developed and implemented. Additional costs related to the extension of SOPs for animal welfare will only affect slaughterhouses that have not yet implemented such policy (the FCEC survey indicated that between 60-70% of the respondents had already implemented such policy anyway). This means that the increased responsibility would probably affect less than 6,000 slaughterhouses across Europe (out of an estimate of 16,000 establishments, 2/3 of them being small scale establishments) on a relatively limited part of their operations, requesting the development of standard operating procedures during the implementing phase (3 days) and then the maintenance and the follow-up of the procedures in place (1 hour a day for a middle size establishment).

Figure 1: Assessment of costs of operational measures and procedures by slaughterhouses operators (red meat)
<table>
<thead>
<tr>
<th>Measure/Procedure</th>
<th>No costs</th>
<th>Slightly costly</th>
<th>Fairly costly</th>
<th>Very costly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Video surveillance</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Providing feed</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employee to check bleeding line</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quality assurance plan</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maintenance records</td>
<td></td>
<td></td>
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<tr>
<td>AVRO</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Providing water to animals</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Animals checked on arrival</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Isolation of fragile animals</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Procedure for transport &gt; 8 hrs</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Survey of slaughterhouse operators (variables for each measure/procedure, see p. 45).
Similar conclusions could be drawn as regards the impact related to the Animal Welfare Officer.

According to the FCEC study, most respondents had implemented measures for having an "animal welfare officer" in their plant (61% in the red meat sector and more than 70% in the poultry sector).

In practice, appointing an AWO would be less bureaucratic than SOPs and probably quite efficient. It would favour direct communication towards employees which is a good channel for a relatively limited number of employees. However, the requirement for AWO could be considered as a disproportionate measure for businesses which slaughter animals on a very small scale. Therefore possibilities for exemption for small slaughterhouses will be foreseen.

As currently an Animal Welfare officer is already in place at national level in Austria and Germany, no additional costs are to be expected in those countries. For other countries, it should be highlighted that in practice this would not mean that a new person would have to be employed as the additional animal welfare surveillance could be covered by the person in charge of general quality meat control. Responses from Member States indicate that this task could represent 10 to 20% of the time of a full-time employee. This is currently the case in some slaughterhouses e.g. in the UK. However, in those extreme cases where nothing is in place and the hiring of a new officer specifically in charge of animal welfare in slaughterhouses would be needed, this would amount to estimated costs of up to 50,000 Euros per slaughterhouse (this figure is based on UK estimate, salaries in other Member States might well be lower).

AWO has been envisaged since the FCEC study has indicated that most respondents of slaughterhouses would combine AWO with SOPs. It is in fact logical since having procedures to deal with animal welfare is unlikely to have effect without proper management system. It combines advantages to produce very good welfare outcomes while providing good economic returns for relatively limited costs according to the operators who have implemented this policy.

As underlined by the consultant the only limiting factor of such option would be the possible bureaucracy and the costs involved for very small businesses compared to the possible benefits. In this case reference to common guidelines could be a solution (as foreseen in the Hygiene package).

– Certificate of competence

Training does involve costs. For example in Germany, a 4-hour external training course provided by specialists for slaughterhouse staff costs around 200 € per participant for the theoretical and practical training and the exams. Training and examination costs for animal transport have been estimated in the UK to range from 126 to 630€ per participant.

However, the majority of respondents of the FCEC study considered that the cost of their training measures had no significant impact on their production costs. Slaughterhouse responses assess the impact of training on
competitiveness of operations to be more positive than on production costs. Better animal handling (resulting from better training of employees) has a positive impact on meat quality which results in better quality products, which may increase meat products’ competitive value on the market.
A very large majority of respondents reported very or fairly significant positive impacts of training on meat quality and occupational safety, 74% and 73% respectively for the red meat sector and poultry sectors. There is also a likely positive correlation between training measures and occupational safety; better trained personnel may lead to less stressed and calmer animals that are easier and safer to work with.

- Application for new stunning methods

Manufacturers of stunning equipments provided a very wide range of expenses for authorisation for new stunning methods based on application made in third countries. Those costs were essentially related to research and development costs and no distinction was actually provided between R&D costs and administrative costs. From data from the Member States, it appears that currently independent testing imposed by the competent authorities could range between 10,000 to 60,000€ per authorisation (scientific and administrative costs included). It is almost impossible to disentangle which parts of the preparatory work for authorisation are research and developing costs that would have been done in any event by business e.g. for marketing purposes and which parts are solely linked to bureaucratic requirements. In any event, it can be assumed that those costs affect only equipment manufacturers which represent a small number of companies in the EU (major players for each technique are limited to three companies) and innovation for new techniques will be relatively exceptional (today's methods will continue to be authorised without specific authorisation process).

It should be noted that in any case for operators (and similarly for public authorities), administrative costs will be reduced as one single application will be needed instead of different applications in each Member State.

Costs for authorities

- Establishment of a national centre of reference

Many Member States have developed applied research centres or network working on animal welfare at slaughter but there is not a formalised organisation that could be compared to this sub-option at the moment. It would be therefore misleading to assume that the cost of this measure would be equivalent in establishing a complete new structure from scratch. In most cases, it would consist in recognising the roles of already existing structures and experts. Therefore certain elements of costs are difficult to estimate and will in any case depend on how much each Member State has already invested on this issue.
Based on estimates provided by the UK, setting up an entirely new independent structure would amount for an investment of 12 to 24 millions euros and yearly operating costs of 2.5 to 3 millions euros (based on 50 staff). Very few MS have been able to reply to the Commission's request of information on this issue to provide further estimations. However the EU legislation could draw a flexible framework (a network rather than a centre) allowing Member States to use existing structures (such as research institutes or universities) as to reduce costs of establishment while redirecting existing operating funds to lower operating costs. As a matter of comparison, the same Member State\(^{46}\) dedicated in the last 10 years an average of 250,000 euros per year in research projects on the welfare of animals at slaughter. In addition it devotes 80,000 euros per year to vocational training on animal welfare at slaughter for its official inspectors. Based on this case, it could be assumed that the development of a network could be estimated of around 350 to 400,000 euros a year for a similar size Member State (UK) if nothing is in place. The Netherlands is spending at present 1.2 M Euros a year on research on animal welfare at slaughter.

A national network would have the advantage of providing a clear visibility to officials and slaughterhouses operators on where to refer to on when questions on animal welfare at slaughter are raised, instead on relying on informal network. Such centre would also provide higher legitimacy to the officials working in the field while ensuring better harmonisation at national level.

– Massive killing methodology

On the negative side, requesting more requirements on animal welfare could be considered by certain Member States as additional technical and administrative constraint and especially if reporting is requested. There is no evidence that better animal welfare preparedness and supervision would entail higher costs. Good welfare measures relates mainly to good logistical preparedness and not necessarily to costly techniques. In addition, Member States have increasingly integrated animal welfare issues as part of their contingency plans and provide public reports for major outbreaks (as national parliamentary inquiries or audits are often performed).

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\(^{46}\) The list and the amount of UK research projects dedicated on animal at slaughter can be consulted at: http://randd.defra.gov.uk/Default.aspx?Menu=Menu&Module=ProjectList&Completed=0&Keyword=Slaughter
Administrative costs generated by such measure will depend to a large extent to the current practices presently in place in the Member States. From the data collected by the Commission, this option is already implemented in some Member States where competent authorities performed veterinary supervision and reporting on animal welfare for every cull\(^{47}\). It is the case for the UK, Netherlands, Czech Republic and is under development in Sweden and Germany. Since killing animals in case of outbreaks is not a regular activity, reporting costs may vary depending on the size of the killing performed. From data collected in one major Member State this would require the development of computerized system that could amount for a unique cost of 125,000 euros.

- **Auditing SOPs**

Following questionnaire sent to the Member States regarding the possible additional costs possibly generated by the need for auditing SOPs by the competent authorities, all respondents that due to the application of the current legislation on official controls in slaughterhouses, controls on animal welfare in slaughterhouses were already integrated in their overall costs of inspection.

- **Administrating certificate of competence**

As regards the administrative costs for public authorities, similar certificate of competence has been required in the UK, Germany and Lithuania. It is also required by the legislation on the welfare of animals during transport. The main disadvantage of such measure is to request the examination of existing working staff, requesting an important administrative task for both the industry and the public sector during the first years of implementation of the legislation. In the case of transport, the implementation phase was extended to three years but according to the data collected by the Commission a longer period would be probably more appropriate (i.e. 5 years).

Based on the UK experience for issuing a certificate of competence for slaugtherman, the administrative costs charged to the applicant is today of 25 € of mere licensing costs (not included the training and the examination costs) – to be paid by the requesting operator.

- **Approval of new stunning methods**

From the data collected from the Member States, public authorities all consider that the process of approval of new stunning methods will not create additional public expenses. Despite the fact that up to now, no formal system was established and therefore no official request was processed, public authorities considered that main costs of approving new stunning methods would be at the expenses of the applicant.

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\(^{47}\) Information collected is details on the method of killing, time of death, checks for the death made and details of any problems or welfare issues.
The treatment of an authorisation file means that public authorities have to evaluate a study that the manufacturers submitted. It is difficult to obtain estimates from national authorities regarding purely administrative costs, as today new methods are very often evolving from research programs for which administrative costs have not been separated from R&D and other costs. One Member State indicated that the costs are currently approximately between 6,000 and 15,000 Euros per authorisation. These costs are recovered via fees to operators.

5.5.3. Social impacts

Main social impacts are related to the positive public perception in improving welfare standards. This perception would derive from all the measures included in this package (such as SOPs, AWO, better design of slaughterhouses, certificate of competence for personnel, establishment of national centre of reference).

However if the requirement for AWO was very much supported by Organisation of animal protection, requirement for SOPs was less favoured since they fear that a less prescriptive legislation will create a less solid legal base for officials to sanction bad practices.

As previously mentioned, there is positive correlation between occupational safety and animal welfare measures. As this option is likely to provide more instruments for improving the welfare of animals, it could be assumed that it will also be the option that will bring most benefits for the safety of the workers. This is particular clear through measures that will be directly addressed to slaughterhouses employees such as:

- Certificate of competence: this measure will provide employees better skills for preventing them having accidents with animals;
- Animal welfare officer: this measure will increase the likelihood to moderate the possible excess of cadence requested by the line managers;
- Standard Operating Procedures: this measure will increase their ability to control the process and reduce their risk of accident and increase their comfort in working.

5.5.4. Environmental impacts

No environmental impact as been specifically identified for this option (see option2).

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48 UK estimates were significantly higher (100,000 pounds per project) which can be explained also by the fact the current UK authorisation regime is very embedded in DEFRA research activities and hence might overestimate the mere bureaucratic costs.
5.5.5. **Summary of costs**

The table 3 below provides a summary of the compliance and administrative costs that have been compiled as a result of the specific questionnaire on costs that was sent to operators and Member States. In addition, we have calculated in some cases the estimated total costs of the different measures for business/Member States.

These calculations are based on estimates from the FCEC study on the percentage of market operators that do not currently comply with the measures envisaged and would therefore need to adapt. These estimations may be underestimated as it is likely that the respondents to the FCEC study are in majority operators with well-advanced practices on animal welfare.

In addition, it should be reminded that there are important data limitations behind the estimated monetised value of the different cost elements, due to a very low rate of responses to the costs questionnaire and uncertainty behind some of the figures provided in the questionnaires' responses.

Additional economic figures used for the calculation are based on Eurostat annual detailed enterprise statistics (labour costs) for 2005, average personnel costs in the production of meat and poultry meat products sector (NACE, da1513). The yearly average personnel costs per employee in this sector for EU-27 is 23 000 euros. As regards the number of employees working in slaughterhouses, we have used the estimated figure of the trade associations UECBV/AVEC of a total of direct 600 000 jobs in the production of meat in the EU (2005). Taking the assumption that one fifth of these employees work in slaughterhouses and are in charge of the treatment of live animals, we have considered roughly the figure of 120 000 employees to extrapolate and calculate training costs.
<table>
<thead>
<tr>
<th>Qualitative description</th>
<th>Quantitative description</th>
<th>Monetised value</th>
<th>Estimated total costs in the EU</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FOR OPERATORS</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Animal welfare officer in slaughterhouses</td>
<td>31-40% of slaughterhouses i.e. less than 6000 establishments (2/3 are small scale establishments)</td>
<td>The UK figure of 50 000 Euros per year per slaughterhouse should be considered only in extreme case (large slaughterhouse where nothing is in place) and is certainly overestimated for most EU countries. On average, it is foreseen that the function of AWO would represent on average 10-20% of one staff time (i.e. 2300-4600 euros per year for one slaughterhouse)</td>
<td>13.8-27.6 mio Euros per year</td>
</tr>
<tr>
<td>Monitoring the efficiency of killing/stunning procedures (Standards Operating Procedures - SOPs)</td>
<td>30-40% of slaughterhouses concerned i.e.less than 6000 establishments in the EU</td>
<td>It is estimated that for middle-size establishment, the development of SOPs would require 3 days/man work and for maintenance and follow-up 1 hour a day i.e. no more than 15% of staff time. However, this time would be combined with the time spent in the function of an AWO.</td>
<td>20.7 mio Euros per year</td>
</tr>
<tr>
<td>Increased training of slaughterhouse employees</td>
<td>8% of red meat and 4% of poultry slaughterhouses employees (although content of training is often too limited for the 92% and 96% who receive training) so approx. 6% of employees</td>
<td>Approx. 200 Euros/participant/year (high estimation based on German experience) plus costs for certificate of competence (25 Euros/application) i.e. a total of 225 Euros</td>
<td>1.62 mio Euros per year</td>
</tr>
<tr>
<td>Upgrading standards for the design of slaughterhouses</td>
<td>20-50% of the slaughterhouses depending on the type of infrastructure</td>
<td>Costs would be absorbed by the amortisement of equipment of 10-15 years (transitional period in the legislation)</td>
<td>-</td>
</tr>
<tr>
<td>Authorisation of new stunning/killing methods</td>
<td>New authorisations are relatively exceptional – between 2-5 per year – and only apply to equipment manufacturers</td>
<td>6.000-15.000 Euros per authorisation (fees to be paid to administrations) This figure does not include costs for preparation of the file and research (total costs estimated between 10.000 and 60.000 Euros per file) but most of these costs would in any case have been done in any event by business for marketing purposes.</td>
<td>12.000 – 75.000 euros per year maximum for submitting applications. This figure represents savings for operators as compared to the present situation where they have to submit different applications in different MS so current costs are in most cases much higher today.</td>
</tr>
<tr>
<td>Qualitative description</td>
<td>Quantitative description</td>
<td>Monetised value</td>
<td>Estimated total costs in the EU</td>
</tr>
<tr>
<td>-------------------------</td>
<td>--------------------------</td>
<td>----------------</td>
<td>---------------------------------</td>
</tr>
<tr>
<td>FOR PUBLIC AUTHORITIES</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Setting up national networks of reference</td>
<td>National centres of reference exist in most Member States in an informal or more formal role. We estimate that a maximum of 10 MS would have to set up something new in place.</td>
<td>If nothing is in place it would cost approx. 350-400.000 Euros for a big Member State, based on UK estimates</td>
<td>4 mio Euros per year maximum</td>
</tr>
<tr>
<td>Production of a report on animal welfare conditions during operations of massive killings</td>
<td>Approx 15 Member States would have to put a system in place</td>
<td>The development of a computerised system (estimated at 125 000 Euros) would be the most important cost.</td>
<td>1,875 mio Euros (one-off)</td>
</tr>
<tr>
<td>Establishing and running a system of certificate of competence</td>
<td>It would apply to most employees since it exists only in 3 Member States (UK, Lithuania, Germany) i.e. approx to 100,000 employees</td>
<td>Public administration staff costs (partly recovered via a fee) estimated at 25 Euros/application</td>
<td>2,5 mio Euros</td>
</tr>
<tr>
<td>Authorisation of new stunning/killing methods (at EU level)</td>
<td>New authorisations are relatively exceptional – between 2-5 per year – and only apply to equipment manufacturers. As applications will be centralised, current costs born by national public authorities will be reduced and instead will be born at central level.</td>
<td>6.000-15.000 Euros per authorisation (to be recovered by fees from operators most probably)</td>
<td>marginal costs as it is anticipated that these costs will be recovered via fees from operators.</td>
</tr>
</tbody>
</table>
6. **COMPARING THE OPTIONS**

6.1. **Main policy options**

Table 3 – Comparing main policy options

<table>
<thead>
<tr>
<th>Impacts/ Options</th>
<th>1- Do-nothing (baseline)</th>
<th>2- Non-biding recommendations</th>
<th>3- Amending the Directive</th>
<th>4- Reorganising the legislation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Main objectives</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Animal protection</td>
<td>0</td>
<td>0/+</td>
<td>+</td>
<td>++</td>
</tr>
<tr>
<td>Encouraging innovation</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>+</td>
</tr>
<tr>
<td>Level playing-field</td>
<td>0</td>
<td>0/+</td>
<td>++</td>
<td>+</td>
</tr>
<tr>
<td>Simplification</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>+</td>
</tr>
<tr>
<td><strong>Economic impacts</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Costs for businesses</td>
<td>0</td>
<td>0</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Costs for SMEs</td>
<td>0</td>
<td>0</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Costs for authorities</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td>Meat quality</td>
<td>0</td>
<td>0/+</td>
<td>+</td>
<td>++</td>
</tr>
<tr>
<td>Trade from third countries</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Meat retail prices</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Social impacts</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public perception</td>
<td>0</td>
<td>0</td>
<td>+</td>
<td>++</td>
</tr>
<tr>
<td>Occupational safety</td>
<td>0</td>
<td>0</td>
<td>+</td>
<td>++</td>
</tr>
<tr>
<td><strong>Environmental impacts</strong></td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

(-/-) very negative impact, (-) negative impact, (0) no impact, (+) positive impact, (++) very positive impact

The comparison between the different options in the light of the different objectives makes clearly more advantageous to reorganise the legislation (option 4) while amending the directive (option 3) would bring limited benefits and providing non-biding recommendations (option 2) will not suffice to tackle most of the objectives. Therefore option 2 alone can not be considered as to be sufficient way to address the issues, but could be considered interesting as a complementary instrument.
Option 2 would in particular contribute to improve animal protection and meat quality. It could also contribute to establish a certain level of harmonisation in the competition between operators but in a very limited way due to its voluntary nature.

Reorganising the directive (option 4) is the only option where innovation can be encouraged and simplification provided (changing the legal instrument and having a new approach). It is also brings more benefits than amending the directive (option 3) as regards animal protection. This is mainly due to the fact that amending the technical annexes of the directive, flexibility will be reduced. Option 3 may appear to be better to ensure a level playing field for businesses since it provides clear and unambiguous standards. However in practice, the complexity in establishing such standards for all sorts of animals and stunning methods may end up with a limited effect.

As regards the socio-economic consequences, options 3 and 4 will generate short terms costs for certain operators but are likely to bring long term benefit in term of meat quality, public perception of meat and occupational safety for workers in slaughterhouses.

Environmental impacts are considered to be neutral for all options as there was no evidence during the collection of data of substantial and/or direct effects on environment.

6.2. Comparing the components of option 3 "amending the directive"

A more detailed comparison (or policy components) of option 3 indicates that the three components of this option have a different effect on each areas.

Upgrading slaughterhouse infrastructure has a potentially important negative impact on businesses due to the need for certain operators for investing on new infrastructures and equipments. However this effect can be mitigated by transitional period.

Imposing operational standards through a prescriptive approach has mainly the disadvantage of being complicated and rigid while having a limited scope due to the difficulties in finding a compromise. Therefore the main weakness of this component is its negative impact on simplification. This aspect can also limit its positive effect on animal protection and its potential in ensuring a level-playing field in the long run.

Providing standards for massive killing through a prescriptive approach has the same drawbacks. Effects on businesses are however not considered here since the standards mainly affect competent authorities.
Table 4 – Summarising the impacts of the components of the option "Amending the directive"

<table>
<thead>
<tr>
<th>Impacts/ Options</th>
<th>Upgrading slaughterhouses infrastructure</th>
<th>Operational standards for slaughterhouses</th>
<th>Standards for massive killing</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Main objectives</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Animal protection</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Encouraging innovation</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Level playing-field</td>
<td>++</td>
<td>++</td>
<td>0</td>
</tr>
<tr>
<td>Simplification</td>
<td>0</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td><strong>Economic impacts</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Costs for businesses</td>
<td>--</td>
<td>-</td>
<td>0</td>
</tr>
<tr>
<td>Costs for SMEs</td>
<td>--</td>
<td>-</td>
<td>0</td>
</tr>
<tr>
<td>Costs for authorities</td>
<td>0</td>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td>Meat quality</td>
<td>+</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>Trade from third countries</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Meat retail prices</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Social impacts</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public perception</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Occupational safety</td>
<td>++</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Environmental impacts</strong></td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

(--) very negative impact, (-) negative impact, (0) no impact, (+) positive impact, (++) very positive impact.

(+/-) the situation will depend on the national context.

6.3. Comparing the components of option 4 "Reorganising the legislation"

Among option 4, several components have been presented and their impacts are summarised in Table 7.

While they all contribute to animal protection (objective 1), only the establishment of a methodology for authorising new stunning methods, is likely to encourage innovation (objective 2). The requirement of a national centre of reference will also contribute to this objective since it will make durable resources for research in this field.
Most measures will also contribute to ensure a level playing field for operators (objective 3) in different ways. The most important in this regard will be the certificate of competence and the establishment of a common methodology for new stunning methods. This last component will positively affect the conditions of competitions of manufacturers of stunning equipments.

Most measures have little impact on simplification. Certificate of competence will increase administrative burden while the requirement for SOPs will provide more flexibility than prescriptive rules. A common methodology for authorising new stunning method will also be beneficial in simplifying the current situation where all Member States have their own procedures.

Impacts on costs for businesses would be mainly neutral or negative depending on the situation of each company. As we have stated before, an important part of slaughterhouses have already implemented the proposed measures (better infrastructures, SOPs, AWO and in some Member States, certificate of competence) which will limit the negative effects of such measures in the short term. Their negative effects could be also diminished by the introduction of transitional period (for infrastructures or certificate of competence) or possible exemption justified by the size of the business (AWOs).

Impacts on costs for the authorities are mainly due to the establishment of a national centre of reference and to a less extend by the requirement for a certificate of competence. However those costs will depend whether they have already implemented some of those requirements. In particular many Member States have scientific bodies that play an equivalent role as the one foreseen for national centres of reference. Similarly a system of certificate of competence has been established in other welfare legislation without creating substantial administrative costs for the authorities. Therefore there is no reason to believe that those requirements would be bring heavy costs while there is clear evidence that they will bring substantial benefits.

Impacts on meat quality are positive for most of the component of this option since they will reduce alteration of the meat due to stress and bad handling. This provides positive economic returns for slaughterhouses.

Similar conclusions can be drawn as regards the public perception of the meat production. Positive image of the meat, has also positive economic effect for the sector.

Occupational safety is also positively affected by most of the components presented. Better design of slaughterhouses, existence of SOPs and better trained personnel contribute significantly to ensure that slaughterhouses are a safe place for workers.
Table 5 – Summarising the impacts of the components of the option "Reorganising the legislation"

<table>
<thead>
<tr>
<th>Impacts/ Options</th>
<th>Methodology for authorising stunning methods</th>
<th>Upgrading slaughterhouses infrastructure</th>
<th>Standard operating procedures</th>
<th>Animal welfare officer</th>
<th>Certificate of competence</th>
<th>National centre of reference</th>
<th>Methodology for massive killing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main objectives</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Animal protection</td>
<td>+</td>
<td>+</td>
<td>++</td>
<td>++</td>
<td>++</td>
<td>++</td>
<td>++</td>
</tr>
<tr>
<td>Encouraging innovation</td>
<td>++</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>++</td>
<td>+</td>
</tr>
<tr>
<td>Level playing-field</td>
<td>++</td>
<td>++</td>
<td>+</td>
<td>+</td>
<td>++</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Simplification</td>
<td>+</td>
<td>0</td>
<td>+</td>
<td>0</td>
<td>-</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Economic impacts</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Costs for businesses</td>
<td>+</td>
<td>--</td>
<td>0/-</td>
<td>0/-</td>
<td>0/-</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Costs for authorities</td>
<td>-</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>+/-</td>
<td>+/-</td>
<td>+/-</td>
</tr>
<tr>
<td>Meat quality</td>
<td>0</td>
<td>+</td>
<td>++</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>0</td>
</tr>
<tr>
<td>Social impacts</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public perception</td>
<td>0</td>
<td>+</td>
<td>0</td>
<td>++</td>
<td>++</td>
<td>++</td>
<td>++</td>
</tr>
<tr>
<td>Occupational safety</td>
<td>0</td>
<td>++</td>
<td>++</td>
<td>+</td>
<td>++</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Environmental impacts</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

(--) very negative impact, (-) negative impact, (0) no impact, (+) positive impact, (++) very positive impact. (+/-) the situation will depend on the national context.
7. **Monitoring and Evaluation**

The general monitoring of the legislation on animal welfare is included in the Regulation (EC) No 882/2004 on official controls of food and feed\(^{49}\). This Regulation foresees that the Member States implement efficiently the requirements of the food legislation including those on animal welfare. The Commission (Food and Veterinary Office) controls the correct implementation of EU legislation in the Member States.

Some Member States like the UK have developed a system of reporting on the results of inspections on animal welfare at slaughter\(^{50}\) that could be used by other Member States. Another example of specific evaluation done in this area can be found in the USA where reports have been performed by the General Account Office on humane killing of animals\(^{51}\).

However from experience with other animal welfare legislation, harmonising reporting from the Member States is a complex issue and comparability of the data is often critical. In addition it generates administrative burden for the Member States while providing data that are difficult to exploit and analyse in a significant way.

Therefore monitoring of the situation should rely on the general instruments that already have been developed and where a general methodology has been extensively discussed. At present, findings from Commission experts remain the most reliable and specific source of information on the subject. In addition, the frequency of controls is relatively high\(^{52}\) and provides adequate indications on the level of compliance with the legislation. Finally Commission experts have performed specific exploratory missions on animal welfare on subjects for which there were no detailed provisions in the current EU legislation and this has been an adequate source of information on the level of welfare of animals within the Member States.

Another approach would be to conduct regular external studies as to evaluate every five years not only the welfare dimension of the subject but also other related elements (socio-economic aspects).

Regarding killing for disease control, specific public reporting of animal welfare performance has been envisaged (see issue 5 sub-option 3) and it could be a good source of information on those specific massive killing situations.

Based on the outcome of the monitoring, an evaluation of the relevant issues should be envisaged after 5 to 7 years depending on the gravity of the issues to

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\(^{50}\) See the review published in 2004: [http://www.defra.gov.uk/animalh/welfare/farmed/slaughter/awr03.pdf](http://www.defra.gov.uk/animalh/welfare/farmed/slaughter/awr03.pdf)


\(^{52}\) Usually Commission's services would control Member States on animal welfare at slaughter at not less than every five years.
change. This evaluation could be part of a comprehensive evaluation of the animal welfare policy.

8. CONCLUSION

From the comparison of the main policy options envisaged it appears that reorganising the legislation would appear to be the most advantageous choice. Keeping the existing legal structure with or without technical changes would not address effectively important aspects of the current issues identified (new stunning techniques, lack of knowledge of officials etc.).

Regarding the question of authorisation of new stunning methods, the present system is clearly not satisfactory. It gives the appearance of a harmonised system while Member States act by themselves without coordination. But this situation is far from delivering good results. A centralised system for assessing new stunning method would be a better alternative but a partially decentralised system would have some benefits. Some Member States have invested resources to support innovation and good welfare standards while bringing other social and economic benefits. National structures are also more available and more reactive. A partially decentralised system should therefore be also considered.

Better integration of animal welfare in the process of production brings clear positive outcomes for the welfare of animals, occupational safety and meat quality. This could be achieved by the requirement for standard operating procedures and/or by the appointment of an animal welfare officer. Economic costs are limited for both options while benefits are appreciated by slaughterhouses which have implemented those measures.

This impact assessment indicates that there is a need for updating the current standards on slaughterhouses infrastructures and fixed equipments. It will bring social benefits and investment costs could be reduced if a reasonable transitional period is considered.

Better competence of personnel killing animals as well as setting up specific national structure for providing technical back-up on animal welfare for officials appear to be two complementary approaches. Knowledge policy is highly efficient in terms of animal welfare and socially positive for the personnel (killing animals is not always a well considered job).

Finally the issue of killing of animals for disease control also indicates that a flexible option is more likely to provide adequate results than a traditional approach. Increasing transparency to such events is legitimate as it concerns public spending. Better preparedness, better supervision and better reporting would also increase credibility of official services and their sub-contractors dealing with those issues.
<table>
<thead>
<tr>
<th>Name</th>
<th>Type of organisation</th>
<th>Geographical base</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anglia-Autoflow</td>
<td>Equipment manufacturer</td>
<td>EU/UK</td>
</tr>
<tr>
<td>Animals Angels</td>
<td>Animal welfare organisation</td>
<td>EU</td>
</tr>
<tr>
<td>AVEC</td>
<td>Poultry meat industry</td>
<td>EU</td>
</tr>
<tr>
<td>Butina</td>
<td>Equipment manufacturer</td>
<td>EU/Denmark</td>
</tr>
<tr>
<td>CIWF</td>
<td>Animal welfare organisation</td>
<td>EU</td>
</tr>
<tr>
<td>COMPACT EUROPE</td>
<td>Equipment manufacturer</td>
<td>Belgium</td>
</tr>
<tr>
<td>COPA-COGECALA</td>
<td>Farmers</td>
<td>EU</td>
</tr>
<tr>
<td>EUROGROUP FOR ANIMALS</td>
<td>Animal welfare organisation</td>
<td>EU</td>
</tr>
<tr>
<td>European Fur Breeders Association</td>
<td>Fur industry</td>
<td>EU</td>
</tr>
<tr>
<td>Federation of Veterinarians of Europe (FVE)</td>
<td>Veterinarians</td>
<td>EU</td>
</tr>
<tr>
<td>Finnish fur breeders association</td>
<td>Fur industry</td>
<td>Finland</td>
</tr>
<tr>
<td>FNICGV</td>
<td>Red meat industry</td>
<td>France</td>
</tr>
<tr>
<td>Humane Slaughter Association</td>
<td>Animal welfare organisation</td>
<td>UK</td>
</tr>
<tr>
<td>OABA</td>
<td>Animal welfare organisation</td>
<td>France</td>
</tr>
<tr>
<td>PVE (Product Boards for Livestock, Meat and Eggs)</td>
<td>Meat industry</td>
<td>Netherlands</td>
</tr>
<tr>
<td>Stork Food Systems</td>
<td>Equipment manufacturer</td>
<td>EU/NL</td>
</tr>
<tr>
<td>UECEBV</td>
<td>Red meat industry</td>
<td>EU</td>
</tr>
</tbody>
</table>
Summary report on the Working group of the Advisory Group on the Food Chain and Animal and Plant Health

On the revision of the directive on the protection of animals at the time of slaughter or killing and on animal transport

Brussels on 19 December 2007

Attendance: see Annex.

Stakeholders represented: AA Animals Angels (animal welfare organisation), AVEC (poultry industry), CLITRAVI (meat industry), EUROCOMMERCE, COPA-COGeca, EUROGROUP FOR ANIMALS (animal welfare organisation), FVE (veterinarians), UEAPME (small businesses), UECBV (red meat slaughterhouses), IBC (butchers), CIWF (animal welfare organisation), EFBA (fur breeders).

Main outcome:

The Commission presented the main topics related to the proposal to revise Directive 93/119, already available on the website of the Commission. Paper copies of the website and other supporting documents were handed out to participants.

The Commission received constructive support from all stakeholders for most of the subjects discussed. In particular they agreed on the principle that operators should be made more responsible for animal welfare (as for the hygiene package). All participants also welcomed the proposal for a regulation rather than a directive. However some of them stressed the need for keeping a number of prescriptive requirements as well as the possibility for EU guidelines in order to provide sufficient guidance to the industry and to officials and to ensure effective controls and sanctions across Member States.

Stakeholders were informed of the possibility to send detailed comments up to 31 January.
A short presentation by Animals' Angels underlining the lack of sufficient enforcement of the new EU legislation on animal transport was also made followed by an exchange of views (see presentation annexed).
Specific outcomes (on slaughter) Presentation is annexed

Increase the operators’ responsibility

All stakeholders were supportive of an increased responsibility of the industry. UECBV and FVE strongly supported this view while CIWF was concerned about too much flexibility being given to operators and insisted that operators need to be monitored by inspections of the competent authorities. CIBC was also supportive of the approach but stressed the need for proportionate measures depending on the size of the company concerned. All stakeholders preferred the new legal text to be in the form of a regulation rather than a directive.

A more specific scope for permitted slaughtering/killing methods

Stakeholders accepted that permitted methods should be better defined, in particular regarding their scope (type of animals to be used for a particular method) and the parameters to be checked. UECBV considered that manufacturers of stunning/killing equipment should provide the necessary instructions. However UECBV was concerned that some equipment, already in use, could no longer be used. A transitional period should be foreseen in this case.

The Commission representative said that it was essential to provide scientific arguments to support the authorisation or to ban specific methods of slaughter.

CIWF and EUROGROUP welcomed the Commission suggestion on this issue. EUROGROUP also asked whether farmed fish would be included in the current initiative. The Commission explained that this was not immediately foreseen for a number of reasons (need for a specific impact assessment, different physiology, different inspection system etc.). However the Commission made clear that it intends to undertake a specific initiative on the issue later.

The question of mobile equipment (e.g. captive bolts) was also raised. The Commission explained why the responsibility should remain at local level as for fixed equipment. The importance of manuals – clear instructions on how to use the machines for ensuring good animal welfare conditions- was highlighted.

Improving knowledge by a national centre/network of reference

All stakeholders agreed on the need for a better knowledge policy on this issue since both official inspectors and operators sometimes lacked technical assistance. The FVE supported the idea of a centre. The industry (CLITRAVI, AVEC) was doubtful of the possibility of creating new structures at a time of budgetary reductions in many Member States, although they considered that providing support on AW was necessary. CLITRAVI suggested that the different functions proposed for a centre of reference could be dealt with separately, in particular by establishing an EU list of scientists specialised in a particular area of animal welfare at slaughter. The FVE suggested that the existence of national networks of reference should be included as a part of the Official Feed and Food Control Regulation (incorporated in national control plans).
Improving the design of restraining/stunning/killing equipment

The FVE agreed on the principle of integrating AW requirements in the process of the general approval of slaughterhouses. The Commission explained that since most equipment was a fixture of the slaughterhouse itself, only a local assessment would be relevant. As regards mobile equipment, the Commission suggested that the responsibility should remain with the slaughterhouse operators as there was no available legal and practical system to ensure a harmonised system of pre-approval at EU level. Therefore it would be up to the Member States to possibly develop a pre-approval system for mobile equipment. Most stakeholders accepted the views presented by the Commission. However CIWF declared that all new equipment or new parameters for using equipment (such as new electrical stunning parameters or gas stunning/killing parameters) should, before being put into use, require approval from the competent authority that they are capable of properly fulfilling their intended function.

The Commission also evoked the possibility in the future legislation to request manufacturers to provide instructions of use as to ensure the welfare of the animals.

Competence of personnel on animal welfare

All stakeholders (UECBV, CLITRAVI, FVE, AVEC and AA) expressed their support in implementing a harmonised system of certification of competence for personnel handling animals in slaughterhouses. FVE and AA insisted on the need for an independent assessment so that the length of experience alone would not be automatically recognized. UECBV also stressed the need for applying such a requirement to all slaughtermen including in the case of slaughter without stunning in order to ensure rational development of production. It was also mentioned that voluntary schemes in certain slaughterhouses already existed and should be taken as examples. Some stakeholders insisted on the need for having a certification linked to a specific test as a result of passing an independent examination of competence.

Introducing Standard Operating Procedures for animal welfare

Although the industry was mostly supportive of the idea, the AVEC questioned the feasibility of finding measurable objectives in all cases. UECBV also expressed concern about the possible risk of requesting excessive documentation from small or medium size slaughterhouses (creating potential additional administrative costs). The question of proportionality of the requirement for SOPs was also raised by the FVE. Adaptability for SMEs (possible transition period) was also mentioned.
Animal Welfare Officer (AWO)

All stakeholders backed the idea of a requirement for an AWO provided that she/he has proper qualifications and responsibilities within the slaughterhouse (mentioned by AA). Such an AWO already exists in Germany (details are provided in the FVE submission). It was clarified that the AWO would not replace the official veterinarian.

Welfare indicators at stunning/killing/bleeding

Although all stakeholders agreed on the need for a system to monitor animal welfare at these particular stages of the process (stunning/killing/bleeding), UECBV expressed the view that the legislation should not set out specific welfare indicators taking into account that national laws have an impact on the conditions of competition and accordingly on the operation of the common market. UECBV considered that it should be up to operators to establish welfare indicators in SOPs and with a recording system so that officials could perform audit and controls. FVE and EFBA also supported the opinion that a general requirement for monitoring outcomes and the creation of SOPs should suffice. CLITRAVI also considered that more specific considerations should be developed in guidelines rather than the legislation, as for food safety.

However CIWF was more doubtful of this approach and advocated specific parameters in the legislation, since this stage (slaughter/killing/bleeding) of the process was critical for the welfare of animals.

Killing for disease control purposes

Stakeholders agreed on the Commission’s proposal to request more AW supervision and recording of the circumstances. The FVE also suggested establishing a list/network of EU experts on the best killing techniques for disease control purposes in order to facilitate exchange of information and good practices between Member States. It was also suggested that methods used for killing for disease control purposes should be part of the general list of approved methods.

On farm killing

UECBV expressed concern about the possibility of allowing more flexibility for on farm slaughter for human consumption. EUROGROUP also considered that slaughter on farm for private consumption should not be exempted from AW rules including stunning.

CIWF declared that fur farming killing was a serious concern and had already provided the Commission with additional material on this issue. They mentioned in particular the recommendation of scientists not to use carbon dioxide for minks. CIWF was also against batch killing for minks. EFBA stated that they were ready to implement SOPs and certificate of competence but the ban on specific methods of killing should only be based on a scientific evaluation.
AA deplored the systematic killing of male chicks and called for a way to stop this practice in the long term. AA also requested suppressing the possibility of transporting sick or injured animals to slaughterhouses (as presently permitted under Article 12 of Directive 93/119/EC).

53 Male chicks of breeds used for producing eggs are systematically destroyed.
AVEC advocated authorisation of neck dislocation in the case of poultry. CIWF said that they were opposed to neck dislocation as scientific research shows that this does not necessarily cause immediate unconsciousness.

Some stakeholders also raised the subject of killing for private consumption – outside slaughterhouses.

Religious slaughter

The issue was raised by animal protection organisations (CIWF and AA) who requested that slaughter without prior stunning should be stopped. FVE also considered it an unacceptable practice.

UECBV supported the actual status quo and considered that a good decision on religious practices should be taken only at a political level as, if it is carried out in an abattoir, performed by trained personal and mechanical restraining always applied (cattle and sheep), it does not pose any particular problem from an animal welfare point of view. UECBV underlined its wish to avoid any discrimination between Halal and/or Kosher meat because any interdiction might be translated in possibilities to fuel illegal slaughter already existing in some Countries.

AAs also mentioned the problem of meat from animals slaughtered without stunning entering in the normal channel of distribution (i.e. non-labelled as religiously slaughtered meat) and considered that such practice did not allow consumers to be properly informed.

The Commission informed stakeholders of the ongoing Community research project DIALREL and the fact that there were very few Member States (Sweden and some Länder in Austria) which had banned slaughter without stunning. The probability of a ban being adopted at EU level looked rather limited. In addition such a position would be in conflict with other EU policies such as the protection of fundamental rights.

AW labelling

AVEC asked if the Commission intended to introduce a specific labelling scheme or grading system with respect to the welfare conditions at slaughterhouses. The Commission reported that in all consultations carried out in this respect there had been a unanimous opinion among stakeholders that slaughtering or killing animals should not be subject to any grading or differentiation system. All stakeholders considered that slaughtering animals should be done correctly and that the legislation should not introduce a grading system between slaughterhouses or slaughter methods.
## ANNEX III – Missions of the Food and Veterinary Office

on the protection of animals at the time of slaughter and/or killing

Part I: List of FVO missions which covered aspects of animal welfare at slaughter in Member States and Candidate Countries

<table>
<thead>
<tr>
<th>Member State</th>
<th>Dates of mission</th>
<th>Report reference</th>
</tr>
</thead>
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<tr>
<td>Portugal</td>
<td>14-21.5.01</td>
<td>DG(SANCO)/3311/2001</td>
</tr>
<tr>
<td>Luxembourg</td>
<td>5-9.11.01</td>
<td>DG(SANCO)/3343/2001</td>
</tr>
<tr>
<td>Italy</td>
<td>25.2 to 1.3.02</td>
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<td>18-22.3.02</td>
<td>DG(SANCO)/8555/2002</td>
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<tr>
<td>Spain</td>
<td>2-11.4.02</td>
<td>DG(SANCO)/8553/2002</td>
</tr>
<tr>
<td>France</td>
<td>24-28.6.02</td>
<td>DG(SANCO)/8554/2002</td>
</tr>
<tr>
<td>Denmark</td>
<td>9-13.9.02</td>
<td>DG(SANCO)/8676/2002</td>
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<td>Austria</td>
<td>14-18.10.02</td>
<td>DG(SANCO)/8677/2002</td>
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<tr>
<td>Ireland</td>
<td>25-29.11.02</td>
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<td>Greece</td>
<td>13-17.1.03</td>
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<td>Lithuania*</td>
<td>27-31.1.03</td>
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<td>Latvia*</td>
<td>10-14.2.03</td>
<td>DG(SANCO)/9053/2003</td>
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<td>Hungary*</td>
<td>3-7.3.03</td>
<td>DG(SANCO)/9052/2003</td>
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<tr>
<td>Czech Republic*</td>
<td>7-11.4.03</td>
<td>DG(SANCO)/9051/2003</td>
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<td>Germany</td>
<td>19-23.5.03</td>
<td>DG(SANCO)/9038/2003</td>
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<td>1-5.9.03</td>
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<td>Sweden</td>
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<td>United Kingdom</td>
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<td>The Netherlands</td>
<td>3-7.11.03</td>
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<tr>
<td>Country</td>
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<td>Spain</td>
<td>9-17.12.03</td>
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<td>Poland *</td>
<td>23-27.2.04</td>
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<td>24-28.5.04</td>
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<td>DG(SANCO)/7273/2004</td>
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<td>5-9.9.05</td>
<td>DG(SANCO)/7714/2005</td>
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<td>Latvia</td>
<td>31.5 to 3.6.05</td>
<td>DG(SANCO)/7367/2005</td>
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<td>Cyprus</td>
<td>9-13.1.06</td>
<td>DG(SANCO)/8037/2006</td>
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<td>Greece</td>
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<td>Bulgaria*</td>
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<td>Romania*</td>
<td>6-10.11.06</td>
<td>DG(SANCO)/8053/2006</td>
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<td>4-8.12.06</td>
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<td>DG(SANCO)/8331/2006</td>
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<tr>
<td>Hungary</td>
<td>23-27.4.07</td>
<td>DG(SANCO)/7331/2007</td>
</tr>
<tr>
<td>Poland</td>
<td>22-26.10.07</td>
<td>DG(SANCO)/7734/2007</td>
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Part II: List of FVO missions which covered animal welfare at slaughter and killing of animals for disease control purposes.

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<th>Member State</th>
<th>Dates of mission</th>
<th>Report reference</th>
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<td>Denmark</td>
<td>6-10.2.06</td>
<td>DG(SANCO)/8039/2006</td>
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<td>Czech Republic</td>
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<td>DG(SANCO)/8040/2006</td>
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<td>The Netherlands</td>
<td>6-9.6.06</td>
<td>DG(SANCO)/8041/2006</td>
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<td>Slovenia</td>
<td>27.11 to 1.12.06</td>
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<td>France</td>
<td>12-16.2.07</td>
<td>DG(SANCO)/7330/2007</td>
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<td>Spain</td>
<td>5-9.3.07</td>
<td>DG(SANCO)/7328/2007</td>
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<td>United Kingdom</td>
<td>25.6 to 3.7.07</td>
<td>DG(SANCO)/7337/2007</td>
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All reports (except for the missions carried in candidate countries before Accession and marked with * ) can be found by entering the mission number in the search engine of the SANCO web page: [http://ec.europa.eu/food/fvo/ir_search_en.cfm](http://ec.europa.eu/food/fvo/ir_search_en.cfm)
ANNEX IV - Main outcomes from the Member States consultation

Following the meeting of 25 January 2008 several Member States provided specific written contribution to the Commission (Finland, France, Germany, Italy, Netherlands, Portugal, Sweden and the UK).

From the meeting and the contributions received, the main reactions from the Member States could be summarised as follows.

General approach

There was a general agreement for the need to revise the directive as many provisions were obsolete and the legal framework did not fit with the current new approach developed in the food safety area. However Member States were more divided as regards if the most appropriate form should be a directive or a regulation, since some of them feared that it would be put into question stricter standards that they have implemented.

List of stunning methods / Approving new methods

Member States would all agree that list of stunning/killing methods would need to be updated and more strictly defined, in line with new scientific evidence. However if some of them wanted a strict adherence to international guidelines, others would prefer a certain flexibility for the killing for disease control purposes.

As regards new methods Member Stats agreed that new methods should be evaluated with strict scientific methodology. But some of them would favour a centralised approach (through the EFSA) rather than a partially decentralised option.

Standard Operating Procedures/ Animal Welfare Officer

There was also a large support for introducing requirements on standards operating procedures in line with the Hygiene Package. The introduction of animal welfare officer was also well received by the Member States. However some Member States were attached to a legislation that secures technical parameters and were doubtful on the possibility of leaving animal welfare indicators in the legislation. Concerns were also expressed of requesting SOP and AWO for small size businesses.

Certificate of competence

Member States also largely supported the introduction of a certification process for staff working in slaughterhouses.

National centres of reference

Member States were more reluctant for establishing a national centre of reference for the protection of animals at the time slaughter, despite that they admit that the assessment of equipment and facilities of slaughterhouses need some technical back-up. While some were opposed since they consider that the system of scientific back-up already exists, others were positive of the idea but would favour a more flexible wording (like a list of recognised specialists) or a network of reference.

Killing for disease control purposes
Better preparedness and reporting on animal welfare in case of killing for disease control purposes received a positive response from the Member States. While some Member States would prefer strictly adhere to international guidelines in this area, others would advocate for a certain level of flexibility as regards the list of killing methods to be used.
ANNEX V – EU sectors affected by Directive 93/119/EC

Red meat sector

The overall red meat sector produces around 30 million tonnes with the large predominance of pig meat production (2/3 of the total red meat and half of the total meat sector if poultry is included – see Figure 3 below).

The EU’s pig meat sector is self-sufficient and strong while cattle and sheep sectors are both net importers and likely to remain so (see Table 1). The main Member States producing pig meat are Germany (19.4% of total EU production), Spain (14.7%), France (10.3%), Poland (8.9%) and Denmark (8.3%).

EU beef meat production accounts for about 19% of total gross EU production of meat (see Figure 3). The main producers within the EU (and their share of EU total production) are France (29.7%), Germany (10.2%), and Italy (11.6%).

Sheep meat production comprises just 3% of the total gross internal production of meat in the EU-25 (see Figure 1 below). The major sheep and goat meat producing MS in the EU are Spain (with 29.7% of the total production in 2005), the UK (20%), Greece (16.1%), and France (14.7%).

Slaughterhouses have become increasingly large and automated within the EU. Many are specialised and only slaughter one species, though it is still common for several red meat species to be slaughtered in the same plant. Most Member States have seen a reduction in slaughterhouse numbers as the remaining slaughterhouses increase in size. Figure 2 and Table 2 provides more specific data on the sector in each Member State.

Table 1: Degree of self-sufficiency of EU red meat production (2005)

<table>
<thead>
<tr>
<th></th>
<th>Cattle</th>
<th>Pigs</th>
<th>Sheep and goats</th>
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</thead>
<tbody>
<tr>
<td>Gross indigenous production (1000 t carcass weight)</td>
<td>7,910</td>
<td>21,101</td>
<td>1,058</td>
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<td>Total exports of live animals (1000 t carcass weight)</td>
<td>131.3</td>
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<tr>
<td>Total imports of live animals (1000 t carcass weight)</td>
<td>43.2</td>
<td>0.95</td>
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<td>Net production (1000 t carcass weight)</td>
<td>7,844</td>
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<td>Total exports (1000 t carcass weight)</td>
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<td>1,468</td>
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<td>Total imports (1000 t carcass weight)</td>
<td>564.6</td>
<td>14</td>
<td>283.5</td>
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<tr>
<td>Total domestic uses (1000 t carcass weight)</td>
<td>8,143</td>
<td>19,647</td>
<td>1,328</td>
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<tr>
<td>Degree of self-sufficiency</td>
<td>96.3%</td>
<td>107.6%</td>
<td>79.1%</td>
</tr>
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</table>

Note: self-sufficiency is defined as a ratio of gross indigenous production to total domestic uses. “Total domestic uses” is defined as parts of the animal used for the following purposes: seeds (or eggs for hatching), losses, animal feed, industrial uses, processing, human consumption.

Figure 1: Gross internal EU production (2005)


Figure 2: Slaughtering by Member States (2004)

Source: DG Agriculture.
Table 2: Number of slaughterhouses in EU Member States (survey data 2007)

<table>
<thead>
<tr>
<th>Country</th>
<th>Red Meat (approved according to Regulation 853/2004)</th>
<th>Poultry (approved according to Regulation 853/2004)</th>
<th>Total red meat and poultry slaughterhouses</th>
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</thead>
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<tr>
<td>AT</td>
<td>23</td>
<td>16</td>
<td>39 (9 slaughterhouses, 90 small scale)</td>
</tr>
<tr>
<td>BE</td>
<td>112</td>
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<td>CV</td>
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<tr>
<td>UK</td>
<td>102</td>
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<td>204</td>
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</tbody>
</table>

*Figures for SE for each species include only establishments, not only those approved according to Regulation 853/2004.
**Number is relatively large due to high number of small slaughterhouses.
Source: Survey of competent authorities.

Poultry sector

The European poultry meat sector is the second largest meat-producing sector after pig meat. Poultry meat production in the EU in 2005 reached 11.1 million tonnes with France accounting for 17% of total EU-25 production. The other major producers are the UK (14%), Spain (12%), Germany (11%), Italy (10%) and Poland (9%). The EU is 106% self-sufficient in poultry meat.

Chicken and turkey are the main poultry species produced, with chickens comprising around three quarters of total EU poultry production and turkeys 20%. The balance is accounted for by ducks and fowl. The UK was the largest producer of chickens in 2005 with a share of 17% of total EU chicken production. It was followed by Spain (13%), and France (12%). Among the New Member States, Poland is the biggest chicken producer supplying over 11% of EU broilers. As far as turkeys are concerned, the biggest producers are France (30%), Germany (18%), Poland (14%), and Italy (14%). Figure 3 provides more details on EU poultry meat production.

The EU poultry meat processing sector is characterised by strong regional concentration and specialisation (driven by increased competition) and vertical integration, particularly between the animal feed industry, broiler producers, and the slaughtering and distribution sectors. As regards poultry meat imports, while imports of poultry alive and carcass are insignificant (less than 10 000 Tonnes in 2005), imports of poultry cuts and prepared have increased, reaching 512,000 tonnes in 2002 and 400,000 tonnes in 2005.

Figure 3 and Table 3 provide more details on the sector and capacity in Member States.
Figure 3: EU poultry meat production, by species 1995-2006 (‘000 tonnes)

Note: 2006 numbers are estimates
Source: AVEC
Fur farming

The fur farming industry represents in Europe some 6000 fur farmers who produce 60% of the world's farmed fur. This industry is the basis for important related economic activities in the trade and the treatment of fur. It also consumes 1.200.000 tonnes of animal by-products reducing waste on the environment.

While fur farming is practiced in different part of the EU, it constitutes in some regions a major agricultural activity, in particular in geographical areas where the climate is unsuitable for other agricultural production. In Finland it is estimated that 50% of fur breeders rely exclusively on fur farming for their incomes.

Mink and foxes constitute the main species farmed for their fur. Denmark is the world's leading mink fur producer while Finland the leading fox fur producer.

The main figures of the fur farming sector are laid down in the table 4 below.

---

**Table 3: Number of poultry slaughterhouses and slaughter capacity 2000-2006**

<table>
<thead>
<tr>
<th></th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number of slaughterhouses</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Austria</td>
<td>9</td>
<td>8</td>
<td>8</td>
<td>9</td>
<td>10</td>
<td>10</td>
<td>11</td>
</tr>
<tr>
<td>Belgium</td>
<td>94</td>
<td>N/A</td>
<td>75</td>
<td>N/A</td>
<td>N/A</td>
<td>72</td>
<td>N/A</td>
</tr>
<tr>
<td>Finland</td>
<td>26</td>
<td>26</td>
<td>26</td>
<td>25</td>
<td>25</td>
<td>23</td>
<td>25</td>
</tr>
<tr>
<td>Germany</td>
<td>112</td>
<td>112</td>
<td>112</td>
<td>117</td>
<td>117</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Hungary</td>
<td>47</td>
<td>44</td>
<td>46</td>
<td>51</td>
<td>50</td>
<td>46</td>
<td>49</td>
</tr>
<tr>
<td>Latvia</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>15</td>
<td>9</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Lithuania</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>15</td>
<td>19</td>
<td>19</td>
</tr>
<tr>
<td>Netherlands</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>32</td>
<td>26</td>
<td>23</td>
<td>N/A</td>
</tr>
<tr>
<td>Poland</td>
<td>N/A</td>
<td>N/A</td>
<td>429</td>
<td>N/A</td>
<td>385</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>UK</td>
<td>119</td>
<td>114</td>
<td>106</td>
<td>103</td>
<td>101</td>
<td>98</td>
<td>89</td>
</tr>
</tbody>
</table>

|                |      |      |      |      |      |      |      |
| **Slaughter output (million birds/year)** |      |      |      |      |      |      |      |
| Austria        | 63.9 | 67.3 | 66.7 | 67.9 | 69.4 | 70.7 | 67.5 |
| Belgium        | 238.2| N/A  | 248.9| N/A  | N/A  | 237.7| N/A  |
| Finland        | 46.1 | 53.7 | 54.8 | 52.8 | 54.8 | 54.5 | 55.1 |
| Germany        | 406.9| 412.9| 424.0| 447.2| 492.9| N/A  | N/A  |
| Hungary        | 187.5| 205.8| 213.5| 217.3| 214.9| 208.0| 193.9|
| Latvia         | N/A  | N/A  | N/A  | 6.4  | 8.2  | 6.3  | 13.2 |
| Lithuania      | N/A  | N/A  | N/A  | N/A  | N/A  | N/A  | N/A  |
| Netherlands    | N/A  | N/A  | N/A  | N/A  | N/A  | N/A  | N/A  |
| Poland         | N/A  | N/A  | N/A  | N/A  | N/A  | N/A  | N/A  |
| UK             | 786.9| 795.2| 781.4| 786.8| 788.9| 804.1| 779.9|

Notes: Hungarian output data converted from kg per year to number of birds assuming 2.2 kg weight.

Sources: ZMP, Meat Hygiene Service, VTP zsvj, Hungarian Poultry Product Board, Food and Veterinary Service (Latvia), Animal Health and Welfare Unit (Finland), FVE/RVV, Lithuanian Ministry of Agriculture, Polish Ministry of Agriculture and Agro CEAS Consulting calculations.
Table 4: Main figures of the EU fur sector (2006)

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of fur farms in the EU</td>
<td>6.000</td>
</tr>
<tr>
<td>(2006)</td>
<td></td>
</tr>
<tr>
<td>Number of mink pelt</td>
<td>25.1 millions</td>
</tr>
<tr>
<td>Number of fox pelt</td>
<td>2.6 millions</td>
</tr>
<tr>
<td>Estimated employees in the fur</td>
<td>164.000 full time + 174.000 part time</td>
</tr>
<tr>
<td>sector (whole chain)</td>
<td></td>
</tr>
<tr>
<td>Value of farmed fur</td>
<td>1.500 millions euros</td>
</tr>
</tbody>
</table>

Source: European Fur Breeders' Association/International Fur Trade Federation documents

Table 5: Main figures of the EU fur farming sector in 2006

<table>
<thead>
<tr>
<th></th>
<th>Mink</th>
<th>Fox</th>
<th>Fitch</th>
<th>Raccoon</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Prod.</td>
<td>Farm</td>
<td>Prod.</td>
<td>Farm</td>
</tr>
<tr>
<td>Belgium</td>
<td>185.000</td>
<td>22</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Denmark</td>
<td>13.420.309</td>
<td>1.727</td>
<td>12.000</td>
<td>35</td>
</tr>
<tr>
<td>Finland</td>
<td>1.465.000</td>
<td>569</td>
<td>2.120.000</td>
<td>1.266</td>
</tr>
<tr>
<td>France</td>
<td>180.000</td>
<td>17</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Germany</td>
<td>400.000</td>
<td>25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Greece</td>
<td>50.000</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Netherlands</td>
<td>3.500.000</td>
<td>148</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Iceland</td>
<td>155.000</td>
<td>22</td>
<td>1.500</td>
<td>4</td>
</tr>
<tr>
<td>Ireland</td>
<td>175.000</td>
<td>6</td>
<td>200</td>
<td>1</td>
</tr>
<tr>
<td>Latvia</td>
<td>500.000</td>
<td>12</td>
<td>17.700</td>
<td>7</td>
</tr>
<tr>
<td>Italy</td>
<td>130.000</td>
<td>21</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lithuania</td>
<td>351.230</td>
<td>18</td>
<td>7.600</td>
<td>4</td>
</tr>
<tr>
<td>Norway</td>
<td>530.000</td>
<td>170</td>
<td>280.000</td>
<td>480</td>
</tr>
<tr>
<td>Poland</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spain</td>
<td>420.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sweden</td>
<td>1.500.000</td>
<td>125</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EFBA Countries</td>
<td>22.961.539</td>
<td>2.902</td>
<td>2.439.000</td>
<td>1.797</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: European Fur Breeders' Association

Hatcheries and killing of chickens on farms

Male day-old chicks of laying hen strains are systematically killed by using gas mixture as they can not be used for other purposes. It is estimated that in the EU about 335 millions day old male chicks of the laying strain are killed and the gas killing method applied to all male

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54 Data of this paragraph have been provided by the Association of European Hatcheries (AEH) and Association of European Hatching Egg, One Day Olds and Pullets Exporters (EPEXA).
chicks would amount the costs at 1,665,000 Euros. This method is mainly used in hatcheries for the egg laying sector.
In addition hatcheries for the meat types are incidentally killing day old chicks and the number of killed chicks both male and female is rather low. The method used for killing day old chicks in these hatcheries is by rotating or whirling knives which are mincing the chicks in a split second. The costs implied can be considered not to be substantial.

Chickens on the farm are incidentally killed mainly for animal welfare reasons. When it is done by farmers themselves, they dislocate the neck. It is not easy to give a common figure for the number of chicks that is killed by this method since it varies per flock and depends on the quality of the day old chicks when they arrive at the farm. About 3,700 million day old chicks of the meat strains are yearly placed on the farms and about 1 – 1.5 million are estimated to be killed.

**Killing for disease control and other killing**

Outbreaks of contagious diseases can sometimes only be controlled through the systematic destruction of animals possibly in contact with infected animals. If vaccination can be used in some cases and is more and more integrated in the future policy on animal health, there are still reasons for proceeding to massive killing in order to limit the spreading of particular pathogens agents.

Figures on killing for disease control are obviously extremely volatile since outbreaks are not part of a normal production activity. However in the last decade, two major outbreaks have affected mammals species with around 10 millions animals killed in each case (Classical Swine Fever in the Netherlands and Foot and Mouth Disease in the UK) while two other major outbreaks have affected birds with around 30 millions birds killed in each case (Avian Influenza in Italy and in the Netherlands).

In addition other killings are performed on farms where no estimate is available. Less spectacular outbreaks of contagious diseases, as well as contamination of animals by feed may lead to the killing of entire farms.

Animals are also killed on farms because they are not sufficiently productive. If animals are sometimes transported to slaughterhouse, many such animals are unsuitable for human consumption and are killed on farms.
ANNEX VI - Current Stunning and bleeding techniques used in slaughterhouses

Table 1 summarises the different techniques for stunning and bleeding used in the different species. The results are based on the survey of EU slaughterhouse operators done in the framework of the external impact assessment study carried out by the Food Chain Evaluation Consortium (FCEC).

Table 1: Overview of current stunning/bleeding techniques used in slaughterhouses

<table>
<thead>
<tr>
<th>% of slaughterhouses who responded</th>
<th>Stunning technique</th>
<th>Bleeding techniques</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cattle</td>
<td>Penetrative captive bolt: 79% on cattle, 96% for calves</td>
<td>Chest sticking: 50% for cattle and 56% for calves</td>
</tr>
<tr>
<td></td>
<td>Non-penetrative captive bolt: 4% for calves and 7% for cattle</td>
<td>1 carotid artery: 16% for cattle, 26% for calves</td>
</tr>
<tr>
<td></td>
<td>Electrical stunning: 0% for calves, 12% for cattle</td>
<td>2 carotid arteries: 34% for cattle, 18% for calves</td>
</tr>
<tr>
<td>Pigs</td>
<td>Electrical stunning: 36% for pigs up to 150kg, 38% for pigs more than 150 kg</td>
<td>Chest sticking: 86% for pigs up to 150 kg, 100% for pigs more than 150 kg</td>
</tr>
<tr>
<td></td>
<td>Gas stunning: 64% for pigs up to 150kg, 62% for pigs more than 150 kg</td>
<td>Neck cutting: 14% for pigs up to 150 kg</td>
</tr>
<tr>
<td>Sheep</td>
<td>Electrical stunning: 93% of lamb, 100% of adult sheep</td>
<td>2 carotid arteries: 62% for lamb, 54% for adult sheep</td>
</tr>
<tr>
<td></td>
<td>Non-penetrating captive bolt: 7% of lamb</td>
<td>1 carotid artery: 38% for lamb, 46% for adult sheep</td>
</tr>
<tr>
<td>Chickens</td>
<td>Head only stunning: 10%</td>
<td>1 carotid artery cut and 1 external jugular vein cut: 50%</td>
</tr>
<tr>
<td></td>
<td>Reversible water bath: 55%</td>
<td>2 carotid arteries cut: 29%</td>
</tr>
<tr>
<td></td>
<td>Irreversible water bath: 24%</td>
<td>1 jugular vein cut: 8%</td>
</tr>
<tr>
<td></td>
<td>Neck dislocation: 10% (but only used in emergency back-up)</td>
<td>Manual knife: 4% (only emergency back-up)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Decapitation: 4%</td>
</tr>
<tr>
<td>Turkeys</td>
<td>Reversible water bath: 67%</td>
<td>1 carotid artery cut and 1 external jugular vein cut: 9%</td>
</tr>
<tr>
<td></td>
<td>Irreversible water bath: 33%</td>
<td>2 carotid arteries cut: 82%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 jugular vein cut: 9%</td>
</tr>
</tbody>
</table>

Source: EU survey of slaughterhouse operators, consultants reports
ANNEX VII - Main requirements of Directive 93/119/EC on the protection of animals at the time of slaughter or killing

Scope:
Animals slaughtered for human consumption, fur animals, killing for disease control purposes, killing of animals in farm.

Requirements for slaughterhouses:
General obligation of stunning animals but derogation in case of religious slaughter
List of permitted methods and specific requirements for stunning or killing of animals
Specific requirements for:
– unloading and keeping animals at slaughterhouses
– restraining animals
– bleeding animals

General requirements on equipment and personnel to perform the slaughtering operations in a professional way respecting the welfare of the animals

Outside slaughterhouses:
General animal welfare principles but possible derogation from stunning in case of private consumption of poultry or rabbits
General requirements for the killing of animals for disease control purposes
List of permitted methods and specific requirements for the killing of:
– fur animals
– surplus day-old-chick
ANNEX VIII - Main technological developments in slaughtering techniques and their welfare relevance

There are two species where the main technological developments took place: poultry and pigs

**Poultry**

*Use of high frequency alternating current and/or pulsed direct current for water bath stunning*

The first water bath stunners were using alternating current at a frequency of 50 Hz since this is the frequency delivered by electricity providers. However due to meat quality problems (blood splashes, broken bones) it appears that some slaughterhouses have been using either higher frequency (e.g. 400 Hz) of alternating current or pulsed direct current. Scientists have pointed out that increasing the frequency of alternative current or using pulsed direct current may decrease the effectiveness of the stunning with animals being immobilised while submitted to painful electrical shocks instead of being stunned.

*Development of Control Atmosphere Stunning*

The use of stunning/killing poultry with gas mixtures (also named Control Atmosphere Stunning) was not foreseen in 1993 when the Directive was adopted. A recent study requested by the Commission indicates that at least three different CAS methods are now used in the EU within around 25 slaughterhouses. CAS is used in the largest slaughterhouses and experts estimate that between 20 to 25% of broilers in the EU are now slaughtered under CAS.

**Pigs**

While the use of carbon dioxide was foreseen in Directive 93/119/EC at a minimum concentration of 70%, scientists have indicated that carbon dioxide can be aversive above 30%. The meat industry has increasingly used higher concentrations up to 90% in order to shorten the time of exposure while ensuring a longer stunning time.

ANNEX IX - Hygiene package requirements in a nutshell

Main requirements of the "Hygiene package" applicable to slaughterhouses

The "Hygiene package" is a set of several regulations implementing the general principles of the "Food Law" laid down in Regulation (EC) No 178/2002. The relevant regulations applicable to slaughterhouses are the following:

Regulation (EC) No 852/2004 on hygiene of foodstuffs

This regulation makes compulsory to any food business operator to put in place, implement and maintain permanent procedures based on the HACCP principles. HACCP stands for Hazard Analysis Critical Control Points and is a complex methodology internationally recognised for preventing food safety.

The Regulation lists seven HACCP principles (Article 5) which can be summarized as follows:

1. identification of food safety hazards,
2. identification of critical control points CCP (i.e. the steps of the production process where you can prevent, reduce or eliminate the hazards),
3. establishment of critical limits for each CCP (what is acceptable or not),
4. establishment of monitoring procedures for each CCP,
5. establishment of corrective actions when a CCP is not under control,
6. establishment of verification procedures to ensure that the system is effectively working,
7. establishment of documents and records commensurate with the nature and the size of the food business to demonstrate the effective application of the measures requested.

Regulation (EC) No 853/2004 laying down specific hygiene rules for food of animal origin

This regulation requires establishments to be registered and approved by the competent authority and laid down specific requirements for each type of establishments.

For slaughterhouses, pre-approval is based on the inspection by the competent authority as to assess the compliance of requirements related to construction, layout and equipments.

In addition the regulation asks for the operational requirements to ensure the safety of the meat (identification, marking, HACCP-based procedures, slaughter hygiene, etc.). In particular it requires HACCP based procedure in order to check the welfare of animals at arrival.

This regulation laid down the organisation of official control including in slaughterhouses.

In particular the process of approval of slaughterhouses and audit of HACCP procedures is specified. The regulation explicitly indicates that for slaughterhouses, animal welfare is part of the inspection tasks of the competent authority.

The regulation also specifies the obligations and the powers of the official veterinarian in a slaughterhouse regarding animal welfare. The official can in particular slow down and stop the production line, depending on the nature and the gravity of the problem encountered.
ANNEX X - Example of the discrepancies of situation in Europe concerning Controlled Atmosphere Stunning from information collected from manufacturers

Current UK legislation only allows anoxic mixtures to be applied in controlled atmosphere stunning. This legislation can no longer be amended, since the maximum number of amendments has been reached already. Therefore, new legislation is needed. It has been expressed to us that the UK awaits the revision of Council Directive 93/119/EC.

For the Dutch situation, the Ministry of Agriculture concluded in 2005 that applying controlled atmosphere stunning was covered already by national as well as EU legislation (with reference to Directive 93/119/EC).

In Finland, the authorisation to apply multiphase has been laid down into legislation since the early 2000's.

For other Member States equipment manufacturers need to apply for a special derogation from the law. Such derogation is usually given on a temporary basis, subject to future law.

Carbon dioxide stunning at high concentration (without the addition of inert gasses) is only applied in Italy. In Germany, hypercapnic stunning of turkeys is allowed by law. There are however, currently no such systems operational in Germany.
ANNEX XI – Directive or Regulation in this case?

As stated in the Commission Communication on “Implementing the Community Lisbon programme: A strategy for the simplification of the regulatory environment”\textsuperscript{56}, "Replacing directives with regulations can under certain circumstances be conducive to simplification as regulations enable immediate application, guarantee that all actors are subject to the same rules at the same time, and focus attention on the concrete enforcement of EU rules."

In this case, a Regulation would offer the following advantages:

- it would provide a uniform and simultaneous application of a measure in all the Member States and avoid the burden, both for the Member States and the Commission, of transposition.

- as this area requires more detailed and precise provisions, where the results to be achieved are often quantifiable, if the Member States are left with a too great margin of discretion, legal insecurity can arise.

- the updating of a Regulation can be more rapidly implemented. This would be particularly welcomed in this area which is subject to evolution, having regard to technical and scientific advances.

\textsuperscript{56} COM(2005) 535.
### ANNEX XII – Comparative price level indices of the survey, EU 27=100

From Statistics in focus, Economy and finance, 90/2007, Eurostat

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Average</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
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<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

#### How to read this table?

The prices underlying this table are average annual national prices for the respective product groups. In the rows, the table provides a direct comparison of the price levels for the respective product group across all 37 participating countries. For example, the PLI for oils and fats is 4% above the EU average in UK, and 10% above the EU average in Sweden. Oils and fats are, therefore, in Sweden about 14% more expensive than in the UK (1.18/1.04=1.14).

By column, the table refers to the PLIs of different product groups within one country and the interpretation is the following one. All PLIs are expressed relative to the EU average for the respective product groups. For example, for Fish the Portuguese price level is 30% below the EU average and for milk, cheese and eggs 0% above the EU average. In relation to the respective EU averages, therefore, Fish is relatively cheaper in Portugal than milk, cheese and eggs.
ANNEX XIII – Illustration of the impact of the baseline scenario on innovation: the example of controlled atmosphere stunning of poultry

The baseline scenario can be illustrated by the development of the controlled atmosphere stunning of poultry (CAS) where the current legislation does not contain requirement or common methodology to analyse/authorise new methods of killing. We have previously seen in section on subsidiarity the various ways Member States have dealt with CAS.

All these differences between Member States have impacts on equipments manufacturers and at the end on innovation. They affect the cost of the structure of production (direct effect) but they also affect the quality of products (indirect effect).

Regarding direct costs, the choice of gas mixture has an influence linked to the cost of gas (Argon or Nitrogen are more expensive than carbon dioxide) but linked to the fact that the different protocols can require slightly different time to stun or kill the animals. Under commercial conditions protocols used, the duration of exposure to gas mixture may vary between less than one minute of exposure to up to three minutes, affecting not only investment costs (design of the equipment) but also the throughput of the production line.

Indirect effects are due to the constraints related to the effect that the CAS protocols have on the final product. Meat quality may be affected by the use of some protocols. According to the FCEC study, the lack of harmonised legislation on CAS has partly contributed to favour the prevalence of electrical stunning.

Table 3: Use of controlled atmosphere system in the EU (poultry)

<table>
<thead>
<tr>
<th>System</th>
<th>Usage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anoxic gases only (argon, nitrogen and their mixtures with up to 2% by volume of residual oxygen in the atmosphere)</td>
<td>No data.</td>
</tr>
<tr>
<td>Anoxic gases and low concentrations of CO₂ (argon, nitrogen and their mixtures with up to 5% by volume of oxygen and up to 30% by volume CO₂)</td>
<td>Up to 5 plants in the UK and one in Belgium</td>
</tr>
<tr>
<td>Two stage CO₂ (40% CO₂, 30% oxygen and 30% nitrogen followed by 80% CO₂ for two minutes)</td>
<td>6 chicken processing plants in Finland, Belgium, Germany, France, UK and Sweden, 3 turkey plants in Italy, France and Germany.</td>
</tr>
<tr>
<td>CO₂ only (30% to 80% CO₂ in air):</td>
<td>4 plants, one for broiler chickens and one for turkeys in Germany and two in Italy.</td>
</tr>
</tbody>
</table>
ANNEX XIV – Complementary questionnaire to the Member States

AS TO COMPLETE THE IMPACT ASSESSMENT ON THE REVISION OF THE EU LEGISLATION ON
THE PROTECTION OF ANIMALS AT THE TIME OF SLAUGHTER OR KILLING

The following questions do not preclude the final options taken by the Commission. They reflect demands expressed by stakeholders or/and scientists which needs to be quantified in terms of economic costs as well as on other possible impacts. As information is not necessarily available and cases may vary depending on each local situation, evaluation should be provided based on concrete data or existing studies which are directly relevant or which present similarities.

For the purpose of this questionnaire the word "stunning" should be understood as any method inducing unconsciousness and insensitivity, reversible or not (stunning or stunning/killing).

**Question 1 – Official controls** – The Commission may envisage requesting official controls and audits on animal welfare that we understand are already covered under inspection duties of officials in the framework of the hygiene package. Do we have any quantitative information regarding the costs generated by the requested official controls?

**Question 2 – Administrative costs related to the authorisation of new stunning methods** – The Commission may envisage maintaining the possibility for Member States to initiate the process of authorisation for new stunning methods.

Q.2.1 – Based on previous experience, what would be the costs of processing such authorisations?

Q.2.2 – What types of costs would a new authorising scheme require from companies and/or Member States' authority?:

- Additional staff? If yes, please indicate how many more man-hours.
- Additional checks? If yes, please indicate how costly this could be (in €).
- Data collection? If yes, please indicate how costly this could be (in €).
- Data storing and processing? If yes, please indicate how costly this could be (in €)
- Etc…

Q.2.3 – To which extent these costs could be supported by the industry?

Q2.4 – In the past years, how many authorisations for new stunning methods have been processed?
Question 3 – Animal Welfare Officer (AWO) – The Commission may envisage making compulsory for slaughterhouses to appoint a person who would be responsible for the implementation of the animal welfare legislation.

Based on the experience gained in your country (if applicable) where a AWO is required, how this obligation is implemented by operators? In particular, how many more man-hours are needed at company level to comply with the requirement?
**Question 4 – Certificate of competence** – The Commission may envisage establishing a system of certificate of competence for personnel handling animals at slaughterhouses and for personnel killing fur animals.

Q.4.1 – Based on similar experiences, what would be the costs for the public administration to introduce and run such system of certificates of competence?

Q.4.2 – In particular, what types of costs would a new certificate of competence scheme require from companies and/or Member States' authority?:

- Additional staff? If yes, please indicate how many more man-hours.
- Additional checks? If yes, please indicate how costly this could be (in €).
- Data collection? If yes, please indicate how costly this could be (in €).
- Data storing and processing? If yes, please indicate how costly this could be (in €)
- Etc…

**Question 5 – National Centre of Reference** – The Commission may envisage requesting Member States to establish a national centre of reference to perform several scientific and technical tasks related to the welfare of animals at the time of slaughter and killing. In particular those tasks could involve *inter alia* the provisions of technical supports for the process of approval of new slaughterhouses, the examination of new stunning methods, the scientific advice on killing methods for disease control purposes and the accreditation of certification bodies (for certificate of competence).

Q.5.1 – Could you describe in your country how officials in slaughterhouses make use of scientific and/or technical expertise to assess the animal welfare aspects of new equipments, new establishments, new stunning or killing methods or the competence of personnel?

Q.5.2 – What is the present costs of the system you have described?

Q.5.3 – Based on similar experience and the availability of existing scientific resources available in your country, what types of costs would a new national centre of reference require from companies and/or Member States' authority?:

- Additional staff? If yes, please indicate how many more man-hours.
- Additional checks? If yes, please indicate how costly this could be (in €).
- Data collection? If yes, please indicate how costly this could be (in €).
- Data storing and processing? If yes, please indicate how costly this could be (in €)
- Etc…
**Question 6 – Killing for disease control purposes and other depopulation cases** – Directive 93/119/EC allows the competent authority to use other methods than the one listed in the current EU legislation. The Commission may envisage using a stricter list of stunning/killing methods including for disease control purposes and requesting a better integration of animal welfare concerns when actual killing of animals takes place.

Q.6.1 – Could you identify methods of killing that are presently not listed in Directive 93/119/EC or not recommended by the EFSA or the OIE guidelines that have been or would be used by your country in case of outbreaks?

Q.6.2 – What type of costs would the ban on these methods involve from your organisation?

- Buying new equipment? If yes, please indicate how costly.
- Hiring additional staff? If yes, please indicate how many more man-hours.
- Etc….

Q.6.3 – What are the current practices of your country in relation to the integration of animal welfare issues on the planning, the supervision and the reporting during outbreaks or other massive on farm killing?

Q.6.4 – Do you have the practice of producing an evaluation report on the animal welfare results during operations of depopulation? If so, how often?

Q.6.5 – If not, what types of additional costs would involve the production of an evaluation report on the animal welfare results during operations of depopulation?

- Additional checks? If yes, please indicate how costly
- Additional drafting for producing report? If yes, please indicate how many more man-hours

**Question 7 – Official supervision in case of religious slaughter** – Some stakeholders believe that religious slaughter is often performed without sufficient consideration to the welfare of the animals and suggest that permanent presence of officials would improve the situation.

What types of costs would a presence of officials involve from Member States authority?

- Additional staff? If yes, please indicate how many more man-hours.
- Additional checks? If yes, please indicate how costly this could be (in €).
- Data collection? If yes, please indicate how costly this could be (in €).
- Data storing and processing? If yes, please indicate how costly this could be (in €).
- Etc….
**Question 8 – Official controls on fur animals killing** – Today's EU legislation provides specific requirements for the killing of fur animals which take place on farm during a specific period of the year.

Q.8.1 – How today official controls are performed to check the provisions applicable to the killing of fur animals?

Q.8.2 – What is the percentage of fur animals killed per year do you estimate to be checked?

END OF THE QUESTIONNAIRE