PROJECT FINAL REPORT

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1. Final publishable summary report

1.1 Executive summary

Farming has changed significantly over the last six decades and consumers became disconnected from the process. However, farm animal welfare is now a matter of growing public concern. Consumers' preferences and purchasing choices basically underpin the societal and economic sustainability of agro- and food-chains so it is very important for the industry, both from a corporate social responsibility and a market point of view, to rebuild and maintain consumer trust in how food animals are kept across Europe. These concerns and requirements were addressed in the present European Animal Welfare Platform (EAWP) project where major stakeholders worked together to safeguard and progress farm animal welfare. This is the first project in this field to harness the efforts of principal stakeholders throughout the supply chain. EAWP partners represented major companies in the animal production sector (producers, processors, retailers, food service), animal welfare organisations and academia; all the participants had considerable practical experience of welfare issues and were recognized leaders in their field. The Platform was able to exploit outcomes of the EC-funded Welfare Quality® project on welfare assessment protocols, product information and improvement strategies by building on and complementing them in a commercial environment.

Working in an atmosphere of openness and trust the Platform facilitated the exchange of knowledge, expertise, resources and networks in order to: i) effectively support the continued development and implementation of scientifically based welfare assessment systems, information systems and practical welfare improvement strategies; ii) identify and prioritise key welfare issues/problems in several animal product groups (beef and dairy cattle, pigs, laying hens, broiler chickens, and salmon); iii) identify legislation regarding key welfare issues, iv) describe ways of monitoring and measuring the various welfare issues, v) describe existing best practices for dealing with each of the welfare issues, vi) propose short- and long-term goals for welfare and economic improvement, and vii) list R&D priorities. This output was central to the development of a set of Strategic Approach Documents (SADs) for each of the product groups which had become a major and overarching objective of the EAWP.

The EAWP also communicated the results of its activities to a broader audience using several dissemination tools; these included the EAWP website (www.animalwelfareplatform.eu), newsletters, leaflets, press releases etc. By defining research priorities the Platform contributed to continuing efforts to place welfare policy and welfare legislation on a clear scientific footing. Its activities therefore fitted seamlessly and in a very timely fashion in the priorities of the Community Action Plan and Strategy on the Welfare of Animals.

In conclusion, this Platform is a unique, timely and important achievement. Together with the partners' global business links the EAWP represents a sufficiently wide spread of product chains, interest groups, knowledge, expertise, geography, and cultures to ensure that it speaks with a powerful and international voice on the welfare of farmed animals.

1.2 A summary description of project context and objectives

The last 60 years has seen tremendous changes in animal farming with production systems and management practices becoming more and more mechanised and conditions for the animals becoming increasingly barren and crowded (Blokhuis et al 1998; 2010). Furthermore, not only are many more animals now kept per farm but intense genetic selection for production traits, like growth, food conversion, milk and egg production, has often been associated with the appearance of harmful behavioural and physiological characteristics. In a nutshell, despite offering welfare benefits such as minimal risk of predation, shelter from bad weather, and increased hygiene, animal production became highly industrialised with its own unwittingly created set of welfare problems. Unfortunately, while these changes were taking place a number of cultural, attitudinal and commercial barriers prevented constructive communication between farmers/producers and consumers (Buller and Morris 2002). Sociological studies had already shown a very real lack of transparency and understandable information about welfare in the market for animal products (Harper and Henson, 2000). This meant that many consumers were simply unaware of the realities of modern animal production. However, recent crises, such as swine fever, BSE and bird flu, as well as the activities of animal welfare organizations have led to farm animal welfare becoming an issue of significant public concern. Indeed, recent surveys by the European Commission revealed that European citizens are strongly committed to animal welfare, that they attach an economic value to that commitment and that most of them perceive a clear need for further improvements in animal welfare (Eurobarometer 2005; 2007).

Since consumers are the end-users, their preferences and purchasing choices basically underpin the societal and economic sustainability of agro- and food-chains. Thus, it is clearly very important for the industry, both from a corporate social responsibility and a market point of view, to regain and maintain consumer trust in how food animals are kept and handled across Europe. There is also growing international recognition that high standards of food safety and of animal health and welfare are interrelated and critical components of the move towards more sustainable agriculture. This was convincingly illustrated by the Good Practice Note on animal welfare issued by the International Finance Corporation of the World Bank which describes the creation of business opportunities through improved animal welfare and cites several cases where better welfare resulted in increased productivity and profitability.

The above issues, concerns and requirements were addressed in the present project by the establishment of the European Animal Welfare Platform (EAWP) where major stakeholders were committed to working together to safeguard and progress farm animal welfare. This is the first project in the area of the welfare of farmed animals to harness the efforts of principal stakeholders throughout the supply chain. The EAWP was designed to contribute to the European Knowledge Based Bio-Economy by bringing together industry, research and other stakeholders to exploit new opportunities that address social and economic challenges. The partners in this multi-stakeholder EAWP represented major companies in the animal production sector (producers, processors, retailers, and the food service sector), animal welfare organisations and academia. (All the participants had considerable practical experience of welfare issues and were recognized leaders in their field). The timing of the Platform was extremely apposite because it was able to exploit many of the outcomes of the EC-funded Welfare Quality® project on welfare assessment protocols, product information and improvement strategies by building upon and complementing them in a commercial environment.

The Platform facilitated the exchange of knowledge, experience, expertise and networks in order to: i) effectively supportthe continued development and implementation of scientifically based welfare assessment systems, information systems and practical welfare improvement strategies; ii) identify and prioritise key welfare issues in the various animal product groups (beef and dairy cattle, pigs, laying hens, broiler chickens, and salmon); iii) identify legislation regarding key welfare issues , iv) describe ways of monitoring and measuring these issues, v) describe existing best practices for dealing with each of the welfare issues, vi) propose short- and long-term goals for welfare and economic improvement, and vii) list R&D priorities. The collation of much of the latter output into a set of Strategic Approach Documents (SADs) for each of the product clusters became a major and overarching objective of the EAWP (see below).

The Community Action Plan on the Protection and Welfare of Animals adopted by the European Commission in 2006 aimed to ensure that animal welfare is addressed in the most effective manner possible in all EU sectors and through EU relations with Third countries. Clearly, the EAWP not only addressed many stakeholder concerns about farm animal welfare but it also supported the implementation of the Community Action Plan and its proposed follow-up (the European Union Strategy for the Protection and Welfare of Animals 2012-2015). For example, the EAWP not only stimulated and continues to facilitate interaction and the exchange of knowledge and resources between the major European stakeholders within the project itself but it also communicated the results of its varied activities to a much broader audience. Furthermore, by analysing some pressing knowledge needs and defining research priorities the EAWP contributed to continuing efforts to place welfare policy and current and proposed welfare legislation on a clear scientific footing. The activities of the EAWP therefore fitted seamlessly and in a very timely fashion in the priorities of the Community Action Plan.

Specific key objectives of the EAWP included:

1. to **interchange information, experience and knowledge** between different stakeholders on how to progress animal welfare in the food supply chain;
2. to **define and disseminate 'best practices'** for safeguarding and improving animal welfare in the food supply chain;
3. to **facilitate the testing and implementation of Welfare Quality® outcomes**, (i.e. assessment and product information schemes, improvement strategies);
4. to **contribute to the integration** of emerging science-based animal welfare assessment systems with existing quality assurance schemes;
5. to **develop information tools and communication strategies** in the animal welfare field (e.g. connect to consumers, producer organisations etc);
6. to **identify and prioritise needs for animal welfare research** of interest and importance to Europe, (this also relates to areas within current and proposed animal welfare legislation where more knowledge is necessary).

A number of these objectives as well as the output of Work Packages 1 and 2 (see below) were integrated within the Strategic Approach Documents mentioned above and described in greater detail in section 1.3.

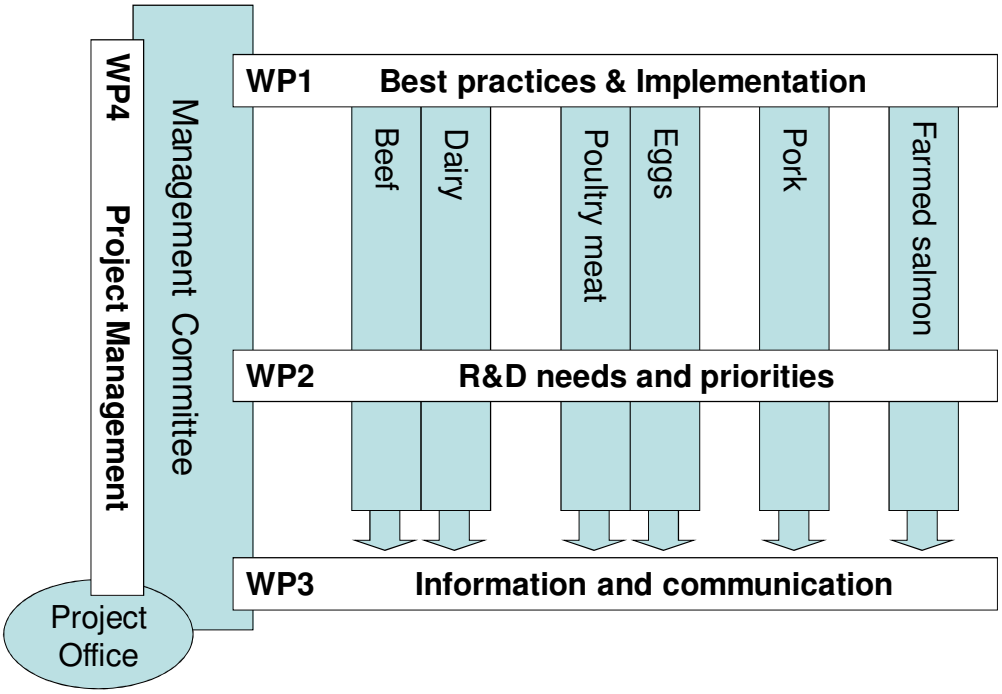
The work of the platform was organised into four Work Packages (WPs):

1. WP1: Best practices and implementation
   The main objectives of this WP were to interchange information, experience and knowledge on animal welfare and to contribute to the integration of high welfare

production into the food chain. The work in this WP included the identification of best practices and their most effective implementation for each product chain/cluster. Best practice was defined as the most appropriate and efficient procedure or practice for improving a particular aspect of welfare and or its communication.

2. WP2: R&D needs and priorities
   WP2 was designed firstly to identify the top welfare issues in each product cluster and then to prioritise R&D needs related to each of these welfare issues (see also the SAD approach in section 1.3). A subsequent cross-cutting activity was carried out to indicate R&D priorities that overarched the different product clusters (because some clusters may have more urgent problems than others) and to identify synergies and possible harmonisation in problem solving and regulatory action.
3. WP3: Information and communication
   Efforts in WP3 aimed to support not only the communication of information within the project but also the dissemination of existing and emerging information to a wider external audience (through a public website, press releases, EAWP newsletter etc). An in-house editing desk was established to contribute to the quality, clarity and effectiveness of communicated materials.
4. WP4: Project management
   The management structure and activities (see below) were designed to ensure that the EAWP achieved its objectives within the defined conditions of time, budget, control and quality.

The organisational structure and grouping of activities in clusters is illustrated below.



A Management Committee (MC) was established to ensure that the project ran efficiently and that objectives were achieved. Members of the MC represented different stakeholders in the chain (farming, retail, food services, animal protection and research). An independent scientific adviser and a financial administrator also worked with the MC. This group which was supported by a Project Office, corresponded frequently and met approximately four times a year.

In order to accommodate the specific nature of different animal production chains, e.g. species, production and marketing characteristics, the activities of the EAWP were grouped in

'product clusters'. These clusters addressed similar general questions and issues but in the framework of a product specific 'environment'. The term 'Cluster' is used here to illustrate that various stakeholders and participants from different segments in a specific product chain, (including industry, NGO's and academia) worked closely together in order to achieve informed input on all aspects relevant to the economically viable, animal friendly production of that product. Thus, each cluster consisted of those EAWP partners (and sometimes external advisors) who possessed the most appropriate expertise for that task. The members of each cluster also elected a leader who was tasked with organising the activities of that cluster and reporting to the MC. The member of the MC with the most relevant expertise also worked with a particular cluster and thereby provided support for the Cluster Leader (CL) as well as a direct link between the MC and that cluster group. For practical, efficiency and budgetary reasons the clusters Beef and Dairy and the clusters Poultry Meat and Eggs were operationally combined and then met and operated as two instead of four clusters.

Not only do the partners in the EAWP partners represent major European companies in their own right but they also have business links with many other organisations both within and outside the EU. In conclusion, the EAWP is considered to represent a sufficiently wide spread of product chains, interest groups, knowledge, expertise, geography, and culture to ensure that it speaks with a truly European voice.

1.3 Description of the main S&T results/foregrounds

1.3.1. Established management structure

The management structure of the EAWP project was designed to accommodate an effective and efficient management and to ensure that the project objectives are realised within the set time and budgetary constraints. This management structure is schematically represented in the figure in Section 1.2 of this report.

The general management of the project is entrusted to the Management Committee (MC). The members of the Management Committee represent different stakeholders in the food animal production chain including primary production, retail, food services, animal protection and research. These organisations and the networks they link to have the necessary skills, contacts and resources to ensure the successful development and execution of the proposed activities.

The members of the MC are:

- Harry Blokhuis, Professor of Ethology, Swedish University of Agricultural Sciences, Uppsala, Sweden (Project Coordinator and Chairman)
- Keith Kenny, Senior Director, Quality Assurance Europe, McDonald's Europe, Frankfurt am Main, Germany
- Sonja van Tichelen, Director, Eurogroup for Animals, Brussels, Belgium
- Aldin Hilbrands, Senior Product Safety & Integrity Manager, Corporate Centre, Royal Ahold, Amsterdam, The Netherlands
- Paul Cook, Farm Animal Initiative, Oxfordshire, UK
- Paolo Montagna, Quality Director, Amodori, Italy

An independent expert (Bryan Jones, Animal Behaviour and Welfare Consultant, Edinburgh, UK) also attends all MC meetings, advises on scientific and other matters and takes the minutes.

All Work Packages have a WP Coordinator and each is a member of the MC. The WP Coordinator is responsible for the daily organization and execution of the Work Package and for communication within the project. The work of the Management Committee and WP Coordinators is further supported by a financial administrator and an editing facility.

1.3.2 Established dissemination tools

In Work Package 3, task 3.4 was designed to inform a wider audience (industry, assurance schemes, academia, policy makers, NGO's, and the general public) about the activities of the EAWP and related welfare developments. This task was (and remains) ongoing and its importance increased and evolved as the cluster groups generated results and conclusions. Central messages include the ultimate goals of the platform ('What is EAWP about?'); its internal organisation ('work packages, cluster group meetings'); and the processes used to achieve the objectives (map the supply chain; identify key welfare issues; consult interested stakeholders; define best practices for dealing with key welfare issues; identify R&D priorities for the EU). The independent advisor to the project also contributed to the formulation and editing of dissemination material. Currently, our achievements include:

- A unique EAWP logo was created.
- A press release in 2008 informed the general public about the project, its aims, and the involvement of stakeholders from many different sectors and backgrounds.
- A dedicated website (www.animalwelfareplatform.eu) was established and contains a general presentation of the EAWP project and its organisation; an overview of farm animal welfare issues; a news section with a selection of articles, publications and press releases. It also refers to and shows the logo of the Seventh EU Framework Programme. The website was created by a professional design bureau, the content is written by a professional editor, and the site is regularly updated as results emerge.
- Platform members describe and discuss the EAWP when speaking at or attending conferences. They also promote the Platform within their own organisations.
- A double page, full colour leaflet describing the EAWP project and providing contact details was produced and is routinely distributed at relevant conferences or public events.
- An attractive, 2m high banner presenting the EAWP and its central message: (progressing animal welfare throughout the food chain) is displayed at conference or public event venues.
- A PowerPoint presentation of the platform, its aims and activities has been developed and is used to target the general public.

1.3.3. Reports on consumer perceptions and attitudes and marketing and communication

There have been extensive discussions in the MT regarding this task. Within the budgetary constraints of the EAWP project we produced an overview of the available knowledge on consumer perceptions and attitudes ('Report concerning consumer perceptions and attitudes towards farm animal welfare', M. Miele, 2010). This report presented some key findings on European consumers' knowledge and attitudes to animal welfare based on the Welfare Quality focus group research and population survey, which were the largest investigations of this type regarding farm animal welfare carried out in Europe to date. Of course, practices and strategies regarding marketing and communication typically play an important (and often confidential) role in the profiling of companies and thus competition. This means that it is difficult to address this issue in a particularly specific and meaningful way in the context of the EAWP. This task was therefore focussed on a general description of issues and contexts relevant for defining best practices for marketing and communication on animal welfare. This resulted in a report 'The Marketing and Communication of Animal Welfare a review of existing tools, strategies and practice' (H. Buller, 2010). Some of the main conclusions were that the use of welfare will, like other components of a product's quality, always be a component of segmentation (of products, brands or retailers), and thereby an element of exclusivity, but that it can only legitimately do so if there are agreed procedures for its evaluation. Competition over the level of welfare in various systems/farms etc is valid but competition over the definition and the

parameters of welfare assessment and improvement is likely to confuse rather than reassure consumers, producers and other food chain actors. For this reason, it is important that harmonised assessment procedures are used across the different sectors.

1.3.4 Prioritisation of welfare issues in different product chains

An important result achieved in EAWP was the identification of the most important (key) welfare problems (in terms of severity and animals affected). Each cluster worked through a series of steps designed to identify the key welfare issues for each species group as agreed by a range of stakeholders. These steps were:

a. Scoping the production system
b. Mapping the production chain
c. Agree all possible welfare issues within the chain
d. Consult stakeholders and ask them to grade these issues
e. Analyse the data to generate a list of key issues

a. Scoping the production chain

The groups agreed the following key points:

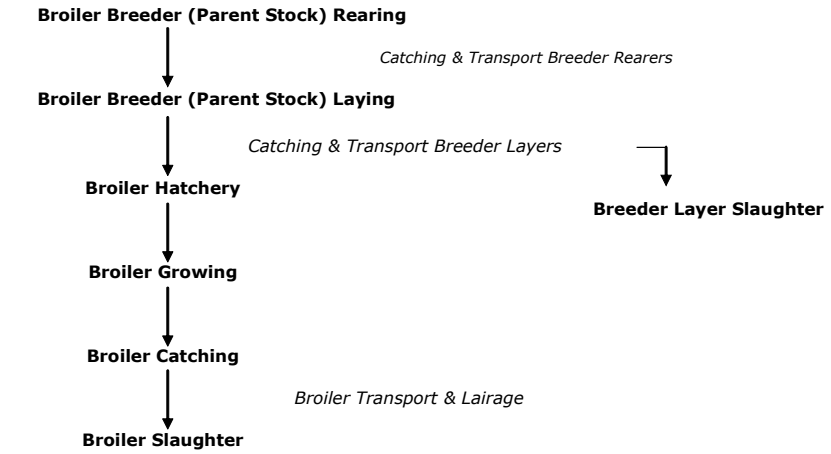
- Only mainstream production systems would be covered. This meant that free range systems were not considered for poultry meat, but were covered within the egg sector
- The systems would be examined from primary breeding through to slaughter
- Only broiler production would be considered within the poultry meat cluster
- Only farmed salmon would be considered within the fish cluster

b. Mapping the production chain

Each chain was initially mapped in overview:

Production Flow – Poultrymeat

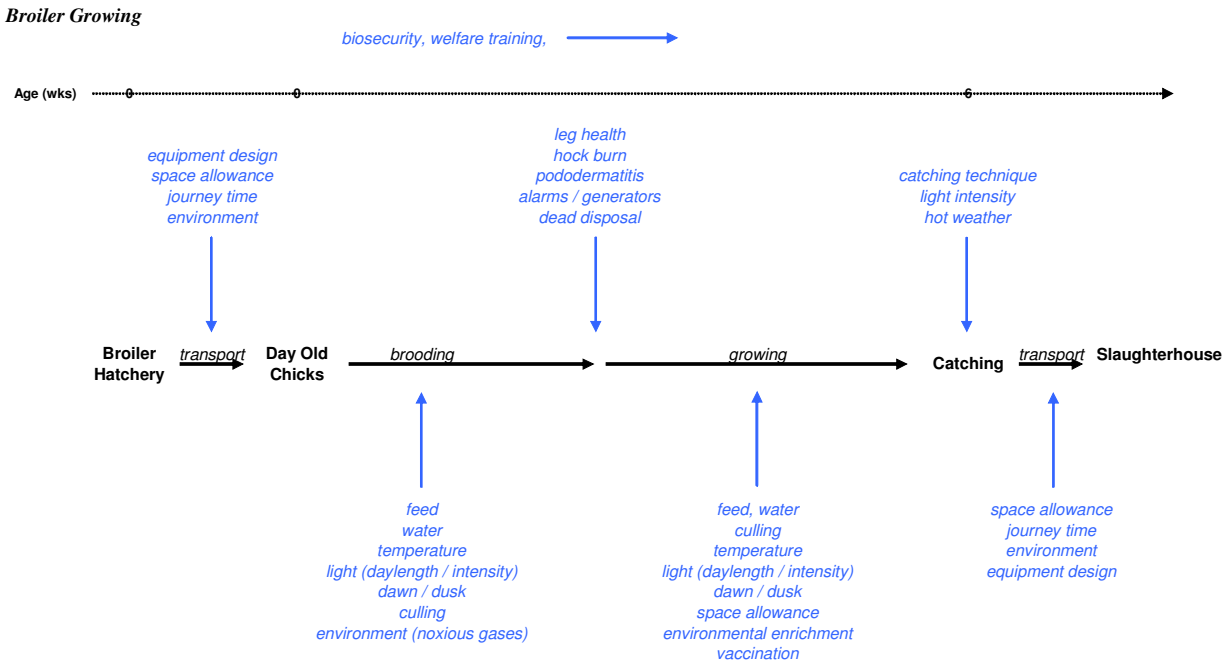
Simple Overview



c. Agree all possible welfare issues within the chain

Within each cluster, the group then expanded each stage of the production chain and identified all possible welfare issues associated with that particular production system.

For ease of presentation the following example represents only the broiler growing stage within the poultry meat cluster. The potential issues identified by the cluster are highlighted in blue type.



d. Consult stakeholders and ask them to grade these issues

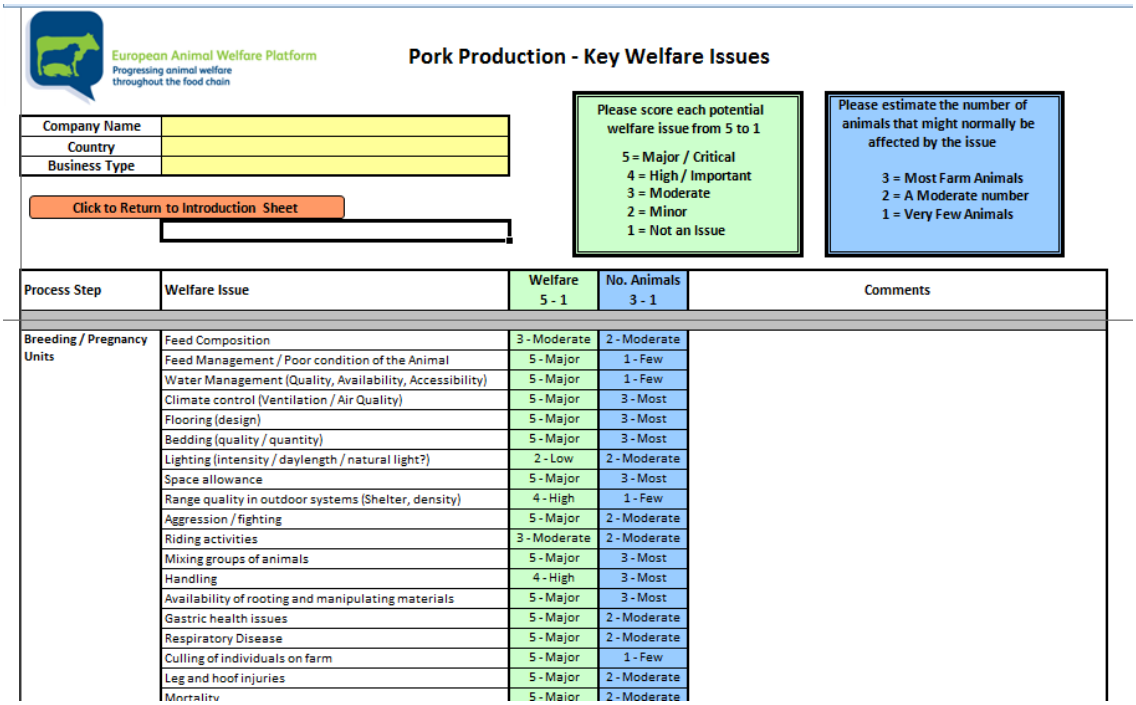
In 2009 all clusters produced an agreed list of main welfare issues within each of the respective sectors. This was then distributed for comment and consultation with external stakeholders, categorised in four groups: Farmers & Integrators, Retailers, NGO's and Scientists.

These stakeholders were asked to grade these issues in terms of:

- The relative severity of the issue (score 1-5)
- The number of animals affected in everyday production (score 1-3)

This consultation was carried out in each of the cluster groups and feedback was received from over 200 interested stakeholders.

An example of the consultation form used is shown below:



European Animal Welfare Platform
Progressing animal welfare throughout the food chain

Pork Production - Key Welfare Issues

Company Name	
Country	
Business Type	

Click to Return to Introduction Sheet

Please score each potential welfare issue from 5 to 1

5 = Major / Critical
4 = High / Important
3 = Moderate
2 = Minor
1 = Not an Issue

Please estimate the number of animals that might normally be affected by the issue

3 = Most Farm Animals
2 = A Moderate number
1 = Very Few Animals

Process Step	Welfare Issue	Welfare 5 - 1	No. Animals 3 - 1	Comments
Breeding / Pregnancy Units	Feed Composition	3 - Moderate	2 - Moderate	
	Feed Management / Poor condition of the Animal	5 - Major	1 - Few	
	Water Management (Quality, Availability, Accessibility)	5 - Major	1 - Few	
	Climate control (Ventilation / Air Quality)	5 - Major	3 - Most	
	Flooring (design)	5 - Major	3 - Most	
	Bedding (quality / quantity)	5 - Major	3 - Most	
	Lighting (intensity / daylength / natural light?)	2 - Low	2 - Moderate	
	Space allowance	5 - Major	3 - Most	
	Range quality in outdoor systems (Shelter, density)	4 - High	1 - Few	
	Aggression / fighting	5 - Major	2 - Moderate	
	Riding activities	3 - Moderate	2 - Moderate	
	Mixing groups of animals	5 - Major	3 - Most	
	Handling	4 - High	3 - Most	
	Availability of rooting and manipulating materials	5 - Major	3 - Most	
	Gastric health issues	5 - Major	2 - Moderate	
	Respiratory Disease	5 - Major	2 - Moderate	
	Culling of individuals on farm	5 - Major	1 - Few	
	Leg and hoof injuries	5 - Major	2 - Moderate	
	Mortality	5 - Major	2 - Moderate	

The following table shows the numbers of stakeholder responses received in each cluster:

Cluster	No. responses
Beef & Dairy	58
Pork	35
Poultry meat	46
Eggs	16
Farmed fish	46
Total	201

e. analyse the data to generate a list of key issues

The analysis of this feedback was then carried out as follows:

- For each issue the score given for the Severity of Issue (1-5) was multiplied by the score given for the number of animals affected (1-3). This yielded an overall score for each issue from each stakeholder; thus the maximum score for an issue was 5 x 3 = 15, minimum = 1 x 1 = 1;
- The stakeholder scores per issue were summed and an average score was then calculated for each issue;
- The issues were then ranked numerically from the highest to the lowest, with the highest average score indicating the most important welfare issue;
- The data was further analysed (using the methodology described above) to reflect the prevailing perceptions within each of the stakeholder groups:
    - Farmers & Integrators
    - Retailers
    - NGO's
    - Scientists
- The final list of key issues was an amalgamation of:
    - Any issue that appeared in the top 10 'overall' ranking plus
    - Any issue that appeared in the top 5 ranking of any stakeholder group

- The issues were then reassessed by the stakeholder groups to ensure that no topical issues had been overlooked. Three such issues were identified and included in the appropriate lists of top welfare issues:
    - Pododermatitis in broilers
    - Bone strength in end of lay caged egg layers
    - Provision of shade / shelter in beef production

These 'priority' lists were then used as the bases for the next phase of the project, i.e. writing the Strategic Approach Documents.

Lists of Top Issues by Product Cluster

Poultrymeat

Production Stage	**Welfare Issue**
Broiler Growing – Standard	Genetic Growth Rate
Breeder Rearing / Laying	Feed Restriction / Genetic Growth Rate – Males
Breeder Rearing / Laying	Feed restriction / Genetic growth rate – females
Breeder Rearing	Enrichment (opportunity to perform natural behaviour)
Broiler Growing – Standard	Space allowance
Broiler Growing – Standard	Heat Stress
Broiler Growing – Standard	Air Quality
Broiler Growing – Standard	Leg Health
Broiler Growing – Standard	Pododermatitis
Catching – Breeder & Broiler	Catching Practices – Manual
Transport – Breeders, Chicks & Broilers	Thermal Comfort
Slaughter – Breeder & Broiler	Effectiveness of Electric Stun
Slaughter – Breeder & Broiler	Hang-to-stun Time
Slaughter – Breeder & Broiler	Shackling / Inversion

Egg Production

Production Stage	**Welfare Issue**
Laying	Cages: Space Allowance
Laying	Cages: Enrichment (opp to perform natural behaviour)
Laying	Cages: Inspection, esp. top tier
Slaughter – Breeders & Layers	Shackling / Inversion
Slaughter – Breeders & Layers	Hang-to-stun Time
Slaughter – Breeders & Layers	Effectiveness of Electric Stun
Catching – Breeders & Layers	Catching Practices – Manual
Transport – Chicks	Thermal Comfort
Transport - Breeders & Layers	Thermal Comfort
Transport - Breeders & Layers	Journey Time
Transport - Breeders & Layers	Space Allowance
Transport - Breeders & Layers	Unloading Techique
Lairage – Breeders & Layers	Thermal Comfort / Lairage Ventilation
Lairage – Breeders & Layers	Lairage Time
Pullet Rearing	Space Allowance
Pullet Rearing	Light Source - Requirement for Natural Light
Laying	Synchrony between laying / pullet rearing environment
Pullet Rearing	Breed Cannibalism / Feather Pecking
Egg Parent Stock Rearing	Beak Trimming (Females)
Pullet Rearing	Beak trimming (hot blade)
Laying	Bone Breakage at End of Lay

Beef & Dairy

Production Stage	Welfare Issue
Transport to Slaughterhouse	Handling / Movement of Animals
Transport to Slaughterhouse	Stress & Injury during transport
Transport	Journey Time
Lairage	Handling / Movement of Animals
Stunning & Slaughter	Handling / Movement of Animals
Dairy Cow	Reduced Longevity of Dairy Cow
Dairy Cow	Extreme Genetics - selection for high milk yields
Suckler Cow	Sire selection for high meat yields / caesarian section
Dairy Cow	Mastitis
Dairy Cow	Lameness
Indoor Growing / Finishing	Vaccination / Health Programme
Calf - 1st 24 hours	Colostrum Quality / Availability / Timing
Dairy Cow	Metabolic Disorders
Dairy Cow	Feed Composition (Balance - fibre / concentrates) / Metabolic Disorders
Dairy Cow	Comfortable Lying Area – bedding
Dairy Cow	Comfortable lying area - appropriate size for cow
Indoor Growing / Finishing	Floor - Bedding / Slats
Indoor Growing / Finishing	Space Allowance
Indoor Growing / Finishing	Opportunity to perform natural behaviour
Indoor Growing / Finishing	Handling System
Calf Rearing	Housing Environment
Suckler Cow	Provision of Feed
Dairy Cow	Tethering
Stunning & Slaughter	Effectiveness of Stun - Captive Bolt (also add other systems)
Calf Rearing / Growing	Dis-budding & Dehorning
Indoor Growing / Finishing	Castration
Suckler Cow	Provision of Water
Outdoor Growing / Finishing	Access to Shelter / Shade

Pork

Production Stage	**Welfare Issues**
Farrowing units	Castration
Farrowing units	Tail docking
Transport to Slaughter	Loading
Transport between Units	Journey Time
Transport to Slaughter	Journey Time
Transport to Slaughter	Vehicle Design for Transporting Livestock
Lairage	Unloading
Lairage	Lairage Design & Management
Lairage	Fight Marks/ Lesions / Aggresion in the Lairage
Lairage	Race Design
Breeding / Pregnancy Units	Space allowance
Finishers	Space allowance
Breeding / Pregnancy Units	Flooring (design)
Breeding / Pregnancy Units	Bedding (quality / quantity)
Finishers	Bedding (quality / quantity)
Breeding / Pregnancy Units	Climate control (Ventilation / Air Quality)

Finishers	Climate control (Ventilation / Air Quality)
Breeding / Pregnancy Units	Availability of rooting and manipulating materials
Weaners	Availability of rooting and manipulating materials
Finishers	Availability of rooting and manipulating materials
Farrowing units	Lack of Opportunity to Nest Build
Farrowing units	Restriction of Movement
Weaners	Mixing groups of animals

Salmon Production

Production Stage	Welfare Issue
Grower	Sea lice & lice treatments
Post smolts	Sea lice and treatments
All life stages	Vaccines and medicines - lack of or absence
Post smolts	Disease e.g. IPNv, bacteria, PD, gill disease
Grower	Disease e.g. PD, vibriosis, ISAv
Parr/presmolt	Water quality e.g. temp., oxygen, suspended solids
Alevins	Water quality e.g. temp., oxygen, suspended solids
Fry	Water quality e.g. temp., oxygen, suspended solids
Smolts	Water quality e.g. temp., oxygen, suspended solids
Broodstock	Water quality e.g. oxygen, temperature, salinity
Post smolts	Water quality e.g. oxygen, temperature, salinity
Grower	Water quality e.g. oxygen, temperature, salinity
Post smolts	Water quality e.g. oxygen, temperature, salinity
All life stages	Water quality during transport
Harvest	Transport (method, densities, time, water quality)
Harvest	Time fish out of water before stunning
Harvest	Method & effectiveness of stunning (includes sedation)
Harvest	Crowding times & density
Harvest	Live fish chilling
Harvest	Method & effectiveness of killing

1.3.5. Strategic Approach Documents

For this second phase of the project, the EAWP MC and each product cluster worked through a series of four steps to generate a Strategic Approach Document (SAD) for each of the key welfare issues that had been identified in their cluster in Phase 1. These steps were:

a. Generation of a template for the Best Practice Questionnaires
b. Second consultation with stakeholders
c. Drafting of Strategic Approach Documents
d. Editing of strategic approach documents

a. Generation of a template for the Best Practice Questionnaires

The Management Committee initially devised a template to ensure that the best practice questionnaires would be constructed in a similar way across clusters. Within this template it was agreed that every SAD should identify and comment on the following aspects of each welfare issue:

- Current Situation with regard to the issue
- The cause of the issue

- How the issue should be monitored in the field
- Existing legislation that relates to the issue
- Existing best practice in dealing with the issue
- Short term goals to address the issue
- Long term goals to address the issue
- R&D requirements to achieve the long term goals

The clusters were charged with writing these strategic approach documents based on information derived from 3 main sources:

- Expertise from within the cluster and their companies / contacts
- External experts brought in to advise on specific issues
- Information received from further consultation with stakeholders

b. Second consultation with stakeholders

All the stakeholders who took part in the consultation exercise in Phase 1 of the project were again consulted. This time they were provided with a list of the top welfare issues that had been identified in each cluster and asked to answer a series of questions (in the questionnaire) about each of these issues. These questions are shown in the extract from the consultation document shown below:

Welfare Issue:	***Please overtype here, the name of the issue on which you would like to comment***
What is Current Best Practice?	
What should be the short term actions to address this issue – please list any barriers to implementation?	
What should be the longer term strategy to solve this problem – please list any barriers to implementation?	
What are the key parameters that should be used to monitor and measure progress on this issue?	
What research & development is required to generate improved practice?	
Space for Additional Comments	

c. Drafting of the strategic approach documents

As the completed questionnaires were returned by the stakeholders the information was collated and fed back to the clusters to inform them of the range of stakeholder ideas that should receive further consideration for eventual incorporation in the Strategic Approach Documents.

A new template was then formulated for the SADs in an attempt to minimise the risk of repetition and to make the documents more concise. This new template required comments on the following points:

- The problem(s)

- Legislation
- Measuring and Monitoring
- Existing Best Practice
- Short term goals
- Long term goals
- R&D Requirements

The strategic approach documents were completed by the clusters and returned to the MC. A series of exchanges between the editing team, the Management Committee and the cluster groups then followed and the content of each SAD was thoroughly discussed and agreed.

d. Editing of strategic approach documents
In the final stage each SAD was edited further by the editing team and the MC to ensure that the documents were all presented in a similar format and harmonised as much as possible. Of course, it was recognised that best practice sections could not be equally prescriptive in all clusters; for example areas such as beef and dairy are particularly difficult to harmonise because of the huge variation in production systems in this sector. Best practice, goals and R&D requirements also tended to be larger and more diverse in relatively young product groups such as farmed salmon.

An example of an SAD is shown below:

Strategic Approach Document

Ref: EAWP EGG 03

Title: Key welfare issues in Laying Hens related to manual catching practices

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This strategic approach document addresses the following related welfare issues:

EGG 03.01	**Catching Practices – Manual**

Catching Practices
There are 3 types of equipment used in the catching of laying hens:

- Modular systems e.g. Stork, Anglia Autoflow, Linco
- Loose crates
- Vehicles with fixed containers, commonly referred to as 'side-loaders'

Depending on the equipment used and the type of housing system that is being depopulated, there are 2 basic ways of organising the catching. In a minority of cases modules or baskets are taken to the birds; this is sometimes possible in extensive systems where house access is feasible. More commonly, the birds are carried out of the building to the modules / loose baskets (which remain on the vehicle) or to side-loader vehicles. This is always the case when depopulating caged systems.

When removing the birds out of the cages care must be taken not to damage them through collision with the doors or the feed track which typically runs along the front of the cage.

Commonly, the problems associated with manual catching manifest themselves as carcase bruising or limb dislocations. Issues include:

- Breast bruising
    - Caused by collision with the feed trough in cage systems
- Wing bruising / dislocation
    - caused when the birds collide with the cage structure (doors, feed trough)
    - caused by flapping when the birds are inverted for carrying
- Leg bruising
    - Caused by poor catching technique, e.g. if single leg catching is use. This is more common when filling the top drawers of a module

Care must also be taken not to trap and injure the birds when the drawers are closed in modular systems.

Legislation

Currently, there is no specific legislation regarding catching other than the basic animal welfare recommendations regarding the handling of animals. There is, however, legislation relating to the number of birds placed in each transport basket; this is covered in the Strategic Approach Document, *EAWP – EGG 05,* which relates to the transport of laying birds.

Monitoring and measuring

There are 2 main types of measures: resource and animal-based. The animal based measures (e.g. yes/no, how much, how often, when) can be taken at different levels according to the interest group, perhaps in greater depth for research purposes. The standard of management / husbandry also plays a key role.

Resource based measures:

- Catching team identity
- Birds / hour / man
- Type of equipment – modules / loose baskets
- Stocking density per basket (cm^2 / kg)
- Catching technique – number of birds per hand, single leg or two leg catching
- Supervision – is there a farm representative present?
- Use of a breast support slide?
- Lighting

Animal based measures:

- Weight of bird
- Percentage wing bruising/dislocation caused by catching
- Percentage leg bruising / dislocation caused by catching
- Percentage dead on Arrival

Monitoring of all resource based measures can take place at the farm. Data should be collected separately for each house and related to the loads caught from that house. In this case, the animal based measures should be recorded at the slaughterhouse. For many of the animal based measures, a sample of birds is normally assessed from within the load; a sample of 100 birds for each welfare issue is typical. All data collected is typically recorded by 'vehicle-load' of birds delivered to the slaughterhouse. This data is then related to the house of origin.

Camera grading systems (image analysis) are available to measure carcase quality and these can generate useful data for the assessment of bruising. However, as with visual assessment,

interpretation of the data is often problematic because it is difficult to determine the exact time that the bruising occurred. For instance, the bird could have suffered bruising at the farm, during catching or transport, when hung on the shackles or at stun.

Existing Best Practice

There are several practical measures that can be taken to minimise problems during the process of manual catching.

In cage systems best practice would be to:

- Grasp the birds by both legs when removing them from the cage
- Use a 'breast support slide'. This is a device which fits into the feed trough and forms a slide for removing the birds from the cage
- Carry no more than 6 birds at a time (3 per hand)
- Ensure 2 teams work in tandem from either side of the cage. Due to the size of enriched cages it is not actually possible to catch the birds from only 1 side
- The system should be designed to incorporate a fully opening cage-front. This maximises access and reduces the likelihood of damaging the bird on removal

In extensive systems best practice would be to:

- Ensure as much equipment as possible is removed from the house before the start of the catching process
- Ensure that the lights are dimmed to minimise bird disturbance Bring the equipment as close as possible to the birds
- Catch the birds by both legs
- Carry no more than 6 birds at a time (3 per hand)

In all systems it is recommended that a representative of the farm staff is present to supervise the catch and to deal with any issues that may arise. The supervisor must ensure that all the birds are adequately ventilated and that their behaviour is monitored to avoid the risk of smothering and injury.

Short term goals

- Effectively disseminate guidance as to best catching practice
- Improve recording systems in slaughterhouses to measure the extent of the problem accurately and relate data back to the farmer and the catching teams.
- Establish international benchmarking of performance
- Improve training, including the certification of catchers to promote best practices

Long term goals

- To develop catching systems where the equipment is brought to the birds thus negating the requirement to carry them over long distances

R&D Requirements

- Develop and test catching systems that eliminate the need to carry the birds over long distances between cage and vehicle.

- Currently, most R&D is carried out by the companies developing automated catching systems. It is suggested that funding should be made available to support independent integrated projects involving researchers, equipment manufacturers and other stakeholders to develop practical welfare-friendly solutions to the problems caused by manual catching.

1.3.6. Established network and trust among partners

The EAWP is the first multi-stakeholder organisation in the field of farm animal welfare. The establishment of this Platform is not only an unique but also a very important and timely achievement. The EAWP ultimately consisted of representatives from 21 partner organisations, all of whom were committed to working together to safeguard and progress the welfare of farmed animals in Europe. Six of these partners joined during the evolution of the project. The partners of this strong network are also linked, through business, with many other organisations throughout Europe and beyond, thereby ensuring that the EAWP speaks with a powerful and international voice.
All members of the EAWP readily signed a Code of Conduct whereby they agreed to conduct themselves in all activities related to the Platform with the highest degree of ethics and integrity. The basic principle of the Platform is to openly communicate its work as broadly as possible, though if a partner preferred that a specific piece of their information was not communicated outside the EAWP then this wish was respected. However, as it turned out, from an early stage all knowledge sharing within the EAWP was conducted in a genuine and particularly fruitful atmosphere of openness, friendliness and trust.
In every sense, the EAWP has become much more than the sum of its parts.

1.4 The potential impact and the main dissemination activities and exploitation of results

Farm animal welfare is a matter of growing and vociferous public concern. Consumers' preferences and purchasing choices underpin the societal and economic sustainability of agro- and food-chains so it is very important for the industry, both from a corporate social responsibility and a market point of view, to rebuild and maintain consumer trust in how food animals are kept across Europe. The European Animal Welfare Platform (EAWP) project was established to address these concerns and requirements. In the first project of its kind in the field major stakeholders worked together in the EAWP to safeguard and progress farm animal welfare, harnessing the efforts of principal stakeholders throughout the supply chain and thereby contributing to a European Knowledge Based Bio-Economy (KBBE). EAWP partners represented major companies in the animal production sector (producers, processors, retailers, food service), animal welfare organisations and academia; all the participants had considerable practical experience of welfare issues and were recognized leaders in their field. The Platform was also able to exploit outcomes of the EC-funded Welfare Quality® project on welfare assessment protocols, product information and practical welfare improvement strategies by building on and complementing them in a commercial environment. This relationship offered significant benefits in terms of welfare improvement, better farm management, product placement and targeting, scientific advancement, the satisfaction of consumers' demands, and guidance for the legislative process. Continued realisation of these benefits will have a substantial and positive impact on the sustainability of European agriculture.

Working in an atmosphere of openness and trust the Platform facilitated the exchange of knowledge, expertise, resources and networks. This resulted in the following major achievements:

- Identification of knowledge gaps, (as well as strengths), and the prioritisation of research needs based on current and expected legislation as well as existing and emerging welfare problems. This contributes to continuing efforts to place welfare policy and welfare legislation on a clear scientific footing

- Provision of state-of-the-art advice to guide policy formulation on key R&D priorities, legislation, accreditation, certification, education etc;
- Identification of best practices in the industry and the optimal ways of implementing them;
- Guidance for the animal product industry to shape its policies and initiatives on animal welfare and to thereby safeguard and expand its market share;
- Support for the development of the European Community Action Plan on the Protection and Welfare of Animals and the potential establishment of a European Animal Welfare Centre by establishing a specific information and communication platform on farm animal welfare to nurture a broad, long-term dialogue and the rapid exchange of knowledge. Indeed, the Platform's activities fitted seamlessly and in a very timely fashion in the priorities of the Community Action Plan.
- Development of information tools and communication strategies that can be used to effectively engage consumers, producers, policy makers and other important stakeholders.

More specifically, the development of a set of Strategic Approach Documents (SADs) for each of the product groups became not only a major and overarching objective of the EAWP but also a particularly important achievement. Through a series of widespread consultation exercises involving committed stakeholders (and external experts where necessary) these Strategic Approach Documents i) identify and prioritise key welfare issues/problems in several animal product groups (beef and dairy cattle, pigs, laying hens, broiler chickens, and salmon); ii) identify existing legislation regarding each of the key welfare issues, iii) describe ways of monitoring and measuring the various welfare issues, iv) discuss existing (and potential) best practices for dealing with each of the welfare issues, v) propose short- and long-term goals for welfare and economic improvement, and vi) list the most pressing R&D priorities.

It is clearly in the industry's and the legislators' own interests to satisfy the growing demand by consumers and citizens for reliable, credible and easily understandable information about the welfare status of farm animals as well as ways of improving the animals' quality of life. The members of the EAWP were and remain committed to disseminating information about the Platform's work activities and about farm animal welfare developments to a wide audience, including the public. The EAWP therefore communicated the results of its activities to a broader audience using several dissemination tools; these included:

- a dedicated EAWP website (www.animalwelfareplatform.eu),
- newsletters, leaflets and, press releases,
- the set of 58 Strategic Approach Documents
- a PowerPoint presentation of the platform, its aims and activities was used to target the general public.
- a booklet describing the project's aims, achievements and recommendations
- an audio-visual presentation of the Platform's efforts.

In conclusion, this Platform is a unique, timely and important achievement. Together with the partners' global business links the EAWP represents a sufficiently wide spread of product chains, interest groups, knowledge, expertise, geography, and cultures to ensure that it speaks with a powerful and international voice on the welfare of farmed animals. By contributing to the generation of integrated ("speaking with one voice") rather than fractured viewpoints the project outcomes can also strengthen the European position in global negotiations on farm animal welfare.

2. Use and dissemination of foreground

Section A (public)

1.1 List of all scientific (peer reviewed) publications relating to the foreground of the project

Within the EAWP project no peer reviewed publications were produced.

2.2 List of dissemination activities

LIST OF DISSEMINATION ACTIVITIES								
NO.	Type of activities[1]	Main leader	Title	Date	Place	Type of audience[2]	Size of audience	Countries addressed
1	*Web*	*Van Tichelen*	*European Animal Welfare Platform*	*2008*	*Brussels*	*Stakeholder, general public, policy makers*	*200000*	Global
2	*Leaflet*	*Van Tichelen*	*European Animal Welfare Platform*	*2008*	*Brussels*	*Stakeholder, general public, policy makers*	*2000*	EU
3	*Logo*	*Van Tichelen*	*European Animal Welfare Platform*	*2008*	*Brussels*	*Stakeholder, general public, policy makers*	*200000*	Global
4	*Banner*	*Van Tichelen*	*European Animal Welfare Platform*	*2008*	*Brussels*	*Stakeholder, general public,*	*2000*	EU

[1] A drop down list allows choosing the dissemination activity: publications, conferences, workshops, web, press releases, flyers, articles published in the popular press, videos, media briefings, presentations, exhibitions, thesis, interviews, films, TV clips, posters, Other.

[2] A drop down list allows choosing the type of public: Scientific Community (higher education, Research), Industry, Civil Society, Policy makers, Medias ('multiple choices' is possible.

						policy makers		
5	*Presentation (PowerPoint)*	*Van Tichelen*	*European Animal Welfare Platform*	*2008*	*Brussels*	*Stakeholder, general public, policy makers*	*2000*	EU
6	*Press release*	*Van Tichelen*	*European Animal Welfare Platform*	*2008*	*Brussels*	*Press*	*200*	EU
7	*Workshop*	*Blokhuis*	*A standardised approach to animal welfare assessment*	*17 March 2009*	*Paris*	*Stakeholders, OIE*	*20*	Global
8	*Conference*	*Van Tichelen*	*European Animal Welfare Platform*	*8-9 October 2009*	*Uppsala*	*Animal Welfare Conference*	*200*	Global
9	*Conference*	*Blokhuis*	*Animal welfare assessment*	*April 2011*	*Mullingar*	*Joint Annual Scientific Conference of the Veterinary Officers Association and the Local Authority Veterinary Service*	*100*	Ireland
10	*Workshop*	*Blokhuis*	*Accelerating innovation in the animal domain – from research to practice. What are the internal and external hurdles?*	*17 May 2010*	*Brussels*	*Stakeholders, scientists, EU Commission*	*20*	*EU*
11	*Newsletter*	*Van Tichelen*	*European Animal Welfare Platform*	*26 May 2010*	*Brussels*	*Stakeholder, general public, policy makers, partners*	*2000*	EU
12	*Presentation*	*Blokhuis*	*European Animal Welfare Platform*	*22 October 2010*	*Brussels*	*DG SANCO Animal Health Advisory Committee*	*25*	*EU*

13	*Newsletter*	*Van Tichelen*	*European Animal Welfare Platform*	*1 July 2011*	*Brussels*	*Stakeholder, general public, policy makers, partners*	*2000*	EU
14	*Seminar*	*Blokhuis*	*Introduction and background of the European Animal Welfare Platform*	*24 November 2011*	*Brussels*	*Partners EAWP, EU Commission*	*25*	*EU*
15	*Seminar*	*Cook*	*Process and outcomes of prioritization of welfare issues*	*24 November 2011*	*Brussels*	*Partners EAWP, EU Commission*	*25*	*EU*
16	*Seminar*	*Vig Tamstorf*	*Pig SADs*	*24 November 2011*	*Brussels*	*Partners EAWP, EU Commission*	*25*	*EU*
17	*Seminar*	*Kenny*	*Beef & Dairy SADs*	*24 November 2011*	*Brussels*	*Partners EAWP, EU Commission*	*25*	*EU*
18	*Seminar*	*Cook*	*Laying hens & broiler SADs*	*24 November 2011*	*Brussels*	*Partners EAWP, EU Commission*	*25*	*EU*
19	*Seminar*	*Breck*	*Salmon SADs*	*24 November 2011*	*Brussels*	*Partners EAWP, EU Commission*	*25*	*EU*
20	*Seminar*	*Hilbrands/Kenny*	*Reflections from companies and way forward*	*24 November 2011*	*Brussels*	*Partners EAWP, EU Commission*	*25*	*EU*
21	*Video*	*Kenny/Cook*	*The European Animal Welfare Platform*	*February 2012*	*Brussels*	*Stakeholders, general public, EU Commission*	*20000*	*EU*
22	*Booklet*	*Cook*	*The European Animal Welfare Platform*	*February 2012*	*Brussels*	*Stakeholders, general public, EU Commission*	*3000*	*EU*
23	*Congress*	*Blokhuis*	*The European Animal Welfare Platform*	*1 March 2012*	*Brussels*	*Stakeholders, EU Commission, Policy makers, NGOs*	*250*	*Global*

Section B

2.3 Applications for patents, trademarks, registered designs, etc.

Within EAWP no applications for patents, trademarks, registered designs, etc .were submitted

2.4 Exploitable foreground

Type of Exploitable Foreground[3]	Description of exploitable foreground	Confidential Click on YES/NO	Foreseen embargo date dd/mm/yyyy	Exploitable product(s) or measure(s)	Sector(s) of application[4]	Timetable, commercial or any other use	Patents or other IPR exploitation (licences)	Owner & Other Beneficiary(s) involved
	Ex: New supercond uctive Nb-Ti alloy			*MRI equipment*	*1. Medical 2. Industrial inspection*	*2008 2010*	*A materials patent is planned for 2006*	*Beneficiary X (owner) Beneficiary Y, Beneficiary Z, Poss. licensing to equipment manuf. ABC*

In addition to the table, please provide a text to explain the exploitable foreground, in particular:

- Its purpose
- How the foreground might be exploited, when and by whom
- IPR exploitable measures taken or intended
- Further research necessary, if any
- Potential/expected impact (quantify where possible)

[19] A drop down list allows choosing the type of foreground: General advancement of knowledge, Commercial exploitation of R&D results, Exploitation of R&D results via standards, exploitation of results through EU policies, exploitation of results through (social) innovation.

[4] A drop down list allows choosing the type sector (NACE nomenclature) : http://ec.europa.eu/competition/mergers/cases/index/nace_all.html

3. Report on societal implications

A General Information *(completed automatically when **Grant Agreement number** is entered.*

Grant Agreement Number:	212326
Title of Project:	European Animal Welfare Platform: adding quality to food
Name and Title of Coordinator:	Prof Dr Harry Blokhuis

B Ethics

1. Did your project undergo an Ethics Review (and/or Screening)? • If Yes: have you described the progress of compliance with the relevant Ethics Review/Screening Requirements in the frame of the periodic/final project reports? Special Reminder: the progress of compliance with the Ethics Review/Screening Requirements should be described in the Period/Final Project Reports under the Section 3.2.2 *'Work Progress and Achievements'*	***No***
2. Please indicate whether your project involved any of the following issues (tick box) :	***YES***
RESEARCH ON HUMANS	
• Did the project involve children?	
• Did the project involve patients?	
• Did the project involve persons not able to give consent?	
• Did the project involve adult healthy volunteers?	
• Did the project involve Human genetic material?	
• Did the project involve Human biological samples?	
• Did the project involve Human data collection?	
RESEARCH ON HUMAN EMBRYO/FOETUS	
• Did the project involve Human Embryos?	
• Did the project involve Human Foetal Tissue / Cells?	
• Did the project involve Human Embryonic Stem Cells (hESCs)?	
• Did the project on human Embryonic Stem Cells involve cells in culture?	
• Did the project on human Embryonic Stem Cells involve the derivation of cells from Embryos?	
PRIVACY	
• Did the project involve processing of genetic information or personal data (eg. health, sexual lifestyle, ethnicity, political opinion, religious or philosophical conviction)?	
• Did the project involve tracking the location or observation of people?	
RESEARCH ON ANIMALS	
• Did the project involve research on animals?	
• Were those animals transgenic small laboratory animals?	
• Were those animals transgenic farm animals?	
• Were those animals cloned farm animals?	
• Were those animals non-human primates?	
RESEARCH INVOLVING DEVELOPING COUNTRIES	
• Did the project involve the use of local resources (genetic, animal, plant etc)?	
• Was the project of benefit to local community (capacity building, access to healthcare, education etc)?	
DUAL USE	
• Research having direct military use	No
• Research having the potential for terrorist abuse	No

C Workforce Statistics

3. Workforce statistics for the project: Please indicate in the table below the number of people who worked on the project (on a headcount basis).

Type of Position	Number of Women	Number of Men
Scientific Coordinator		1
Work package leaders	1	3
Experienced researchers (i.e. PhD holders)		4
PhD Students		
Other	3	19

4. How many additional researchers (in companies and universities) were recruited specifically for this project?	**0**
Of which, indicate the number of men:	

D Gender Aspects

5. Did you carry out specific Gender Equality Actions under the project?

○	Yes
x	No

6. Which of the following actions did you carry out and how effective were they?

		Not at all effective				Very effective
❑	Design and implement an equal opportunity policy	x	○	○	○	○
❑	Set targets to achieve a gender balance in the workforce	x	○	○	○	○
❑	Organise conferences and workshops on gender	x	○	○	○	○
❑	Actions to improve work-life balance	x	○	○	○	○
○	Other:					

7. Was there a gender dimension associated with the research content – i.e. wherever people were the focus of the research as, for example, consumers, users, patients or in trials, was the issue of gender considered and addressed?

○ Yes- please specify

X No

E Synergies with Science Education

8. Did your project involve working with students and/or school pupils (e.g. open days, participation in science festivals and events, prizes/competitions or joint projects)?

○ Yes- please specify

X No

9. Did the project generate any science education material (e.g. kits, websites, explanatory booklets, DVDs)?

X Yes- please specify: Booklet, video, website, leaflet

○ No

F Interdisciplinarity

10. Which disciplines (see list below) are involved in your project?

X Main discipline[5]: Agriculture

X Associated discipline[5]: Fisheries and maritime affairs

x Associated discipline[5]: Research and innovation

G Engaging with Civil society and policy makers

11a Did your project engage with societal actors beyond the research community? *(if 'No', go to Question 14)*

x	Yes
○	No

11b If yes, did you engage with citizens (citizens' panels / juries) or organised civil society (NGOs, patients' groups etc.)?

○ No

○ Yes- in determining what research should be performed

X Yes - in implementing the research

X Yes, in communicating /disseminating / using the results of the project

[5] Insert number from list below (Frascati Manual).

11c In doing so, did your project involve actors whose role is mainly to organise the dialogue with citizens and organised civil society (e.g. professional mediator; communication company, science museums)?	x ○	Yes No

12. Did you engage with government / public bodies or policy makers (including international organisations)

○	No
X	Yes- in framing the research agenda
○	Yes - in implementing the research agenda
X	Yes, in communicating /disseminating / using the results of the project

13a Will the project generate outputs (expertise or scientific advice) which could be used by policy makers?

○	Yes – as a **primary** objective (please indicate areas below- multiple answers possible)
X	Yes – as a **secondary** objective (please indicate areas below - multiple answer possible)
○	No

13b If Yes, in which fields?

Agriculture	x	Energy		Human rights	
Audiovisual and Media		Enlargement		Information Society	
Budget		Enterprise		Institutional affairs	
Competition		Environment		Internal Market	x
Consumers	x	External Relations		Justice, freedom and security	
Culture		External Trade		Public Health	
Customs		Fisheries and Maritime Affairs	x	Regional Policy	
Development Economic and Monetary Affairs		Food Safety		Research and Innovation	x
		Foreign and Security Policy		Space	
Education, Training, Youth		Fraud		Taxation	
Employment and Social Affairs		Humanitarian aid		Transport	

13c If Yes, at which level?

- ○ Local / regional levels
- X National level
- X European level
- X International level

H Use and dissemination

14. How many Articles were published/accepted for publication in peer-reviewed journals?	**0**
To how many of these is open access[6] provided?	
How many of these are published in open access journals?	
How many of these are published in open repositories?	
To how many of these is open access not provided?	
Please check all applicable reasons for not providing open access:	
❑ publisher's licensing agreement would not permit publishing in a repository ❑ no suitable repository available ❑ no suitable open access journal available ❑ no funds available to publish in an open access journal ❑ lack of time and resources ❑ lack of information on open access ❑ other[7]: ……	

15. How many new patent applications ('priority filings') have been made? *("Technologically unique": multiple applications for the same invention in different jurisdictions should be counted as just one application of grant).*		**0**
16. Indicate how many of the following Intellectual Property Rights were applied for (give number in each box).	Trademark	**0**
	Registered design	**0**
	Other	**0**
17. How many spin-off companies were created / are planned as a direct result of the project?		**0**
Indicate the approximate number of additional jobs in these companies:		

18. Please indicate whether your project has a potential impact on employment, in comparison with the situation before your project:

❑ Increase in employment, or	❑ In small & medium-sized enterprises
❑ Safeguard employment, or	❑ In large companies
❑ Decrease in employment,	❑ None of the above / not relevant to the project
❑ Difficult to estimate / not possible to quantify	

19. For your project partnership please estimate the employment effect resulting directly from your participation in Full Time Equivalent (*FTE = one person working fulltime for a year*) jobs:	*Indicate figure:*

[6] Open Access is defined as free of charge access for anyone via Internet.
[7] For instance: classification for security project.

Difficult to estimate / not possible to quantify	x

I Media and Communication to the general public

20. As part of the project, were any of the beneficiaries professionals in communication or media relations?

○ Yes x No

21. As part of the project, have any beneficiaries received professional media / communication training / advice to improve communication with the general public?

○ Yes x No

22 Which of the following have been used to communicate information about your project to the general public, or have resulted from your project?

X	Press Release	❑	Coverage in specialist press
❑	Media briefing	❑	Coverage in general (non-specialist) press
❑	TV coverage / report	❑	Coverage in national press
❑	Radio coverage / report	❑	Coverage in international press
x	Brochures /posters / flyers	x	Website for the general public / internet
x	DVD /Film /Multimedia	❑	Event targeting general public (festival, conference, exhibition, science café)

23 In which languages are the information products for the general public produced?

❑	Language of the coordinator	x	English
❑	Other language(s)		

***Question F-10*:** Classification of Scientific Disciplines according to the Frascati Manual 2002 (Proposed Standard Practice for Surveys on Research and Experimental Development, OECD 2002): 4.1, 5.2

FIELDS OF SCIENCE AND TECHNOLOGY

1. NATURAL SCIENCES

1.1 Mathematics and computer sciences [mathematics and other allied fields: computer sciences and other allied subjects (software development only; hardware development should be classified in the engineering fields)]

1.2 Physical sciences (astronomy and space sciences, physics and other allied subjects)

1.3 Chemical sciences (chemistry, other allied subjects)

1.4 Earth and related environmental sciences (geology, geophysics, mineralogy, physical geography and other geosciences, meteorology and other atmospheric sciences including climatic research, oceanography, vulcanology, palaeoecology, other allied sciences)

1.5 Biological sciences (biology, botany, bacteriology, microbiology, zoology, entomology, genetics, biochemistry, biophysics, other allied sciences, excluding clinical and veterinary sciences)

2 ENGINEERING AND TECHNOLOGY

2.1 Civil engineering (architecture engineering, building science and engineering, construction engineering, municipal and structural engineering and other allied subjects)

2.2 Electrical engineering, electronics [electrical engineering, electronics, communication engineering and systems, computer engineering (hardware only) and other allied subjects]

2.3. Other engineering sciences (such as chemical, aeronautical and space, mechanical, metallurgical and materials engineering, and their specialised subdivisions; forest products; applied sciences such as

geodesy, industrial chemistry, etc.; the science and technology of food production; specialised technologies of interdisciplinary fields, e.g. systems analysis, metallurgy, mining, textile technology and other applied subjects)

3. MEDICAL SCIENCES

3.1 Basic medicine (anatomy, cytology, physiology, genetics, pharmacy, pharmacology, toxicology, immunology and immunohaematology, clinical chemistry, clinical microbiology, pathology)

3.2 Clinical medicine (anaesthesiology, paediatrics, obstetrics and gynaecology, internal medicine, surgery, dentistry, neurology, psychiatry, radiology, therapeutics, otorhinolaryngology, ophthalmology)

3.3 Health sciences (public health services, social medicine, hygiene, nursing, epidemiology)

4. AGRICULTURAL SCIENCES

4.1 Agriculture, forestry, fisheries and allied sciences (agronomy, animal husbandry, fisheries, forestry, horticulture, other allied subjects)

4.2 Veterinary medicine

5. SOCIAL SCIENCES

5.1 Psychology

5.2 Economics

5.3 Educational sciences (education and training and other allied subjects)

5.4 Other social sciences [anthropology (social and cultural) and ethnology, demography, geography (human, economic and social), town and country planning, management, law, linguistics, political sciences, sociology, organisation and methods, miscellaneous social sciences and interdisciplinary , methodological and historical S1T activities relating to subjects in this group. Physical anthropology, physical geography and psychophysiology should normally be classified with the natural sciences].

6. HUMANITIES

6.1 History (history, prehistory and history, together with auxiliary historical disciplines such as archaeology, numismatics, palaeography, genealogy, etc.)

6.2 Languages and literature (ancient and modern)

6.3 Other humanities [philosophy (including the history of science and technology) arts, history of art, art criticism, painting, sculpture, musicology, dramatic art excluding artistic "research" of any kind, religion, theology, other fields and subjects pertaining to the humanities, methodological, historical and other S1T activities relating to the subjects in this group]