



# report

## THE ROLE, IMPACT AND WELFARE OF WORKING (TRACTION AND TRANSPORT) ANIMALS

Report of the FAO - The Brooke Expert Meeting  
FAO Headquarters, Rome  
13th – 17th June 2011



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We would also like to extend our appreciation to all those who responded to the call for experts and to those invited experts who, although unable to attend, provided documents and other information that was not readily available in the mainstream literature and official documentation.

The role of the following organizations and agencies in supporting the participation of some of the resource persons is also acknowledged: the World Organisation for Animal Health (OIE), the European Commission, the World Veterinary Association (WVA), the Commonwealth Veterinary Association (CVA), the Animal Welfare Indicators (AWIN) project, Compassion in World Farming (CIWF), the World Society for the Protection of Animals (WSPA), the Donkey Sanctuary and the Society for the Protection of Animals Abroad (SPANNA).

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## Declarations of interest

Of twelve experts who were invited to the meeting, nine were able to attend. No participants declared any interests in the topics under consideration that could impact on their contributions and views.

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## Abbreviations and acronyms

<b>ATNESA</b>	Animal Traction Network for Eastern and Southern Africa
<b>AWIN</b>	Animal Welfare Indicators Project
<b>CGIAR</b>	Consultative Group on International Agricultural Research
<b>CIRAD</b>	Centre de Coopération Internationale en Recherche Agronomique pour le Développement (Centre for International Cooperation on Agricultural Research for Development)
<b>CIWF</b>	Compassion in World Farming
<b>CTVM</b>	Centre for Tropical Veterinary Medicine
<b>CVA</b>	Commonwealth Veterinary Association
<b>DAP</b>	Draught Animal Power
<b>DFID</b>	UK Department for International Development
<b>ESAP</b>	Fundación Equinos Sanos para el Pueblo
<b>FAO</b>	Food and Agricultural Organization of the United Nations
<b>FAOSTAT</b>	FAO Statistical Database
<b>FECTU</b>	European Draught Horse Federation
<b>FIAPO</b>	Federation of Indian Animal Protection Organisations
<b>GDP</b>	Gross Domestic Product
<b>IMF</b>	International Monetary Fund
<b>NGOs</b>	Non-Governmental Organizations
<b>OIE</b>	World Organisation for Animal Health
<b>SNNPR</b>	Nationalities People's Region of Ethiopia
<b>SPANNA</b>	Society for the Protection of Animals Abroad
<b>TEV</b>	Total Economic Value
<b>UK</b>	United Kingdom
<b>UN</b>	United Nations
<b>UNDP</b>	United Nations Development Programme
<b>WSPA</b>	World Society for the Protection of Animals
<b>WVA</b>	World Veterinary Association

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## Executive Summary

- In less economically developed countries, working animals play a fundamental role in numerous sectors, particularly agriculture and the transport of goods and people. They provide both direct and indirect incomes to households and therefore make an important contribution to families' access to food and services. Yet recognition of the role of working animals remains a neglected area in the programmes of cooperation to development, and in particular in the sectors of agriculture, gender, food security, and rural development.
- The recent recurrent food price crises led to renewed momentum on tackling food insecurity and promoting livelihood resilience. They also put agricultural growth and food production issues back on the development agenda. Agriculture is the main source of livelihoods for 2.5 billion people and with rural development, is widely acknowledged as a pathway out of poverty and a key contributor to food security. Yet despite the fact that working animals provide a key source of power, both in terms of production and distribution, and are therefore critical to the functioning of farming systems, they remain absent from food security and agriculture interventions. The recent hike in fuel price has in many instances resulted in an increase in the use of working animals, such as donkeys.
- Natural and man-made crises, such as civil unrest, droughts and floods in numerous countries have further highlighted the linkages between human livelihoods and working animals. Many working animals, while not production animals, do contribute greatly to human lives by transporting people, small animals and goods to safety and by carrying emergency supplies particularly in areas inaccessible by other means. However, they remain largely absent in humanitarian policies and emergency response plans.
- Working animals are also largely absent from national, regional and international policies, programmes and legislation, throughout the world, and more particularly in less economically developed countries. This leads to a lack of critical services and resources towards working animals and the absence of adequate protection frameworks in the worst types of industries, such as brick kiln manufacturing.
- Although some progress has been made on raising the issue of animal welfare particularly at the global level, the integration of an animal welfare lens to relevant sectorial programmes and policies, including agriculture and livelihoods, remains inadequate.
- A number of factors contribute to the weak linkages between working animals and the development and humanitarian sectors, and the lack of recognition of the role of working animals globally and in country, including:
  - The term "animal welfare" is poorly understood as are the links with people's livelihoods, food security and agriculture and rural development. It therefore remains seen as the responsibility and business of a small number of non-governmental organizations (NGOs) and intergovernmental organizations whose mandate specifically includes animal welfare and health. Similarly,

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working animals are rarely acknowledged as a specific group, are not usually addressed through livestock interventions, nor are they adequately considered in policy, legislation or programmes. There is no collective voice for working animal welfare, which leads to a lack of strong, coordinated and compelling messages highlighting the links between working animals, their welfare and related issues to relevant stakeholders.

- There is currently no institutional or coordination body on working animals that would bring together governmental institutions, United Nations (UN) Agencies, development cooperation entities, civil society and private sector in support of community, national, regional, and international efforts towards improving working animal welfare.
- In less developed countries in particular, working animals receive little or no attention in public awareness campaigns. Those countries very often face other critical issues that are considered more important and “relatable” to the general public. In communities, the socio-economic contributions of working animals are also not very often acknowledged. Deep-rooted negative attitudes towards some working animals particularly donkeys, myths and traditional behaviour also often lead to mistreatment and the animals being undervalued.
- The invisibility of working animals and of the role they play is increased by the lack of specific data, incomplete statistics and a gap in research and technical information.

## **RECOMMENDATIONS**

Based on their deliberations, the experts made the following recommendations (summarized) in agreement with all participants in the meeting:

1. FAO, if relevant and in collaboration with other parties, should develop practical Guidelines on good practice for specific aspects of working animal use and welfare (e.g. nutrition, husbandry, harnessing), to be made available through the Gateway to Farm Animal Welfare and other distribution channels. FAO should also encourage their adoption and should support the development of capacities to implement those practices and any possible internationally recognized relevant standard, in its Member Countries.
2. The OIE should develop Standards for working animal welfare and include them in its Terrestrial Code;
3. FAO, OIE and other relevant intergovernmental organizations should raise awareness and provide guidance to their Members on the importance of working animals, their health and welfare and contributions to livelihoods and national economies. They should also include working animals on the agenda of forthcoming events with a view to engage their members in the process of developing recommendations and other suitable mechanisms to address them.
4. International influencing should be carried out through the creation of an “International Partnership for Working Animals”, initially facilitated by FAO and the Brooke, and steered by a “pool of champions” including intergovernmental organizations, regional entities such as the European Commission, professional associations, animal traction networks and NGOs. One of the first priorities of the Partnership should be to generate and promote evidence and case studies on the socio-economic contributions of working animals to

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agriculture development and livelihoods. In particular the Partnership should work to increase understanding and evidence of the impact of working animals and to develop and validate suitable indicators. It should also coordinate the development of a reliable database of information on the role and impact of working animals and key messages that aim to raise awareness of governments, donors and other stakeholders.

5. The International Partnership for Working Animals should also serve as an information hub and should seek to foster collaboration, lesson learning and sharing, including from other sectors through the use of accessible networking.
6. Working animals should be included in development programmes and emergency responses and guidelines, when appropriate. Linkages between working animals and other development issues such as environment, biodiversity preservation, gender, children, urbanization, climate change and disaster risk reduction, should be acknowledged. In particular, working animals should be seen as an important part of the livestock population that contributes to food security, poverty alleviation and rural development alongside the food-producing animals.
7. The visibility and recognition of working animals should be raised in a positive way with the general public through the use of documentaries, media, videos, publications and events. Including the relevant working animals in certification and labelling schemes could encourage the public to make positive purchasing choices.
8. Research and practical (local) experience should be linked in order to provide a broad range of evidence for the role and value of working animals.
9. Academic and international and national research centres, such as the Consultative Group on International Agricultural Research (CGIAR) and research funding bodies should increase attention to working animals in their agenda.
10. Science-based welfare indicators for working animals should be developed and collated. Welfare indicators should be appropriate and adapted to the specific situations and developed through a participatory process.
11. Working animals should be acknowledged and included at every level of statistical data collection by national governments (including figures provided to FAOSTAT), alongside other livestock. The contribution of working animals to the national gross domestic product (GDP) should be included in these figures.
12. Animal welfare education in university, school and other education curricula should include working animals. Fostering local competence would also help to ensure that capacity development is appropriate and realistic.
13. A supportive policy environment should be encouraged. Legislation and policies should protect or support the welfare of working animals, their welfare and that of their owners and carers.

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# Preface

Working animals are critical in many countries, not least in the agriculture and transport sectors. Their role may have become largely obsolete in the developed world, but throughout the developing world they continue to be an essential source of power for transport of goods and people, and in agriculture for example, by providing a lifeline for millions of subsistence farmers, herders and pastoralists.

Globally, there is increasing evidence of their economic contributions to human livelihoods, through their direct and indirect impact in generating income.

Yet, working animals remain largely invisible in the eyes of millions, including amongst decision and policy makers, civil society, and donors, but also those who rely on them. At policy level, lack of leadership and actions, which stem primarily from an insufficient knowledge and understanding of the role and contributions of working animals, means that they are not considered or acknowledged in relevant policies, strategies, and programmes. Working horses, donkeys and mules are also often excluded from the definition of “livestock”, which may lead them to be excluded from critical interventions such as vaccination campaigns and other animal health related initiatives. The lack of recognition of their importance and their chronic neglect by institutions and governments also means that human and financial resources are not available and expertise on the issue rarely available. The weak linkages between the welfare of working animals and trade, transport, agriculture, and all broad development issues also limits opportunities to put working animals on the agendas of governments, development agencies and NGOs. This particular shortcoming has been highlighted by the renewed momentum around agriculture and food security generated by the food price crisis internationally and at country level. Calls for renewed emphasis on smallholder farmers and building resilience and strengthening livelihoods have so far disregarded the importance of including working animals that contribute significantly both directly and indirectly to agriculture and households’ food security.

Working animals are also very often invisible to those who rely on them. Yet owners, users and carers are at the cornerstone of improving working animal welfare and as such can be champions in their communities and amongst their peers. They also have a role to play in engaging decision makers by providing evidence and stories of how those animals make a difference. However, a lack of knowledge and skills, cultural myths and taboos, as well as the low social status of those animals, in particular donkeys, contribute to bad and harmful practices. Community based capacity development, awareness raising and mobilisation should be supported and implemented as key strategies.

This Expert Meeting convened in June 2011 was a first step towards exploring some of the critical challenges, gaps as well as opportunities; sharing and learning from good practice and experiences from the field; and providing with recommendations for mobilising and engaging decision and policy makers, civil society organizations, intergovernmental organizations, donors, as well as communities and the general public on the issue. The meeting benefited from the invaluable expertise and

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experiences, but also passion and dedication from individuals who brought diverse, complementary, and informed perspectives and thoughts to the table.

We believe this Expert Meeting was a significant step towards advancing the agenda of working animals and securing the recognition of their unique contribution towards improving human development in numerous sectors including poverty alleviation, food security and gender equality.

Petra Ingram  
Chief Executive Officer  
The Brooke Hospital for Animals

Berhe G. Tekola  
Director  
Animal Production and Health Division,  
FAO



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# Introduction

## BACKGROUND

Working animals play a fundamental role in human livelihoods through their direct and indirect contributions to financial, human and social capital in particular. For example, their work provides support to food security and poverty reduction efforts through their role in income generation activities. They are also important in communities' and households' socio-cultural lives, as they are often used in celebrations and in supporting households in need by being lent and shared between families.

Working animals are multipurpose: they provide draught and load-bearing power, as well as outputs including manure and sometimes milk, meat and hides. Use of draught and pack animals contributes to increased farm productivity. For example, smallholders who use animals for soil tillage can cultivate larger areas more efficiently and quickly than with human labour, thus greatly increasing their yields. Working animals create synergy in nutrient cycles, farming and marketing systems by enabling farmers and traders to transport harvests, market products, fodder and water for other livestock. Finally, working animals are also central to people's transport capacity and range, providing families and entrepreneurs with access to supplies, services and goods.

Human, animal and mechanical power are not mutually exclusive and each has advantages and specific roles and impacts, depending on the environment, scale and socio-economic context. People aspire to prestigious, modern machines but tractors may be unaffordable and inappropriate on small farms or on difficult terrain. For a large majority, access to machines for the transport of goods and people is not an option, which makes the contribution of working animals a critical part of their daily lives.

Furthermore, animal welfare is recognized as a central component of responsible animal husbandry and therefore should be a core part of all working animal systems. The welfare of working animals, as well as being a common good *per se*, has a direct impact on their health and on their capacity to carry out tasks and jobs, which in turn affects the livelihoods of their owners and owners' families. However, good welfare practices for working animals are not given sufficient attention worldwide, despite their positive impact on both animals and the people who own and use them.

## PROCESS

In the light of these issues, the Food and Agriculture Organization of the United Nations (FAO) and the Brooke Hospital for Animals (the Brooke) organized an Expert Meeting in Rome in June 2011. The meeting aimed to consider ways of raising both the profile and the welfare of working animals in agricultural and rural development programmes, and to explore linkages and lessons from a wide range of stakeholders, taking into account the current status of these animals throughout the world and more particularly in less economically developed countries. The Expert Meeting was preceded by an open call for individuals with expertise on the topic.

Experts were then selected on the basis of their experience and geographic diversity, and were explicitly required to serve in their individual capacity and therefore not to represent the interests or viewpoints of any organizations with which they were affiliated. See Appendix A for the agenda of the meeting and Appendix B for a list of the experts' resumes.

The experts met for five days (13th to 17th June 2011) of discussion. During this time, they had access to ten resource people that also attended the meeting representing the World Organisation for Animal Health (OIE), the European Commission, the World Veterinary Association (WVA), the Commonwealth Veterinary Association (CVA), the Animal Welfare Indicators (AWIN) project, Compassion in World Farming (CIWF), the World Society for the Protection of Animals (WSPA), the Donkey Sanctuary and the Society for the Protection of Animals Abroad (SPANNA)<sup>1</sup>, as well as three staff from FAO and three from the Brooke who also served as the Secretariat for the meeting.

The experts considered the findings in the reports from two recent consultation exercises: the FAO - the Brooke e-Consultation on working (traction and transport) animals, held from 1st – 28th February 2011 and the Working Animal Session at the 5th Congress of the Pan-Commonwealth Veterinary Association, held in Accra, Ghana on 24th March 2011. Experts were also requested to submit and present papers on specific topics for consideration by the group. See Appendix C for further information on the consultation exercises and Appendix D for the list of the experts' papers.

Working groups were convened and focused on the following three themes: *Role and impact of working animals*, *Health and welfare of working animals* and *Policies, legislative and regulatory options and capacity building*. Regular feedback sessions were held in plenary. During discussions the experts, together with the resource people, analyzed positive experiences with policies, programmes, projects and activities linked to working animals and their welfare, which could provide examples for others. They also identified the main challenges and knowledge gaps, recommended actions and options to move those forward, and explored potential opportunities for collaboration.

## **SCOPE**

For the purpose of the Expert Meeting, working animals were defined as domesticated large livestock used for traction and transport work. The discussions therefore centred on draft and pack horses, mules and donkeys, oxen, buffalo and camelids. Most recommended actions and principles outlined during the discussions would be equally relevant in the context of working Asian elephants, although species- and context-specific considerations would need to be taken into account. Sled dogs, guard and rescue dogs, military, police and customs dogs, sport horses, police and army horses and mules, circus animals and others that could fall within a wider definition of "working animals" were not included in the experts' definition, on the basis that their uses, circumstances and needs would differ widely from those of the traction and transport animals described above.

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<sup>1</sup> These Organizations are the ones that accepted the invitations sent to those selected on the bases of their relevance with respect to the themes treated.

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# The role and impact of working animals on livelihoods

There is a growing recognition and collection of evidence that working animals play a significant role in supporting the livelihoods of the families who own them and in fulfilling socio-economic functions that benefit animal owning households and the wider community. In particular, their contribution to income-generating activities has recently attracted attention and interest – they are often the major or a key source of income for families – and was one of the main topics discussed in the meeting.

It is well acknowledged that working animals contribute to households' livelihoods and benefit the community as a whole, including by:

- Transporting firewood, water and other daily needs to the homestead, in particular relieving the physical burden of women and freeing their time for other household or income-generating activities
- Transporting water and fodder for other livestock
- Providing draught power for agricultural tillage, including ploughing, harrowing and weeding
- Taking agricultural and livestock products, such as milk, vegetables and other farm produce, to the market and bringing market purchases back to the homestead
- Being used for small-scale commercial activities such as taxi services, carting goods or petty trading
- Being rented out to provide an income for the animal owner and a small business opportunity for the hirer
- Transporting commercial crops, such as coffee, from farm to road-head or transport hub
- Transporting geographically localised goods such as salt over long distances from salt pans or coastal areas to cities
- Strengthening social relationships within extended families and communities through lending working animals at times of need, for example during ploughing and harvesting seasons
- Providing manure for fertilizer and, in some cases, milk, meat and hides for household use or income
- Providing a source of bride wealth
- Forming an important part of weddings or ceremonial occasions

Experts presented papers on the economic, cultural and environmental values of working animals and methods for effective communication of their impact on livelihoods (papers are listed in Appendix C).

Agriculture is the main source of livelihoods for 2.5 billion people and, with rural development, it is widely acknowledged as a pathway out of poverty and a key contributor to food security. Yet despite the fact that working animals provide a key source of power, both in terms of production and distribution (i.e. access to markets), and are therefore critical to the functioning of farming systems, they remain absent from food security and agriculture interventions.

**Box 1. The contribution of donkeys, horses and mules to people's livelihoods in Ethiopia**

*A study on the socio-economic contributions of working donkeys, horses and mules to human livelihoods was commissioned by the Brooke to Tufts University in 2011. The research sought to assess the value and costs of equine ownership focused on three woredas, or districts, (Lemmo, Meskan and Shashego) in the Southern Nations and Nationalities People's Region of Ethiopia (SNNPR), using United Kingdom (UK) Department for International Development (DFID)'s Sustainable Livelihoods Framework. 528 households were surveyed. The study found that:*

- *56 percent of households surveyed kept donkeys mainly for pack services (to generate income and for homestead use), 26 percent for cart use (to generate income), and 14 percent for pack use but exclusively for homestead use.*
- *At least 40 percent of households surveyed said donkeys helped reduce women's work while all communities said equine animals were economically important for rural and urban communities for all wealth groups.*
- *The average household net return from equine ownership and use was 4419 ETB (USD 330) per year.*
- *The income derived from the use of equines accounted for 14 percent of total income across the three woredas. The overall income from other livestock accounted for 13 percent of total household income.*
- *Equine animals played a critical role in providing ambulance services for both animals and humans, and strengthening good relationships with neighbours and local societies through lending them whenever people were in need.*
- *The shortage of fodder and grazing areas and the rising cost of feed were identified as important limiting factors for equine production and use. Poor health as well as overloading and overworking were also reported major constraints. These constraints were reported to reduce equine work output substantially, and limited the contribution of equines to rural livelihoods.*

Berhanu Admassu and Yoseph Shiferaw, The Brooke, Ethiopia.

The 2007-08 food price crisis led to renewed momentum on tackling food insecurity, and promoting livelihood resilience. The crisis also put agricultural growth and food production issues back on the development agenda, particularly in the context of smallholder farming because 85 percent of farmers in developing countries work on less than two hectares of land (European Commission, 2010). As a result, the critical role of working animals to the functioning of small-scale farming cannot be ignored.

Engaging policy-makers and development partners is vital if these animals are to be included in national development plans and as part of a holistic approach to food security and poverty reduction. The lack of understanding about the linkages between working animals and other development priorities is a key obstacle contributing to their marginalisation and neglect in policy and programmes.

### **Box 2. Economic valuation and impact of working horses in the Petén and Chimaltenango communities of Guatemala**

*A 2010 ESAP study assessed the economic value of the impact of working horses in 13 villages in the Petén region (north) and nine villages in the Chimaltenango region (central highlands) of Guatemala. The research examined two production systems for the Petén communities and three for the Chimaltenango communities. The study found that:*

- Moving coffee is the activity for which equine animals are used most in Chimaltenango, undertaking 27 trips for an average production of 5400 kg of coffee. Equids were mostly used for moving corn, mainly for household consumption in the Petén region.*
- The value of working horses was highest for the smallest producers whilst their importance was lower for producers owning more land for cattle-raising or export crops (such as coffee).*
- The added value provided by use of a working equine animal in production of corn, beans, gourd seed, vegetables and coffee ranged from 2 – 22 percent according to the production system, with the highest added values seen in small producer systems in Chimaltenango.*
- For small producer families in this region, the loss of a horse would lead to a decrease of almost 60 percent in their productive assets, while small producers in the Petén communities would lose 45 percent of their productive assets. Overall, use of working horses in agriculture and cattle-raising on small farms, which lie 5-10 km from home showed a benefit: cost ratio of between 2.09 and 3.57.*

Fundación Equinos Sanos para el Pueblo (ESAP), Guatemala.

### **Box 3. Working camels in Ethiopia**

*According to FAOSTAT figures Ethiopia is home to 2.4 million camels, the third largest population in the world following Somalia (7 million) and the Sudan (4.5 million). The number of camels in Ethiopia is on the increase and camel exports to neighbouring countries are becoming a growing industry. Camels are reared in the lowland and pastoral areas of Ethiopia and are used to transport goods and people and their milk used to feed children. They have a high value for pastoralists who use them to move mobile huts, feed and water. To show their appreciation of the value of camels, Afar pastoral communities have a saying: “It takes five cows to feed a child, but one camel can feed five children”.*

Bojia E. Duguma.

There are opportunities to include working animals in policy and funding for agriculture and food security. A number of actions will be necessary in order to engage effectively with decision/policy makers and other key stakeholders, in particular through compelling messages that clearly highlight evidence for the role of working animals in advancing their agenda and supporting their priorities.

In addition, engaging the general public and mobilising communities who own working animals can support advocacy efforts towards improving animal welfare policy.

## **CHALLENGES**

The main challenges to demonstrating the role and impact of working animals on livelihoods and their role in poverty reduction and food security were identified as the following:

### **Lack of recognition of working animals in sectorial policies, programmes and strategies**

- Working animals do not appear in most national agricultural or rural transport strategies and policies. They are rarely acknowledged as a specific group and not usually addressed through livestock interventions, which tend to prioritise production animals. As a result they are also absent from other important livestock-related sectors such as education, research and animal health.
- Working animals are also currently absent from donors' livelihoods-related programmes and policies. Similarly, NGOs actively working on poverty reduction are not considering the critical contributions of working animals that are not sources of food or fibre.
- Despite their role in disaster management and recovery, working animals are not consistently included in the relevant humanitarian policies and frameworks.

### **Lack of data on working animals including on their economic contributions and roles**

- The qualitative benefits of working animal use are well recognised by the animal owners and their families. However, there is very little evidence of the monetary value of draught animal power (DAP) versus human labour, which means that farmers and other groups that use working animals may not be aware of the impact of those animals on their income.
- Both the qualitative and quantitative (particularly financial) impacts of DAP provide a compelling case for greater recognition of the importance of working animals to human livelihoods by national and international decision and policy makers, NGOs and educational institutions.
- However, there are very few well-designed and large-scale studies of those impacts. Existing data on working animals and their contributions to livelihoods tend to be at small scale and collected to meet the requirements of individual projects.
- Because working animals are not recognised in livelihoods-related programming and policy, they are not included in the menu of commonly used qualitative and quantitative livelihoods indicators. However, widely-used livelihoods frameworks/models such as DFID's Sustainable Livelihoods Framework pro-

vide an opportunity to advocate for the development and inclusion of indicators that relate to the role of working animals in livelihood outcomes, in terms of financial capital and also social, physical and natural capital.

- National statistics on numbers of working animals, which inform FAOSTAT and other international databases, often do not exist or need to be more accurate.

### **Lack of recognition of use of DAP as the main source of power for smallholder farmers**

- Whilst there has been a focus on increased use of mechanical power for the past 50 years, the majority of rural households and smallholder farmers engaged in agriculture in developing countries do not have access to mechanised transport and heavily rely on animals or hand power for carrying out farming activities. Animal traction has in fact expanded in Africa and remains widespread in Asia and Latin America (FAO, 2010a). Furthermore, DAP can be a critical coping strategy in case of shocks or unpredicted changes. As a result of the hike in fuel prices in 2008, Turkish farmers reverted to the use of draught animals very quickly (Starkey, 2012).
- Historically, large volumes of research into DAP, animal-drawn harness, machinery, equipment and their use was carried out by army and tram companies and then by international agricultural research and animal health institutes such as CIRAD and CTVM. These sources have been lost or stopped funding draught animal research, partly as a result of the change in IMF priorities away from agricultural extension during the 1980s, which is only now starting to be reversed.
- The Experts noted that in more developed countries there has been a gradual loss of skills in training animals for draught work and an apparent trend towards new adopters and re-introducers of draught power wishing to buy trained animals rather than doing the training themselves. They also highlighted the importance of maximizing the use of indigenous knowledge in order to avoid “perfected” equipment that is not useful or desirable to the end-user.
- Donors’ and governments’ programmes and agendas on agriculture and rural development overwhelmingly focus on mechanisation and do not acknowledge or reflect the needs of different categories of people involved in farming activities.
- Maintaining momentum in networks supporting DAP and working animal welfare can be challenging as people and institutions change their focus and funding to follow new trends.

The experts and resource persons identified groups of stakeholders for potential engagement and collaboration relating to the role and impact of working animals on livelihoods. They also discussed knowledge gaps in this area.

### **ENGAGEMENT AND COLLABORATION**

**Engaging policy/decision makers and other development /humanitarian actors on issues related to working animals in the context of their contribution to human livelihoods and subsequently to national economies.**

- The Experts identified the importance of better understanding the strategic objectives and priorities of relevant development and humanitarian actors

including national governments, donors and NGOs. This would inform the development of targeted and appropriate messages, and make a compelling case for the linkages between working animals and key and current debates as climate change, oil prices, smallholder farming, poverty, gender, and food security.

- Similarly the Experts highlighted the current poor understanding of the structure and processes of various intergovernmental agencies and organizations and called on those agencies to provide more clarity. Knowing those agencies' processes and structures – particularly who is responsible for what – is critical in achieving more strategic and focused advocacy around (1) promoting draught animal issues; (2) engaging with those agencies with a view to influencing their work and processes around issues that are relevant to working animals; and (3) supporting them in implementing policies and interventions.

### **Engaging diverse constituencies and stakeholders in support of the working animals agenda in a coordinated and complementary way**

- The Experts stated the importance of promoting networking opportunities to encourage and foster exchange and technical knowledge.
- Greater communication, inter-disciplinary and cross-sectoral collaboration and coordination between a wide range of stakeholders are also needed at all levels to produce and disseminate the evidence required for raising the profile of working animals. Relevant stakeholders include governments, donors, international organizations, economists, agriculturalists, veterinary and animal health workers, social and environmental scientists, animal welfare scientists and practitioners, human health and development specialists and networks such as animal traction networks. Efforts are also needed to ensure the meaningful participation and inclusion of farmers and other owners and users of working animals.
- The Experts agreed that forming a multi-disciplinary Forum or Partnership for sharing knowledge and coordinating activities relating to working animals would be a useful start to increase collaboration and enable more effective communication and influencing.
- NGOs and other development partners involved in working animal welfare also need to better promote and share successful stories and examples of best practices, particularly those relating to working cattle, buffalo and camelid welfare.
- The Experts noted that there are many untapped opportunities to use the media to engage and mobilize the general public on working animal issues with a view to building support towards policy and practice change.

### **INCREASING EVIDENCE**

Stronger advocacy is needed to ensure more emphasis is given to working animals in research, including in relation to:

- The role and contributions of working animals to human livelihoods. In particular, there is a need for the development of indicators or indices and for large-scale studies of the economic impact of draught animal power at household and national levels. Pilot data to test new methods for economic analysis is also needed. It may be possible to use similar methods as utilized by FAO



to quantify the economic value of women's contribution to agriculture (FAO, 2010b). An important conclusion was the need to collate existing knowledge and assess its strengths and gaps, as well as gaining a clear understanding of the information that policy-makers wish to see, before developing complex and expensive new models.

- Working animals and climate change adaptation. Climate change adaptation has gained momentum over the past few years, particularly in the context of food security. This provides an opportunity to contribute to key debates and initiatives and to make a compelling case for greater inclusion of working animals in policy and programmatic responses. However, more research is needed to assess and better understand the potential contribution of working animals to climate change adaptation and mitigation. For example, by enabling both on-farm and off-farm income, working animals could reduce the agricultural risks associated with climate change-related weather patterns (see paper by van Dijk, L. in Appendix C).
- The social impacts of working animals, particularly around gender, should be considered alongside the technical and economic aspects of draught animal power. For example, women have a significant role in agriculture, but the role that working animals play in reducing their burden of work is not well articulated and poorly documented.
- Effective draught animal equipment training methods and equipment.

In addition, more comparative studies are needed on the relative costs of human, animal and mechanical power. Existing studies have often focused on fuel equivalents and missed out the hidden costs of mechanisation, such as building and disposing of tractors, and the hidden benefits of DAP, such as increased self-sufficiency. Calculating the Total Economic Value (TEV) of working animals in a similar way to calculating the TEV of wildlife or pastoralism should be explored.

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# Working animal health and welfare

There is often a misunderstanding that animal welfare is a trade-off between animals and people. However experience shows that working animals in a state of good welfare are more likely to benefit their owners' livelihoods than those suffering from poor health and welfare.

Experts made presentations on nutrition and general care of working animal, health and the effects of improved harness and equipment. Together with resource people, the Experts identified positive local and national experiences and case studies. They also discussed global trends that highlight the importance of good working animal welfare to livelihoods and national economies.

## GLOBAL LEVEL

- Over the last 30 years, economy, quality (including food safety), competition for trade and science have been major drivers for international animal welfare policy. An increasing emphasis on the importance of animal use ethics and sustainable farming has led to the recognition of animal sentience in international treaties. This has led to a stronger value placed on human-animal relationships, which can be used to improve the conditions of working animals.
- There is also some evidence of growing international attention and funding for animal welfare in general, leading to the formation of new organizations, academic institutes and networks in various countries. Examples include the European Commission funded Animal Welfare Indicators (AWIN) project, the Jeanne Marchig International Centre for Animal Welfare Education (UK) and the Federation of Indian Animal Protection Organisations (FIAPO). Whilst working animals remain at the periphery of those efforts, there are encouraging signs of new and existing bodies' interest in expanding their involvement with working animals. There is also increasing visibility of working animals on the FAO Gateway to Farm Animal Welfare<sup>2</sup>.
- A significant amount of information on working animal health and welfare is already available, for example the nutritional requirements of working animals and a range of technologies for improving poor quality feed and forage (see paper by Pearson, A. in Appendix C), welfare indicators (Pritchard *et al.*, 2005), participatory methods for welfare improvement (van Dijk *et al.*, 2010) and safe, efficient harness and equipment for working equids (see paper by Schlechter, P. in Appendix C). This information should be disseminated widely and used for making a strong case on the need for increased attention to working animal welfare in policy making.

## LOCAL AND NATIONAL LEVEL

- Communities that own draught and pack animals have a lot of indigenous knowledge about their health and welfare. Most owners are well-intentioned and want support to care for their animals, although they are often con-

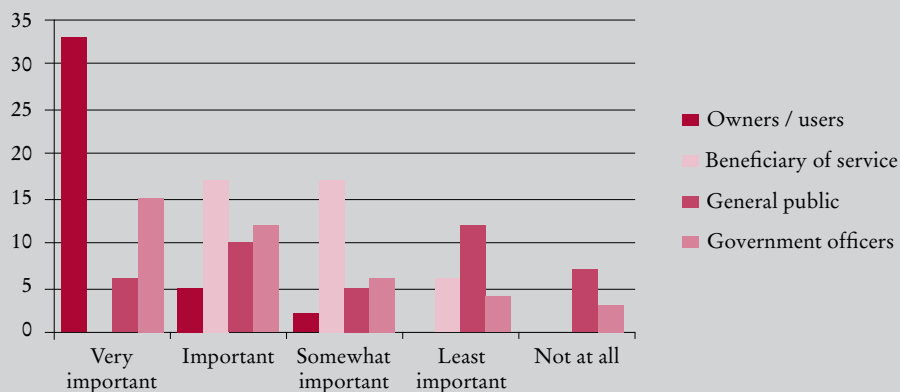
<sup>2</sup> [www.fao.org/ag/animalwelfare.html](http://www.fao.org/ag/animalwelfare.html)

strained by their circumstances. The vision of KENDAT’s ‘Heshimu Punda’ project states that “Animals are treated and cared for in ways that provide the highest degree of health and standard of welfare possible by the appropriate custodians in a given environment” (see paper by Ochieng, F. in Appendix C), referring to the importance of achieving good welfare within local contexts. This was reflected at an international level in the European Commission funded “Better Training for Safer Food” initiative: feedback from African trainees demonstrated that they were bringing information as well as receiving it, their empathy and knowledge gaps were much smaller than had been assumed, and implementation gaps were mainly due to practical or economic constraints.

- There are numerous examples of good practice at local level, including from Cambodia, India and the West Bank and Gaza Strip, providing evidence of the impact of the use of peer-encouragement, peer-pressure and participatory action, leading to positive change in the welfare of working animals.
- In Ethiopia, regional education bureaux were lobbied to identify opportunities for including humane donkey use within the existing education curriculum of young children (see paper by Duguma, B.E. in Appendix C).

#### Box 4. Envisioning the future of working animal care

Interviews conducted by KENDAT’s Heshimu Punda (Kiswahili for “Respect Donkeys”) project in the organization’s operational areas showed the lack of recognition of the importance of donkeys for key stakeholders. In particular, no beneficiaries of donkey drought services felt that the animals were very important.



This illustrates the need to better understand the factors behind stakeholders’ perceptions of working donkeys in order to develop adequate strategies aiming to promote greater recognition and acknowledgement of the animals’ role and work and the need for improving standards of care for working animals.

Fred Ochieng

## **CHALLENGES**

The Experts also highlighted key challenges to improving the welfare of working animals, including:

- Working animals and their welfare are not seen as a priority at international, national and local levels, in large part because of the lack of understanding of the link between working animal welfare and human concerns, and their low status compared with food production livestock. On the other hand, in drawing close links between working animal welfare and livelihoods, it is important to acknowledge the need for more evidence of the direct association between good welfare and improved productivity and performance.
- Welfare may be perceived as a low priority for farmers who may have other pressing issues to deal with, or they may feel that solutions are beyond their control. Similarly, it is not usually seen as a priority for decision-makers, including at local level, due to other competing priorities. Nor for veterinarians who are primarily concerned with the health problems of other livestock, and who may consider recurring welfare issues in working animals (such as chronic wounds) to be mundane or untreatable.
- Working animals are often associated with negative descriptions and images of poor welfare and peasantry. Experts and resource people recommended a “positive deviance” rather than a problem-based approach to working animals wherever possible, by emphasising successes and the benefits of good welfare and effective working animal use. Working animals could be a “solution” to many problems of the 21<sup>st</sup> century, such as sustainable farming, environmental protection and food security, rather than a “problem” of animal welfare and poverty.
- Some working species suffer from damaging cultural beliefs about their health and welfare, for example “donkeys do not get sick”, which impact on the level of care that the animals are perceived to require.
- Working animals do not appear in most national animal health systems: they are not part of disease eradication strategies, vaccination campaigns, livestock and animal health policies, legislation or guidelines. Many notifiable diseases listed by the OIE affect working animals, but they are not part of surveillance systems. Working animals are frequently moving across national boundaries carrying goods, and those slaughtered for human consumption are not in the meat inspection system.
- There is a need for responses that address context-specific animal welfare challenges. In urban and peri-urban areas, working animals are ignored by city planners and their presence may be penalized by authorities. They often work for very long hours in harsh conditions as the main or only source of income for a family and are kept in extremely restricted environments. Animals in remote rural areas often have a better working environment but poor access to animal health services. However, both urban and rural working animals face common challenges including the impact of seasonal or recurring drought and floods.
- The concepts of “animal welfare” and “animal rights” are often confused and misunderstood, especially because the word “welfare” does not have an equivalent in many languages. In some circumstances using terms such as good animal health and husbandry may be important to engage others who are not familiar with “animal welfare”.

- There is a lack of evidence of the link between working animal welfare and livelihoods, which could be used to engage and raise awareness amongst working animals' owners as well as decision- and policy-makers and other relevant stakeholders. Evidence-gathering that seeks to address those gaps should therefore include the impact of working animals at household level and on the national economy.
- Similarly there are critical gaps in the range of welfare indicators available, particularly around mental (rather than physical) welfare, such as fear and exhaustion. However, one of the challenges is to combine welfare scientists' wish for comprehensive, reliable and scientifically valid indicators with decision makers' demand for less complex welfare assessment systems and a few key indicators of welfare. Reconciling both sets of needs is also made difficult by the fact that animal welfare criteria, including acceptable levels and what is achievable, vary depending on personal opinions and local contexts for owners. However the best interest of the animals should remain at the core of the identification of animal welfare indicators.
- There is a need to test new innovations for improving health and welfare while respecting the principle of "First, do no harm". This requires local monitoring systems that recognise welfare problems early and local skills to correct them promptly.
- Many welfare issues reflect a problem of communication between service providers and animal owners, rather than gaps in service providers' skills. However, most organizations focus their efforts on direct service or training provision and find it harder to embrace broader principles and actions that would enable long term, sustainable and local service provision.
- The welfare of working animals depends on their owners and the communities in which they live. Field staff are critical to the programmatic and policy work of the organizations they work for because they are the main interface with animals and owners and are in a unique situation to influence and to gather experience and testimonies. However their value is often not recognised.
- Animal health systems are often ineffective due to problems of accessibility (clustered in cities but absent in remote areas), affordability (not affordable as owners need to pay cash) and variable acceptability. Different levels of animal health training are needed, from animal owners through para-veterinary and community-based animal health workers to veterinarians, supported by a regulatory framework to ensure that roles are clear. The consolidated experience of ethnic (community) animal health services should be recognized and taken into account, particularly in remote areas where few veterinarians are available to provide relevant services.
- Expertise in working animal health varies between veterinary schools. Camels and donkeys are not seen as priority species and therefore do not feature highly in the curriculum. In addition, veterinarians are often not taught adequate extension and communication skills as well as participation/training methods. This has an impact on their ability to engage and build a relationship with communities and to understand animal owners' views.
- There is a recognised gap in both practical and policy provision for end-of-life welfare issues, such as slaughter (including transport to slaughter), euthanasia, abandonment and retirement.

- The need to address the welfare of working animals in less economically developed countries is often highlighted, however, also in many wealthy countries there are still severe animal welfare issues to be addressed.

### **KNOWLEDGE GAPS**

- The Experts and resource people also discussed key knowledge gaps relating to working animal health and welfare, in particular around:
- Effective ways to promote humane handling and training practices to those working directly with animals.
- Targeting and supporting animals in the greatest need. For example tourist riding animals may be the best available and have access to health or welfare accreditation schemes, while animals in the worst welfare state are not seen by the wider public so receive no attention.
- The impact of climate change on welfare issues such as increased working if animals have to travel further to collect water and firewood, which should be considered alongside discussions on the potential for working animals to help offset some effects of climate change.
- Draught animal nutrition, in particular (1) how to develop or modify traditional feeding practices with farmers, in order to cope with increasing pressure on land use; (2) best ways to store feed and forage across seasons; (3) assessment of roughage quality; and (4) the quality and timing of feed supplements needed by working animals and the farm-level economics of supplying these (see paper by Pearson, A. in Appendix C).
- Policy makers' needs and priorities, and those of researchers and implementers, can be bridged to a limited extent in the short term by better dissemination of findings. In the medium to long term it will be important to create local networks of animal welfare science in countries with developing economies, rather than importing knowledge from industrialised countries that can be less relevant (FAO, 2009). Participatory Action Research is well documented in other sectors and these skills and contacts could be used more effectively within the working animal sector.
- Funding is insufficient and focuses on a limited number of institutes and countries. It is therefore critical to map funding opportunities (especially match-funding) in order to enable wider distribution of research support.

### **POTENTIAL AREAS FOR ACTION**

The Experts also identified potential areas for action to improve health and welfare through increased collaboration, information sharing and lesson learning, as well as partnership building. These included:

- Initiating contact with the One Health Initiative, to forge inclusive collaborations between medical, veterinary and other scientific and environmentally-related disciplines. Discussions should initially focus on finding out more about their remit and exploring potential areas for collaboration.
- Engaging with the scientists that could provide an entry point for exploring the issue of the economic benefits of good working animal welfare.
- Including working animals on the agendas of new and existing animal welfare institutes, organizations and networks that may lead to opportunities for

### **Box 5. Health and welfare of draught oxen**

*Oxen are the main animals in use for ploughing, pulling carts and occasionally ox-drawn weeders in Africa. Draught animal power is an excellent example of mass application of appropriate technology, particularly suited for small farmers who have less than four hectares of land. Kenya has high human and livestock populations living mostly in rural and agricultural areas. Draught animals are the backbone of agriculture in terms of land preparation and transportation because mechanisation is insignificant in these areas. Therefore draught animals have to work hard and are afforded very limited grazing time.*

*In Ethiopia, oxen suffer particularly during the main farming season because agriculture is largely rain-fed and the rainy season only lasts for three months. Farmers then put pressure on their animals to work longer hours to complete the expected tillage. At times when the rain is uncertain, the pressure on draught oxen is even higher. Under normal circumstances they work six to eight hours per day; under pressure oxen may be forced to work more than eight hours per day without feed and water. The lack of grazing land is a considerable problem and when they are freed to graze after work, many oxen are subject to feeding disorders including bloating. They also suffer from wounds inflicted by whipping, beating and poking, and from infections and bruising under the yoke. Branding for identification and traditional castration are still practiced in some areas.*

Christopher Wanga (Kenya) and Bojia E. Duguma (Ethiopia).

collaboration through research consortia and potential funding for draught animal welfare research.

- Engaging with scientific journals to encourage them to publish more papers on working animal issues.
- Increasing and better collaboration with the private practitioners who provide veterinary and animal health students with working animal experience through ambulatory veterinary services. Veterinary departments should also be encouraged to include welfare assessment and participatory and extension methodologies as part of the veterinary curriculum.
- Sharing good practice and research results between organizations and institutes (such as guidance on shelter, nutrition, watering practices) to inform better and more applicable welfare guidelines and standards.
- Opportunities for collaboration with community credit schemes and groups should be explored, as a way of improving working animal owners' access to equipment, animal feed and/or health services.

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## Policy, legislative and regulatory change

In the last 50 years a wide range of livestock related legislation, policies, standards and schemes pertinent to animal welfare have emerged, but animals remain overwhelmingly invisible and are most often not considered within the scope of those instruments.

A series of presentations and case studies from various countries were shared, including Kenya (see paper by Wanga, C. in Appendix C) and Ethiopia (see paper by Duguma, B.E. in Appendix C), as well as from Greece and Namibia. These highlighted a wide range of positive developments, experiences and initiatives:

- A small-scale regulation of horse-drawn carts on the island of Hydra in Greece
- New laws being introduced to support draught and pack animals in Namibia.
- The establishment of an Animal Welfare Working Group hosted by the Ministry of Agriculture in Ethiopia.
- WSPA's development of "model" animal welfare legislation and its provision of technical support to countries on planning and drafting of laws

### CHALLENGES

Several challenges to policy-making, legislative change, implementation and enforcement were identified and discussed, including:

- In many countries relevant legislation exists; however the line of responsibilities for enforcement is not clear and relevant government officials may not be aware of the law or not committed to its implementation. There are also very few, if any, effective mechanisms for enforcement.
- The structures and routes for influencing policy change and implementation can seem impenetrable. A lot appears to depend on individuals rather than efficient functioning of transparent systems. Decision-makers change very frequently, especially in local government.
- Welfare monitoring tools are often seen as too complex, subjective or otherwise unsuitable for use in law enforcement.
- Good intentions for livestock health and welfare standards that could benefit working animals may not be implemented due to funding restrictions or being given low priority.
- There is insufficient documentation of positive and negative regulatory experiences, for others to learn from and improve on.
- Animal welfare legislation is often seen as punitive and preventive by communities, with insufficient focus on creating a positive enabling environment for the owners of working animals.
- The fairness of legislating at owner level, when people may not have the knowledge, skills and resources to comply with the law, and are then open to exploitation from law enforcers. Capacity building at household level was suggested as a more reasonable approach to influence owners while ensuring that legislation is effectively used and enforced at higher levels.



**Box 6. Current policy development work to improve conditions for working animals in Ethiopia**

*Ethiopia currently has no specialised national policy framework or guidelines for the use and care of working animals. At local level, with the support of animal welfare organizations, community laws who local beneficiaries abide by have been introduced. In some towns, such as Hawassa and Bahir Dar, the respective municipalities have drafted working policy guidelines addressing the use of cart-pulling donkeys, mules and horses. The guidelines address animal owners and cart drivers' actions as well as the condition of the harness and animal. They include specific requirements on plate numbers, standards of harness, loading capacity, age and condition of the animal as well as the age, skill and ethical qualities of the driver. The guidelines are awaiting for endorsement by municipalities and local transport authorities, and the traffic police department. Animal welfare charities are behind to support implementation of the guideline. The introduction of cart reflectors by the Donkey Sanctuary project in Hawassa town was endorsed by the local traffic police department.*

*Nationally, the recently set up Animal Welfare Working Group (AWWG), hosted by the Ministry of Agriculture, provides a forum for organizations and the government to coordinate actions on animal welfare including around policy and research, as well as lesson learning and strategy development. The Ministry of Agriculture appointed an animal welfare focal person to promote animal welfare issues under the Ministry in Ethiopia. Achievements resulting from the concerted efforts of this group to date include raising the profile of animal welfare issues during World Animal Day nationally and internationally; lobbying the Director of the Animal and Plant Health Directorate of the Ministry of Agriculture and the recognition of animal welfare under the framework of the National Livestock Policy/ IGAD-LPI.*

Bojia E. Duguma (Ethiopia)

**KNOWLEDGE AND SKILL GAPS AS WELL AS POTENTIAL AREAS FOR ACTION**

The Experts and resource people identified some of the key knowledge and skills gaps as well as potential areas for action relating to policy, legislation and standards for working animals:

**Advocacy**

- NGOs that focus on working animals and animal welfare at country level lack advocacy skills and knowledge. Strengthening their capacity and skills to advocate is therefore critical.
- There are currently very few advocacy resources on working animals that can be used for advancing the agenda. Priority should be given to the development of advocacy materials using topical case studies, hard-hitting statistics and targeted advocacy arguments that are very effective in raising interest from decision/policy makers.

**Box 7. Creating a positive policy environment for working animals**

*The tourist island of Hydra in Greece provides one of the best examples of a very positive policy environment for working animals. Local authorities have legislated in favour of animal powered transport, and to date, no private motor vehicles have been allowed to operate on the island (there are a small number of public vehicles providing emergency and service support). Mules, horses and donkeys have been retained and are currently used for all major transport functions, including carrying goods to the stores and supermarkets and the transport of all building materials. Many of the animals are operated by entrepreneurs who earn their livelihoods by transporting goods along the narrow streets and paths. Most animals transport goods rather than people, and are therefore supporting the tourist industry indirectly rather than providing recreational transport for tourists. There are well-enforced bylaws concerning safety, animal welfare and environmental protection.*

*In Cuba the promotion of animal powered transport in the country has been linked to the introduction of legislation on animal welfare and the safety of animal drawn vehicles. Horse buses and carriages are used in several cities and there are welfare regulations on the numbers of passengers a horse-cart can carry, with both animals and animal-drawn vehicles needing annually-renewable permits that require inspection. Where space allows, special lanes have been allocated to slow-moving vehicles (horse carts and bicycles). In some towns, horse vehicles are provided with certain routes, and where horse-drawn vehicles and motor vehicles share the roads, the animal-drawn vehicles have equal rights and a motor vehicle cannot sound its horn or try to force a cart or carriage off the road.*

Paul Starkey

- Where there is sufficient evidence, advocacy on DAP issues should be linked to topical discussions in other sectors (such as climate change and food security) that may increase political interest and attention. Success is more likely where a proposed policy, legislative or standard change for improving working conditions of draught animals has multiple benefits, such as social, financial, political and human development.

**Using existing frameworks and structures**

- Whenever possible governments, NGOs and other development partners should focus on reviewing and implementing existing policy, legislative or regulatory frameworks at national level. Coordination and collaboration between stakeholders should also be promoted through better understanding and agreement on broad roles and responsibilities at national level along with guidance for applying them at local level. Governments are responsible for long-term policy change and NGOs should work with them actively and constructively rather than trying to set up alternatives.
- Legislation forms the foundation or minimum standard for better animal welfare. However “value-added” schemes such as welfare-assured products, fair trade and ethical sourcing provide opportunities to improve the welfare

of working animals by ensuring that assurance standards are met; they can also increase the visibility of working animals amongst the public and decision makers. For example, in Mexico whilst donkeys carry agave for tequila production and in Guatemala, 85 percent of coffee is transported by equids (ESAP, 2010), those animals could be included in ethical assurance schemes for Mexican tequila or Guatemalan coffee exports. In Europe there is a small but reviving interest in the use of working horses as part of sustainable farming systems, which could be incorporated into carbon-labelling or offsetting schemes (see paper by Schlechter, P. in Appendix C).

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# Capacity development

The Expert meeting discussed the importance of capacity development using the United Nations Development Programme (UNDP) definition and the report of the FAO Expert meeting on “Capacity building to implement good animal welfare practices” to frame the discussions.

The UNDP defines capacity as “the ability of individuals, institutions and societies to perform functions, solve problems, and set and achieve objectives in a sustainable manner”. It uses a country’s human, scientific, technological, organizational, and institutional and resource capabilities. According to UNDP, the goal of capacity development is to tackle problems related to policy and methods of development, while considering the potential, limits and needs of the people of the country concerned.

Capacity development on an individual level requires conditions that allow individual participants to build and enhance their existing knowledge and skills. It also calls for the establishment of conditions that allow individuals to engage in the process of learning and adapting to change. At an institutional level, capacity development should not involve creating new institutions, but aiding pre-existing institutions in developing countries. This can be achieved by modernizing and supporting them to form sound policies, organizational structures and effective methods of management and revenue control. Capacity development at the societal level (creating an enabling environment) should support the establishment of a more interactive public administration, which learns equally from its actions and from feedback it receives from the general population. It must also be used to develop public administrators that are responsive and accountable.

The Experts highlighted that lasting and effective change in working animal welfare can only be achieved by building and strengthening the capacity of relevant stakeholders at different levels and across a range of specific animal welfare related areas, including indigenous knowledge, behaviour change, health and nutrition of working animals, and technology transfer. It was also acknowledged that practical exposure to working animals and service providers encourages more engagement and skills development.

Case studies on positive outcomes linked to capacity development – both in the field and within institutions - were shared and discussed, including:

- A case study on the use of draught horses by forestry workers that demonstrated that taking advantage of small, incremental opportunities for exposure to DAP can have far-reaching results
- Examples of introducing animal welfare into school and university curricula from Ethiopia, Kenya and India
- WSPA’s initiative on the introduction of its Concepts in Animal Welfare education programme to universities’ curriculum.
- The Intermediate Technology Development Group’s project on pastoralists and Community Animal Health Workers set up in Kenya in the 1990s: the project sought to encourage veterinarians to work alongside Community-based Animal Health Workers. and learn from each other .

### **Box 8. Capacity development options and tools**

*When embarking on capacity development for improved working animal use and welfare, it is important to be clear first about why it is being done: the objectives that capacity is being developed to meet. The next question is whose capacity is to be developed and how? The individuals and organizations involved with working animals and their welfare include owners, users and carers of the draught and pack animals of the present and also the future (for example school children, apprentices and veterinary students); local service providers, including harness-makers, implement-manufacturers and farriers; animal health providers such as community animal health workers, paravets and veterinarians; extension services; local, national and international decision makers; institutional and legal framework developers; the donor community and the wider public. Capacity development can be carried out using a wide range of tools and methods. Meetings of organizations around specific issues (face-to-face or online), meetings of animal owners and users, women's group meetings, exchange visits, participatory planning and monitoring and participatory research have all been carried out successfully around working animal issues. The people involved and the methods used will also help to answer the third question of who should be developing the capacity of individuals, institutions or society in each case? Capacity development is often thought of as simply training, but it can include many ways of equipping people with skills and competencies that they would not otherwise have. Approaches such as peer group exchanges can bring out existing skills and potential, build people's self-confidence and, importantly, strengthen the ability of people at all levels to recognise and take up their responsibilities towards working animals.*

Dorcas Pratt, the Brooke (UK).

- The formation of technical and other national networks to encourage capacity development and skills sharing such as the Veterinary Forum and Equine Forum initiated by the Ethiopian Veterinary Association (see paper by Duguma, B. E. in Appendix C).

### **CHALLENGES**

The Experts highlighted challenges to developing capacity in effective working animal use and improving working animal welfare, including:

- Over-reliance on external support at the detriment of existing local knowledge and skills.
- Lack of clarity over the objectives and expected outcomes of capacity development and the most appropriate and adapted methods to carry out trainings.
- Ineffective knowledge management including around dissemination. Cut-backs on extension services, and the closure of DAP publications such as Draught Animal News as a result of the lack of funding, further impacts on knowledge sharing and communication of best practices.

### **Box 9. Capacity development of draught horse users in Europe**

*For many years, a local association in Luxembourg called “Forest People” organized an annual public event on the theme of “Forests”. This included competitions for logging with chainsaws, horse-drawn logging and horse-riding. The event became more popular every year as the Forestry Administration department of the Luxembourg government encouraged the sustainable forestry component with substantial funding. FECTU, was involved in each event and when the riding competition was discontinued, increasing attention was given to the working horses. FECTU organised demonstrations of new horse-drawn machinery used in other sectors as well as forestry and held a conference about new possibilities for using working horses in modern ways; each time, the government’s Forestry Administration was involved in event planning from the very beginning.*

*In 2004 the Forestry Administration decided to publish an illustrated 80-page brochure, with the help of FECTU and other professionals, on the modern use of working horses in agriculture, forestry, landscape conservation, tourism and other services in cities and parks. It also published a promotional calendar with beautiful photographs of working horses, and distributed both resources free of charge to all interested parties. Encouraged by this very positive attitude from the Forestry Administration, FECTU organized a one-week training course for people interested in horse-logging, in collaboration with a local open-air museum that focuses on draught horses. At the end of the course, the Director of the Luxembourg Technical School for Agriculture and Forestry agreed to integrate this training course into the curriculum of Forestry students. After four years of experience in running the course, an European Union – INTERREG partnership project has recently enabled a Belgian technical school for forestry to send their students to the training course for the second successive year.*

Pit Schlechter, Luxembourg, European working horse network (FECTU).

- Moving from individual involvement and action to wider organizational/cross-organizational engagement.

### **AREAS FOR ACTIONS**

The Experts further identified the following priority areas for action to improve and foster capacity development in working animal issues, particularly:

- The need for greater efforts and attention to be given to strengthening people’s ability to link up and organise themselves into groups or to join and use existing networks/coalitions.
- Identification of existing structures and initiatives and focus on strengthening and supporting them.
- Building a greater constructive leadership, responsibility and accountability from decision makers. This can often be achieved through discussing and questioning in a constructive way that encourages self-reflection and

**Box 10. 2001 – 2011: Ten years of draft horses in public service**

*In 2000, the tradition of draft horses in public service inspired a small group of people in Trouville, France to test the effectiveness of using these animals to collect recyclable glass containers. The initiative was successfully implemented later that year. Responding to media coverage of the initiative, a group of elected officials and civil servants proposed an event to encourage discussions between individuals and organizations interested in the use of draft horses in local government activities. A conference was organised to coincide with “Equi’days”, a national event showcasing the equine industry. The initial gathering of a small number of draft horse enthusiasts in 2000 grew to over 130 conference participants in 2010.*

*In 2011, the National Association of Municipal Draft Horses was created, whose objectives include: encourage a dialogue on the use of draft horses in the public service activities of local governments; provide a platform for professional networking opportunities and presentations of first-hand experiences with draft horses in urban settings, and increase awareness and acceptance of the use of draft horses by communicating on the subject through both popular and specialized press outlets and printed news media, and with elected officials and at various conferences. The Association has compiled all the information necessary to implement a complete urban draft horse project, including administrative, regulatory, and financial considerations. This information will serve to respond to the questions or concerns most frequently encountered by local governments during the implementation of this type of project.*

Pit Schlechter, Luxembourg, FECTU.

recognition for what people have to improve. For example, local government ministers have responsibility towards local people and their working animals, thus contributing to the local and national economy.

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## Recommendations

Based on their deliberations, the experts made the following recommendations (summarized) in agreement with all participants in the meeting:

1. FAO, if relevant and in collaboration with other parties, should develop practical Guidelines on good practice for specific aspects of working animal use and welfare (e.g. nutrition, husbandry, harnessing), to be made available through the Gateway to Farm Animal Welfare and other distribution channels. FAO should also encourage their adoption and should support the development of capacities to implement those practices and any possible internationally recognized relevant standard, in its Members.
2. The OIE should develop Standards for working animal welfare and include them in its Terrestrial Code;
3. FAO, OIE and other relevant intergovernmental organizations should raise awareness and provide guidance to their Members on the importance of working animals, their health and welfare and contributions to livelihoods and national economies. They should also include working animals on the agenda of forthcoming events with a view to engage their members in the process of developing recommendations and other suitable mechanisms to address them.
4. International influencing should be carried out through the creation of an “International Partnership for Working Animals”, initially facilitated by FAO and the Brooke, and steered by a “pool of champions” including intergovernmental organizations, regional entities such as the European Commission, professional associations, animal traction networks and NGOs. One of the first priorities of the Partnership should be to generate and promote evidence and case studies on the socio-economic contributions of working animals to agriculture development and livelihoods. In particular the Partnership should work to increase understanding and evidence of the impact of working animals and to develop and validate suitable indicators. It should also coordinate the development of a reliable database of information on the role and impact of working animals and key messages that aim to raise awareness of governments, donors and other stakeholders.
5. The International Partnership for Working Animals should also serve as an information hub and should seek to foster collaboration, lesson learning and sharing, including from other sectors through the use of accessible networking.
6. Working animals should be included in development programmes and emergency responses and guidelines. Linkages between working animals and other development issues such as environment, biodiversity preservation, gender, children, urbanization, climate change and disaster risk reduction, should be acknowledged. In particular, working animals should be seen as an important part of the livestock population that contributes to food security, poverty alleviation and rural development alongside the food-producing animals.
7. The visibility and recognition of working animals should be raised in a positive way with the general public through the use of documentaries, media,



videos, publications and events. Including the relevant working animals in certification and labelling schemes could encourage the public to make positive purchasing choices.

8. Research and practical (local) experience should be linked in order to provide a broad range of evidence for the role and value of working animals.
9. Working animals should be brought onto the agenda of academic and international and national research centres, such as the Consultative Group on International Agricultural Research (CGIAR) and research funding bodies.
10. Science-based welfare indicators for working animals should be developed and collated. Welfare indicators should be appropriate and adapted to the specific situations and developed through a participatory process.
11. Working animals should be acknowledged and included at every level of statistical data collection by national governments (including figures provided to FAOSTAT), alongside other livestock. The contribution of working animals to the national gross domestic product (GDP) should be included in these figures.

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## References

- European Commission.** 2010. *An EU policy framework to assist developing countries in addressing food security challenges. Communication from the Commission to the Council and the European Parliament COM(2010)127, p.5*
- ESAP.** 2010. *Economic valuation on the impact of the working equine in the Petén and Chimaltenango communities (also available at [http://esap.org.gt/wp-content/investigaciones/ESAP-economic\\_valuation.pdf](http://esap.org.gt/wp-content/investigaciones/ESAP-economic_valuation.pdf), last consulted in June 2013).*
- FAO.** 2009. *Capacity building to implement good animal welfare practices. Report of the FAO Expert Meeting. Rome (also available at <ftp://ftp.fao.org/docrep/fao/011/i0483e/i0483e00.pdf>, last consulted in June 2013).*
- FAO.** 2010a. *Draught animal power: an overview. Rome (also available at [www.fao.org/fileadmin/user\\_upload/ags/publications/draught\\_ap\\_overview.pdf](http://www.fao.org/fileadmin/user_upload/ags/publications/draught_ap_overview.pdf), last consulted in June 2013).*
- FAO.** 2010b. *Gender dimensions of agricultural and rural employment: differentiated pathways out of poverty. Status, trends and gaps. Rome (also available at [www.fao.org/docrep/013/i1638e/i1638e00.htm](http://www.fao.org/docrep/013/i1638e/i1638e00.htm), last consulted in June 2013).*
- FAO.** 2013. *Livestock for traction: world trends, key issues and policy implications. by P. Starkey. Animal Production and Health Working Paper. Rome (In preparation).*
- Pritchard, J.C., Lindberg, A.C., Main, D.C.J & Whay, H.R.** 2005. *Assessment of the welfare of working horses, mules and donkeys using animal-based measures. Preventive Veterinary Medicine, 69 pp. 265-283.*
- van Dijk, L., Pritchard, J.C., Pradhan, S.K. & Wells, K.L.** 2010 *Sharing the Load: a guide to improving the welfare of working animals through collective action. Practical Action Publishing, Rugby, UK.*

## Annex A

# Agenda of the meeting

FAO HEADQUARTERS, ROME, ITALY, 13-17 JUNE 2011



## Agenda

EXPERT MEETING ON  
ROLE, IMPACT AND WELFARE  
OF WORKING ANIMALS

Facilitation Room A048



## EXPERT MEETING ON ROLE, IMPACT AND WELFARE OF WORKING ANIMALS

13-17 JUNE 2011

### **DAY 1: Monday, 13 June**

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<b>09:00-09:30</b>	Welcome coffee	
<b>09:30-10:00</b>	Introduction, objectives of the meeting and agenda	D. Battaglia and D. Pratt
<b>10:00-10:30</b>	Presentations of participants	All
<b>10:30-10:45</b>	Presentation of E-consultation report	J. Pritchard
<b>10:45-11:30</b>	Resources persons' presentations	
<b>11:30-11:45</b>	<b>Coffee break</b>	
<b>11:45-13:00</b>	Resources persons' presentations (cont.)	
<b>13:00-14:30</b>	<b>Lunch</b>	
<b>14:30-15:30</b>	Role and impact of working animals	
	Economic value of working animals	K. Reed
	The role and impact of working animals in livelihoods with particular emphasis on the cultural and environmental values of working animals	L. van Dijk
	Effectively communicate on the impact of working animals on human livelihoods to raise their profile in agricultural and rural development programmes	M. Hernández
<b>15:30-16:00</b>	<b>Coffee break</b>	
<b>16:00-17:30</b>	Working groups on <i>Role and impact of working animals</i> (geographical split)	All
<b>17:30</b>	<b>Closing</b>	

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### **DAY 2: Tuesday, 14 June**

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<b>08:30-10:30</b>	Working groups on <i>Role and impact of working animals</i> (cont.)	All
<b>10:30-11:00</b>	<b>Coffee break</b>	
<b>11:00-13:00</b>	Plenary on <i>Role and impact of working animals</i>	All
<b>13:00-14:30</b>	<b>Lunch</b>	
<b>14:30-16:10</b>	<i>Health and welfare of working animals</i>	
	Nutrition of working animals	D. Battaglia
	Health aspects of importance for working animals	G. Marcoppido
	Care of working animals	F. Ochieng

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## DAY 2: Tuesday, 14 June (cont.)

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	Improving efficiency and animal welfare: the impact of harness, machinery, equipment and their use	P. Schlechter
	Welfare indicators/monitoring welfare changes	A. Zanella
<b>16:10-16:30</b>	<b>Coffee break</b>	
<b>16:30-17:30</b>	Working groups on <i>Health and welfare of working animals</i>	All
<b>17:30-19:00</b>	<b>Cocktail on FAO terrace</b>	

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## DAY 3: Wednesday, 15 June

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<b>08:30-10:30</b>	Working groups on <i>Health and welfare of working animals</i> (cont.)	All
<b>10:30-11:00</b>	<b>Coffee break</b>	
<b>11:00-13:00</b>	Plenary on <i>Health and welfare of working animals</i>	All
<b>13:00-14:30</b>	<b>Lunch</b>	
<b>14:30-15:45</b>	<i>Policies, legislative and regulatory options and capacity development</i>	
	Review of current developments in policy, challenges and needs/gaps. Options or ways forward	P. Starkey
	Legislative and regulatory options for working animal welfare	
	Capacity development options and tools	D. Pratt
	Current policy work addressing working animals in Kenya: a case study	C. Wanga
	Current policy work addressing working animals in Ethiopia: a case study	B.E. Duguma
<b>15:45-16:00</b>	<b>Coffee break</b>	
<b>16:00-17:30</b>	Working groups on <i>Policies, legislative and regulatory options and capacity development</i>	All

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## DAY 4: Thursday, 16 June

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<b>08:30-10:30</b>	Plenary on <i>Policies, legislative and regulatory options and capacity development</i>	All
<b>10:30-11:00</b>	<b>Coffee break</b>	
<b>11:00-13:00</b>	Working groups to draft recommendations	All
<b>13:00-14:30</b>	<b>Lunch</b>	
<b>14:30-16:00</b>	Working groups to draft recommendations (cont.)	All
<b>16:00-16:15</b>	<b>Coffee break</b>	
<b>16:15-17:30</b>	Working groups to draft recommendations (cont.)	All
	<b>Joint dinner</b>	

## EXPERT MEETING ON ROLE, IMPACT AND WELFARE OF WORKING ANIMALS

13-17 JUNE 2011

### **DAY 5: Friday, 17 June**

<b>08:30-10:30</b>	Discussion of recommendations and agreement in plenary	All
<b>10:30-10:45</b>	<b>Coffee break</b>	
<b>10:45-12:30</b>	Discussion of recommendations and agreement in plenary (cont.)	All
<b>12:30 -13:00</b>	Conclusions and closure of the meeting	S. Jutzi and D. Pratt
<b>13:00</b>	Departure of participants	

### **Experts:**

Lisa van Dijk (Netherlands)  
Bojia Endebu Duguma (Ethiopia)  
Mariano Hernández (Mexico)  
Gisela Marcoppido (Argentina)  
Fred Ochieng (Kenya)  
Pit Schlechter (Luxembourg)  
Paul Starkey (UK)  
Chris Wanga (Kenya)  
Adroaldo Zanella (Brazil)

### **Resource persons:**

- Stephen Blakeway, Donkey Sanctuary
- Elisabetta Canali, Animal Welfare Indicators (AWIN) Project
- Maria Ferrara, European Commission DG SANCO
- Andrea Gavinelli, European Commission DG SANCO
- Michela Minero, Animal Welfare Indicators (AWIN) Project
- Tom Ogilvie-Graham, Society for the Protection of Animals Abroad (SPANIA)
- Abdul Rahman, Commonwealth Veterinary Association (CVA) and Compassion in World Farming (CIWF)
- Suzanne Rogers, World Society for the Protection of Animals (WSPA)
- Antonio Rota, International Fund for Agricultural Development (IFAD)
- Mariela Varas, World Organisation for Animal Health (OIE)
- Daniel Ventura, World Veterinary Association (WVA)

### **Organizers**

Daniela Battaglia, FAO  
Baldomero Molina Flores, FAO  
Illia Rosenthal, FAO  
Dorcas Pratt, the Brooke  
Joy Pritchard, the Brooke  
Karen Reed, the Brooke

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## Annex B

# Experts' résumés

### **Lisa van Dijk**

Lisa van Dijk is an animal health and community development specialist (PgDip Livestock Health and Production, MSc Rural Development Management and BSc Tropical and Subtropical Agriculture) with longstanding experience in management of food security, livestock and sustainable livelihood projects and programmes in developing countries, incorporating community participation at all stages of the project cycle. She has experience at the grass roots level in innovation, development and implementation of participatory methodologies for application in livestock health and production such as PRA / PLA, Participatory Action Research and Participatory Action Tools for Animal Welfare. Lisa has worked extensively on community programmes for sustainable animal welfare improvement and is co-author and editor of "Sharing the Load: a guide to improving the welfare of working animals through collective action" L. van Dijk, J.C. Pritchard, S.K. Pradhan and K.L. Wells.

### **Bojia Endebu Duguma**

Bojia Endebu Duguma worked for the Ministry of Agriculture of Ethiopia as District Veterinary Officer. In 1999 he joined the Donkey Sanctuary jointly operating with Addis Ababa University as a veterinary clinician. The first four years he was treating donkeys, educating owners, training veterinary students in equine handling and treatment. Later he lead the project, lectured clinical year students in equine medicine and surgery, and animal welfare as well as advised final year students doing their thesis for a DVM degree. He has been to several short-term trainings on equines home and overseas. He specialized in veterinary epidemiology from Royal Veterinary College, University of London in 2007. He was later appointed as a National Coordinator of four of the Donkey Sanctuary's Projects in Ethiopia based at the School of Veterinary Medicine: Oromia, Amhara, Tigray and SNNPRs. In 2009, he was appointed as Donkey Sanctuary Country Representative for the Ethiopia Programmes.

### **Mariano Hernández Gil**

Mariano Hernández Gil has obtained a degree in Veterinary Medicine and Animal Production (MVZ) from the National Autonomous University of Mexico (UNAM) in 2000. Thereafter, he moved to the Autonomous University of Yucatan (UADY) to obtain a Masters degree (MC) in Tropical Animal Production with a minor in Animal Nutrition in 2002. Six years later he got certified in Equine Practice by the Mexican Council of Veterinary Education (Cert. CONEVET). He is currently the Country Manager of a joint programme of the Donkey Sanctuary, the World Horse Welfare and UNAM that looks to improve the conditions of working equines in Mexico. Mariano is also a faculty member of the College of Veterinary Medicine of UNAM. Involved in academics, extension and continuing education to advance

in systems relying on animals, throughout his career Mariano has kept a balance between empirical and scientific knowledge. He is convinced about maintaining the good practices people have in agriculture, animal husbandry and sustainability whilst incorporating developments in science.

### **Gisela Marcoppido**

Gisela Marcoppido is a Veterinarian (MV) from the Universidad de Buenos Aires (UBA), where she also received her Ph.D. degree in 2008. She is a Professional Researcher at the National Institute of Agronomic Technology (INTA) in Castelar, province of Buenos Aires, and Professor of Ethology and Animal Welfare at the Veterinary College of the Universidad de El Salvador (USAL). She is a member of the Institutional Animal Care and Use Committee (CICUAE) of INTA-Castelar, and participant in the INTA's Animal Welfare Program, regarding the welfare of domestic animals under intensive and extensive husbandry. Since 2003 she has been working with South American camelids (SAC) on the issues of farming, health care, infectious diseases, welfare and conservation. As a member of the IUCN South American Camelids Specialist Group (GECS), Animal Welfare commission, she plays an active role as field veterinarian in wild vicuñas (Vicuñas, Camélidos y Ambiente, VICAM) and guanacos (Wildlife Conservation Society WCS, Field Veterinary Program) sustainable use programs. This specialization on camelids led her to become the veterinary in charge of the INTA's Llama Research Herd, regarding immunological projects and be an advisor to several Andean communities who are starting to breed llamas again to obtain their differential products.

### **Fred Ochieng**

Fred Ochieng recently joined the Brooke as East Africa Regional Representative. Prior to his appointment he worked as Team Leader for Kenya Network for Dissemination of Agricultural Technologies (KENDAT) –working on the “Heshimu Punda” programme that is being funded by the Brooke. Heshimu Punda program is about improving the welfare and use of donkeys in Kenya. He was also an executive member of the Animal Welfare Action Kenya (AWAKE) partnership that looks into policy, advocacy and extension issues regarding animal welfare in Kenya. Further, he also chaired a regional networking organization (ATNESA – Animal Traction Network for Eastern and Southern Africa), which is a body comprising 12 country networks, and involved in the promotion and support of draft animal power utilization. Fred studied Organizational Development and Agriculture Engineering at the United States International University and at the University of Nairobi respectively. He has extensive experience in draught animal technology, animal traction and welfare.

### **Pit Schlechter**

Pit Schlechter was educated at the University of Saarbrücken (Germany). He has a Ph.D. in German and French Literature and Linguistics and he worked as a teacher until 2005. For 30 years he has been active in the draught horse business as a breeder and user of working horses. In 1993 he became secretary and then chairman of the Luxembourg Heavy Horse Breeding Association. Since its foundation in 2003 he has been the chairman of the European working horse network FECTU. He has



written in the technical press and contributed to conferences and training courses on the modern use of working horses. He is an adviser to the nature and forestry administration of the Luxembourg Government.

### **Paul Starkey**

Paul Starkey is an international consultant in animal power, rural transport and the development of networks. He studied at Oxford, Cambridge and Reading Universities. His early specialisation in animal power involved directing research, extension and training at a national level, and developing national and international networks. Work on animal-powered transport led to work on broader transport and rural development issues. He now works worldwide, focussing on work animals, rural transport systems (motorised and non-motorised) and closer liaison through networking. To achieve this he uses a holistic, systems approach, a historical perspective, networking techniques, critical analysis of pertinent factors and the use of socially appropriate participatory methods. In his forty years of professional experience he has led research and consultancy teams and has written several books and more than 150 publications. He has visited 140 countries. He has been appointed a Visiting Professor at the University of Reading and is a Visiting Senior Research Fellow at the Museum of English Rural Life. He has been actively involved in international networks and has been Chair of several NGOs concerned with international development. He enjoys taking attractive, informative photographs that he uses in presentations, exhibitions, publications and websites.

### **Christopher Wanga**

Christopher Wanga is a veterinary surgeon. Post graduate training in Animal Health Economics. Working as an Assistant Director of Veterinary in the Department of Veterinary Services, Kenya Government offering technical support for formulation, development, implementation, monitoring, reviewing of livestock related strategies, policies, laws, programs and spearheading Public-Private Sector Partnerships in the Animal Resource Industry. In Nairobi county in charge of veterinary inspectorate and surveillance responsible for provision of animal health, production and food safety services. Previous pharmaceutical industry experience in Laboratory and Allied Pharmaceuticals responsible for pharmaco-vigilance, veterinary medicines research including risk assessment for antimicrobial resistance surveillance and monitoring programs. Other professional responsibilities: Vice President of the African Veterinary Association, Kenya's representative to the Commonwealth Veterinary Association and former President of the Kenya Veterinary Association.

### **Adroaldo Zanella**

BVSc Veterinary, Pontificia Universidade Catolica do Rio Grande do Sul, PhD Animal Welfare, University of Cambridge. Professor of Animal Health and Welfare, Scottish Agricultural College, Animal Behaviour and Welfare Team. His primary interest is to develop indicators of animal welfare. He is coordinating the VII Framework Project Welfare Indicators, where horse and donkey welfare will be addressed. Together with North American and Brazilian collaborators they developed the Equine Welfare Intervention Strategy (EqWIS) which was a very successful partnership with poor communities in the Southern part of Brazil, to enhance

the welfare of working horses. He is also interested in fundamental questions to understand how to facilitate optimal organization of the developing brain in animals in order to enhance welfare outcomes. The specific research areas that he is working are related to the following topics: A) Impact of stress and diseases on the organization of the brain in different species. B) Biomarkers of stress and animal welfare, in several species (including horses and donkeys). C) Comparative welfare studies, with the focus on factors that improve the organization of systems in the brain that can promote successful adjustment. D) How positive and negative affective states are represented in the brain of animals. E) The impact of diseases on animal welfare. F) Prenatal and early-neonatal challenges and their effects on the brain and developmental outcomes, including behavioural, structural and gene expression changes. G) Finally he is interested in understanding attitudes toward pain and welfare in different animal species, including horses.

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## Annex C

# List of papers submitted by experts

- Duguma, B.E.** 2011. *Current policy work addressing working animals in Ethiopia.*
- Hernandez Gil, M.** 2011. *How can the profile of working animals, particularly their impact on human livelihoods, be effectively communicated to different actors to raise their profile in agricultural and rural development programmes?*
- Marcoppido, G.** 2011. *Health aspects of importance for working animals.*
- Ochieng, F.** 2011. *Envisioning the future of animal care.*
- Pearson, R.A.** 2011. *Nutrition of draught animals – a summary*
- Schlechter, P.** 2011. *Improved efficiency and animal welfare: the impact of harness, machinery, equipment, and their use.*
- Starkey, P.** 2011. *Policy issues affecting working animals, with examples of challenges and good practice.*
- van Dijk, L.** 2011. *The socio-cultural and environmental role and impact of working animals in livelihoods.*
- Wanga, C.** 2011. *Working animals policy challenges in Kenya*

### **OTHER DOCUMENTS SUBMITTED BY PARTICIPANTS**

- FAO.** 2013. *The role of working donkeys, mules and horses in the lives of women: a review of their contribution to women's pathways out of poverty by J.C. Pritchard. Animal Production and Health Working Paper. Rome (In preparation).*

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Annex D

**List of relevant events and initiatives  
to raise awareness of and promote  
the role of working animals in  
development and the importance  
of their welfare**

Conferences of the OIE Regional Commissions  
Committee on World Food Security  
FAO Regional Conferences  
FAO Committee on Agriculture  
International Women's Day  
PANVET Congress of Veterinary Science  
World Food Day  
Veterinary Congresses

ONLINE PUBLICATION SERIES

**FAO ANIMAL PRODUCTION AND HEALTH REPORT**

1. Impact of animal nutrition on animal welfare – Expert Consultation, 26–30 September 2011, FAO Headquarters, Rome, Italy. 2012 (E)  
<http://www.fao.org/docrep/017/i3148e/i3148e00.pdf>
2. FAO's support to the One Health regional approach – Towards integrated and effective animal health–food safety surveillance capacity development in Eastern Africa. Report of the Workshop, Entebbe, Uganda, 23–24 January 2013. 2013 (E)  
<http://www.fao.org/docrep/018/i3391e/i3391e.pdf>
3. Characterization and value addition to local breeds and their products in the Near East and North Africa – Regional Workshop, Rabat, Morocco, 19-21 November 2012. 2014 (E)  
<http://www.fao.org/docrep/019/i3622e/i3622e.pdf>
4. The Global Platform for African swine fever and other important diseases of swine – Rome, Italy, 5-7 November 2013. 2014 (E)  
<http://www.fao.org/docrep/019/i3739e/i3739e.pdf>
5. The role, impact and welfare of working (traction and transport) animals – Report of the FAO - The Brooke Expert Meeting, FAO Headquarters, Rome, 13th – 17th June 2011. 2014 (E)  
<http://www.fao.org/3/a-i3381e.pdf>
6. Dog population management. Report of the FAO/WSPA/ICT expert meeting - Banna, Italy, 14-19 March 2011 (E\*\*)

Availability: June 2014

E - English

F - French

\*\* In preparation



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<http://www.fao.org/ag/againfo/resources/en/publications.html>

