

# Invisible Workers

**The Economic Contributions of Working  
Donkeys, Horses and Mules to Livelihoods**



healthy working animals  
for the world's poorest communities

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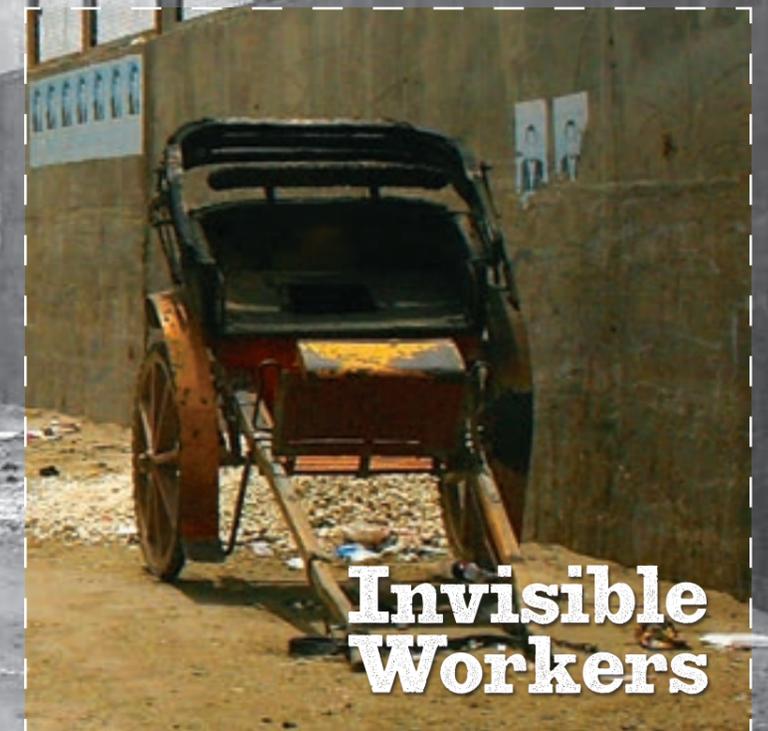
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by Dr Delphine Valette, Head of Advocacy, The Brooke

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# Foreword

Rural India relies on over a million working equids - be they donkeys, mules, ponies and horses - to meet the demand of draught power. They work every day, sustaining the livelihoods of a large section of our population. They are also a critical link to the production chain of several industries in the country, including construction, agriculture and the transportation of people and goods.

Sometimes called the “beasts of burden”, draught animals, such as horses, mules and donkeys, are the power engine of rural India and many other developing countries, yet, their role and contribution remain unacknowledged in national and global policies.

Although working equids technically fall under the definition of livestock, they are often not considered as such by policy makers primarily because they do not produce food of animal origin and therefore are not perceived as a critical element of people’s livelihoods.

Food security is – rightly so – associated with the nutritional value of foods that people need, and therefore food production livestock are considered important to food security because they provide nutritional food outputs. In contrast, the outputs produced by non-food production livestock such as horses, donkeys and mules are not easily quantifiable – they do however provide draught energy. They do not have a direct nutritional impact, but they do have a financial impact on the overall economy of the nation. Unfortunately whilst food production animals are considered livestock, working animals have not been included in the livestock category in India.

I congratulate the Brooke on its efforts to bring out this report “Invisible Workers” to highlight the multiple roles of and contributions that working equids are making to people’s lives. Their first report, “Invisible Helpers” provides a unique insight into the financial help and support that these animals provide to women and their families. This new report focuses on the economic contributions of working donkeys, horses and mules

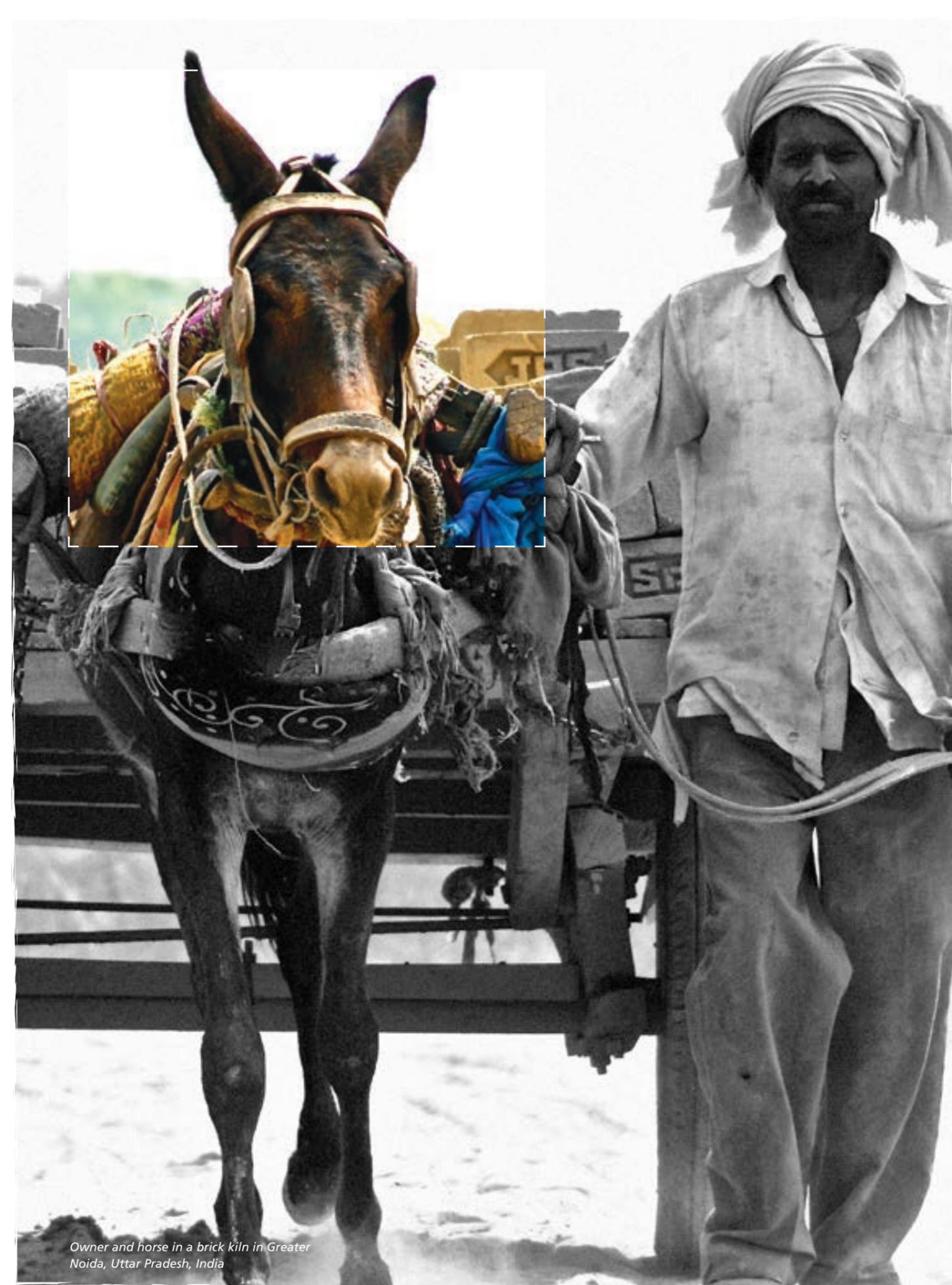
to people’s livelihoods and provides a comprehensive account of how those animals help their owners and those who rely on them to sustain their living.

I very much hope that on reading this report, Governments, UN agencies, NGOs and other policy makers will appreciate the role of working equids as valuable creatures of our animal kingdom who deserve to be recognised and have their contribution acknowledged. The World Organisation for Animal Health (OIE) is currently developing the first Global Standards for the Welfare of Working Equids. Once adopted, these Standards will provide a critical framework for governments to include working equids on their agenda, and for civil society to raise the visibility of these animals and to formulate adequate laws and policies to address their needs and concerns of animal welfare.

As Chairperson of the Animal Welfare Board of India and a long time advocate of animal welfare, I know that a happy, healthy and well-nourished equid will provide additional productivity that will augment income for its owners. Hence good animal welfare practices are an economic necessity. Like humans, working equids are also sentient beings and deserve humane treatment along with working conditions that address their suffering and abuse. I once again would like to complement the Brooke for their tremendous contribution to promote working equine welfare. I am sure this “Invisible Workers” report will go a long way to sensitise Governments, Policy makers and Animal Husbandry stakeholders in addressing the welfare needs of working equids.



**Maj.Gen.(Dr.) R.M. Kharb, AVSM (Retd.)**  
Chairman, Animal Welfare Board of India



Owner and horse in a brick kiln in Greater Noida, Uttar Pradesh, India

# Executive Summary

Working donkeys, horses and mules make up approximately 112 million of the global livestock population in less developed countries.<sup>1</sup> They support people's livelihoods in a wide range of sectors including agriculture, construction, tourism, mining, and public transport. It is estimated that working equine animals help approximately 600 million people globally, very often in the poor and marginalised communities.<sup>2</sup>

These animals are used for domestic and commercial purposes, providing a critical support system to households that rely on them. One pillar of that support system is the money working equine animals generate directly and indirectly, and the savings in expenses that their owners benefit from by using them. However, an incomplete understanding of their role means that working donkeys, horses and mules remain neglected or ignored in relevant global, regional and national policy and programming, including livestock.

This new report is part of the Brooke's ongoing policy and research agenda to increase knowledge of the linkages between working equine welfare and human welfare. It specifically focuses on the economic contributions of working donkeys, horses and mules to household incomes, and aims to highlight to policy makers and other development actors the multiple roles that these animals perform in various sectors and which benefit their owners financially. It does so by articulating their role as money earners (both direct and indirect) and money savers.

Through available compelling quantitative and qualitative evidence, including Household Economy Approach (HEA) baselines carried out by the Brooke with the Food Economy Group (FEG) in India, Pakistan and Kenya, the report shows the critical and multiple economic contributions that working equine animals make to people's livelihoods.

Working donkeys, horses and mules generate vital direct disposable income that enables millions of families to access the food they need and to pay for a wide range of expenses. They also provide essential support to households' main income generation activities particularly in the agriculture sector, for example livestock and dairy production. They do so by carrying feed and water for cows and

buffaloes and connecting farmers to cooperatives and markets. Finally they enable households to save on expenses by transporting families to the market, hospitals, schools and relatives' and friends' homes.

This relentless support, all year long, comes at a price and the report highlights the health and welfare implications of being a working equid, and it then considers the values of animal welfare both from an economic and intrinsic perspective.

Economically the report argues that a healthy and well cared for animal will benefit its owner by being able to work more efficiently and remain active for longer. However working donkeys, horses and mules are also sentient beings. They are not mere commodities or machines and as such they have limitations and needs which need to be considered by policy makers and implementers. The welfare of animals is increasingly discussed in the context of food production and it also needs to be considered for working animals alongside other livestock.

The report stresses that better working equine welfare is not just about the animals; it is also about the people and countries who rely on them. Animal welfare and human welfare should not be seen as separate and unconnected spheres. Instead the emphasis should be on understanding and better articulating the linkages between them and connecting the dots. This is particularly evident in the context of livelihoods.

The report concludes with a number of recommendations to foster a more coordinated, integrated and collaborative approach that benefits both the animals and people. This starts with increasing awareness, knowledge and evidence of the role of working equine animals in people's livelihoods, and the recognition that the economic and inherent values of working equids' welfare must be considered as a whole to optimise the balance between human benefits and animal benefits.

The report makes the following recommendations aimed at international, regional, national and local policy makers and implementers. These include country governments and authorities, donors, and relevant UN agencies.

## 1.

### Inclusion of working equine animals in livestock policy and programmes

Working donkeys, horses and mules should be explicitly included in livestock policy and programmes. If they are not defined as "livestock", horses, mules and donkeys should be defined as "working animals" and their needs be addressed accordingly in policy and programme development and implementation.

Sector specific policies such as transport, agriculture and rural development, and construction should be "working equine welfare friendly" and incorporate the roles and subsequent needs of horses, mules and donkeys. By doing so they will lead to the consideration of the needs of the families who rely on them day in day out.

## 2.

### Increased visibility of working equine animals in data collection and research

The data presented in this report show that working equine animals make significant contributions to individual household and national economies through their role in an extensive number of industries in rural and urban settings. The economic value of animals should not be solely measured by the food outputs they produce.

Working donkeys, horses and mules are livestock and contribute to supporting the livelihoods of hundreds of millions of people. Although this has not been quantified, experiences from the field show they are also making a significant contribution to national industries in several countries. They should therefore be included in livestock and livelihoods collection data tools and reports, and in studies on the GDP contributions of livestock. An example of a positive development around this is the inclusion of working equine animals in an increasing number of HEA baselines carried out by the Food Economy Group, a leader in livelihoods-based household food security analysis.

## 3.

### Reconciling the multiple values of working equine welfare

Working equine welfare and human welfare are inextricably intertwined. The economic and inherent values of working equine welfare should be seen as complementary. The welfare of working donkeys, horses and mules should also not be seen as secondary but part of a holistic and sustainable response to poverty alleviation.

Greater collaboration and understanding between animal welfare and development stakeholders is needed to foster cross-sectoral and complementary strategies and interventions that reflect the linkages between animal workers and human workers.

## 4.

### Greater political commitment on working equine welfare

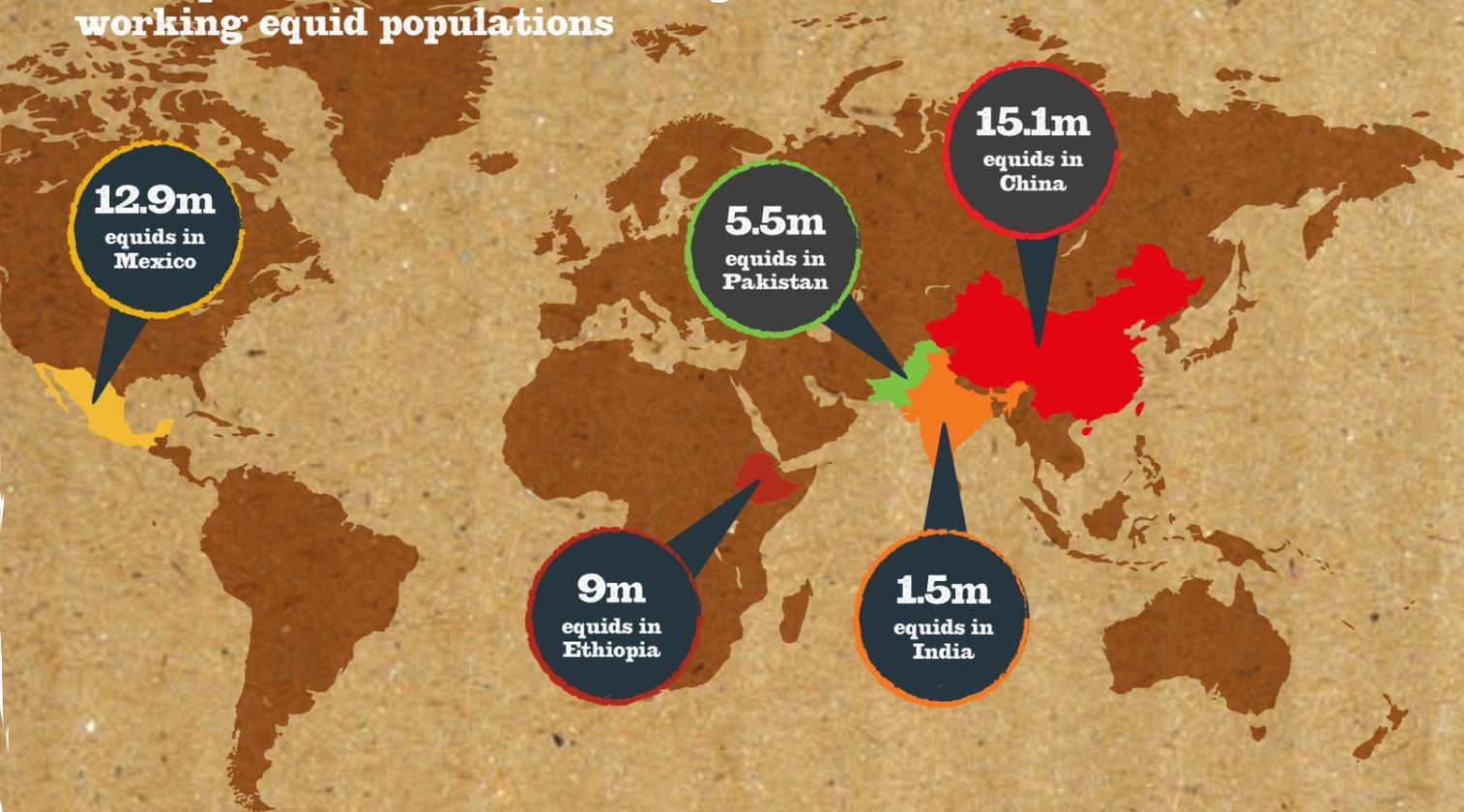
OIE Member States must adopt the forthcoming OIE Standards for the Welfare of Working Equids and show leadership in implementing them. The implementation of the Standards must be driven by a critical understanding of the roles and contributions of working equine animals, and the involvement of stakeholders which can provide technical expertise and support to the government and its partners.

# Food for thought...

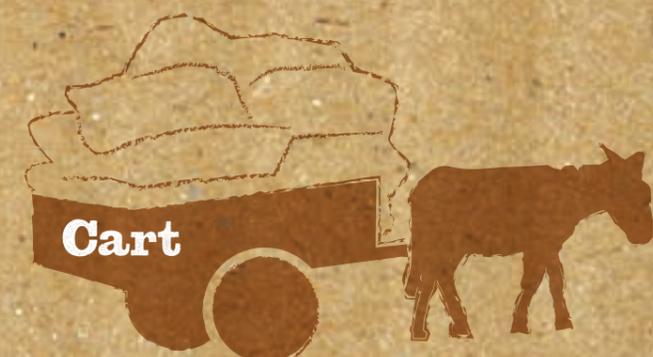
Worldwide population of working equids

**112**  
million

Examples of countries with large working equid populations



Working equine animal services



Various ways equids generate income (\$)



- Common welfare problems**
- Exhaustion
  - Foot problems including sprains, overgrown hooves
  - Wounds
  - Malnutrition / Starvation
  - Lameness
  - Fractures
  - Dehydration
  - Eye infections
  - Infectious diseases
  - Colic
  - Skin diseases
  - Poor body condition
  - Respiratory infections
  - Back pain
  - Injuries
  - Death

Despite the fact that they work every day of the year, connecting people, communities and markets, working donkeys, horses and mules remain largely absent in livelihoods and livestock related policies and interventions.





# Invisible Livestock

## Working Equine Animal Population

Working donkeys, horses and mules make up approximately 112 million of the livestock population in less developed countries.<sup>3</sup> They support people's livelihoods in a wide range of sectors including agriculture, construction, tourism, mining, and public transport. It is estimated that working equine animals help approximately 600 million people globally, often in poor and marginalised communities.<sup>4</sup>

Whilst a decline in equine populations has been recorded in some countries, the number of working equids, particularly donkeys, is increasing and continues to be significant in Africa, South Asia and Latin America.<sup>5</sup> Fuel price rises have been one of the major drivers alongside growing human populations and climate change.

This is the case for Ethiopia which has one of the largest working equine populations with over 9 million working equine animals, including 6.2 million donkeys, which amounts to 32% of the donkey population in Africa and 10% globally.<sup>6</sup> In South Asia, Pakistan saw a 14% increase in the total equine population to 5.5 million between 2006 and 2013.<sup>7</sup>

Although smaller in total numbers than food production animals, working equids are the backbone of household and national economies in numerous countries, contributing to a number of industries which would come to a standstill without them.

## Invisible Livelihoods Assets

### Livestock as money earners and money savers

#### Direct Income:

Cash that is generated from sales of livestock products (e.g. milk, eggs, wool, meat, live animals) or from services (draught, transport). Direct income can also be generated when the animals are used as sources of employment (e.g. taxis)

#### Indirect Income:

Animals supply inputs and products such as draught power and manure that is used for income generating activities.

#### Savings:

Animal draught power enables households to save money on transport and other expenses they would have to incur if they did not have the animal.

An estimated 1 billion people in the world depend on livestock for food and income,<sup>8</sup> with India hosting the world's largest livestock population.<sup>9</sup> Livestock produce food – more specifically protein and energy for the human diet – and provide draught power as well as other non-food related outputs such as fibre and manure. The support they provide is probably most obvious and best recognised in the agricultural sector (crop and animal production) but their importance in urban areas has also been acknowledged.<sup>10</sup>

In livelihoods policy, food production animals are commonly recognised as valuable household assets. This recognition primarily comes from these animals' direct link to food and nutritional security, and their easily quantified monetary value (i.e. sale of animal products and live animals). This is especially the case in smallholder mixed crop-livestock farming systems, landless production systems, and agro-pastoral and pastoral systems. However livestock who do not produce food (or other tangible) outputs remain largely ignored and their contributions unaccounted for.

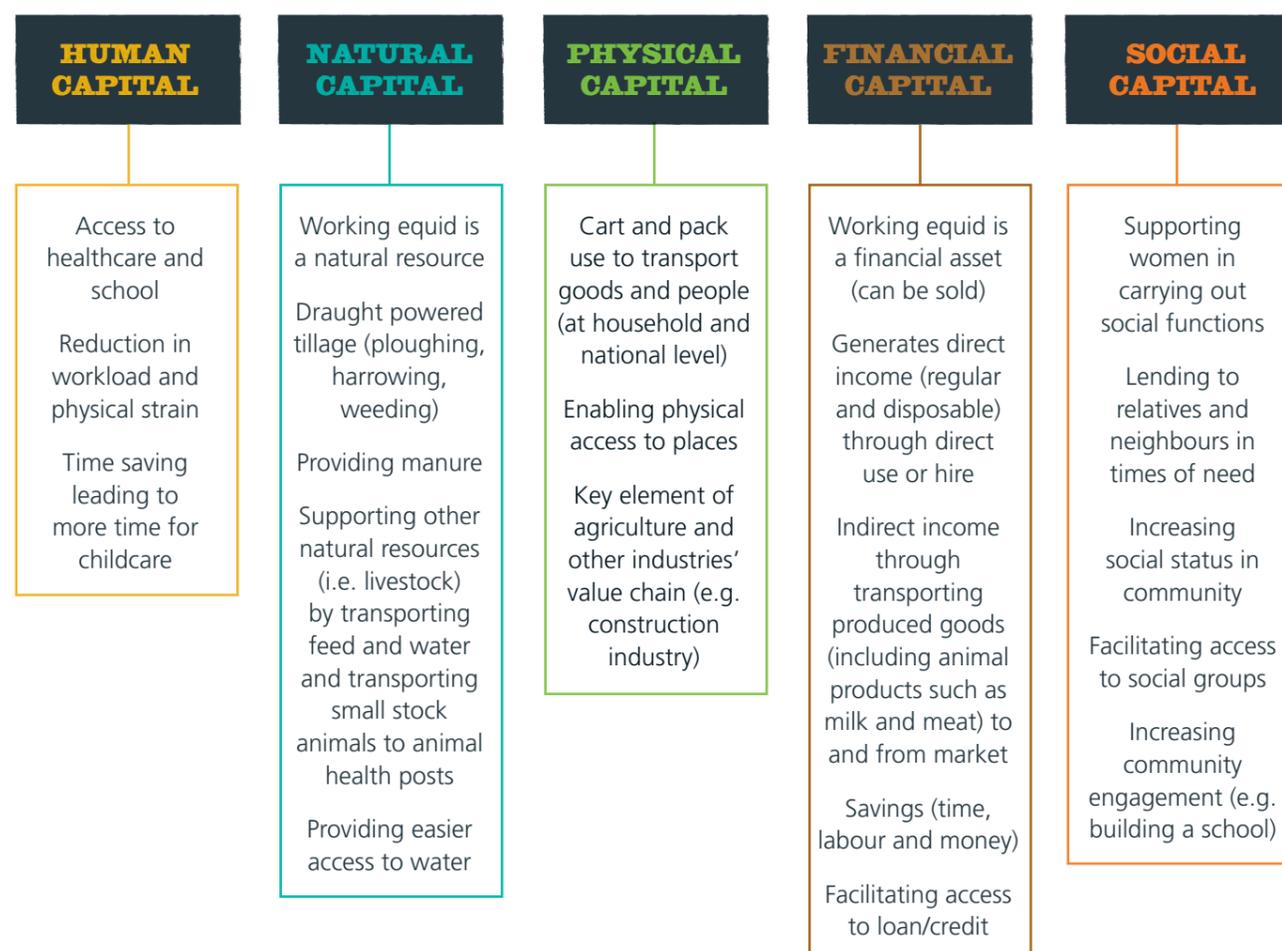


Donkeys carrying bricks in a brick kiln in Kathmandu Valley, Nepal

The Brooke's "Invisible Helpers" report<sup>11</sup> highlighted how working donkeys, horses and mules perform functions traditionally associated with food production livestock through the delivery of a number of monetised and non-monetised outputs. It also emphasised some of the unique tasks performed by working equids, in particular supporting animal rearing and production by transporting feed and water for other livestock, helping women with household chores and labour, and enabling them to increase their status in their communities by accessing social opportunities.

Working equine animals are therefore assets supporting positive livelihood outcomes for households. We have used DFID's Sustainable Livelihoods Framework to illustrate their importance using the framework's Capital categorisation headings.

## How working equine animals contribute to people's livelihoods



Donkey transporting fodder, Kikuyu Nachu, Kenya

"Livestock's multiple roles hold livelihoods together. It is not that livestock keeping is secondary or supplementary to other sources of income, but rather that it is complementary. The multiple roles – whether savings, risk management, income or manure – are 'the glue that holds people's livelihood strategies together'<sup>12</sup>

If one considers the illustration opposite, this reflection is equally true for working equine animals that hold a unique place in the communities by performing economic and social functions, some of which cannot be carried out by other livestock. As noted by Pritchard, traction and transport animals, especially equids, are found and work in more environments than any other livestock.<sup>13</sup>

Despite the fact that they work every day of the year, connecting people, communities and markets, working donkeys, horses and mules remain largely absent in livelihoods and livestock related policies and interventions:

"Similarly they [donkeys] are not included in government policy documents on agriculture or rural development, although in many countries, particularly in Africa, they can make a substantial contribution to the economy of the country. Ethiopia is usually quoted as the classic example of this hidden economy."<sup>14</sup>

They are therefore currently a missing piece of the "development jigsaw" and it is time to rectify this oversight for the mutual benefit of the animals and the hundreds of millions of people who rely on them.

## Invisible Workers: Putting working equine animals on the livelihoods agenda

**“Working equine animals play diverse socioeconomic roles, helping to maintain and enhance all categories of capital assets contributing to a sustainable livelihood. Although animal owners, particularly women, are fully aware of this contribution, recognition of working animals declines to near-invisibility at higher levels of policy, research, funding and programmatic decision-making (...) We cannot expect them to be a central priority and concern to all people at all times, but we can insist that they are never completely forgotten.”**

*(Dr Joy Pritchard, Keynote speech, 7th International Colloquium on Working Equids, 2014)*<sup>15</sup>

This report is part of the Brooke's ongoing policy and research agenda to increase understanding of the linkages between working equine welfare and human welfare. It specifically focuses on the financial contributions of working donkeys, horses and mules to households, and aims to highlight to policy makers and other development actors the multiple economic roles that these animals perform in various sectors. It does so by articulating their roles as money earners (both direct and indirect) and money savers.

The report relies on the distinction between domestic and commercial working equine animals to explore their economic contributions. It defines them as follows:

### Domestic

Domestic working donkeys, horses and mules are animals that are not being used to earn an income. They are primarily used to provide pack and cart services exclusively for transportation of household members and/or their goods and for helping families with household chores and labour (e.g. fetching water and firewood). Whilst they do not generate direct or indirect income, they do contribute to supporting the household economy including savings on time and transport costs.

### Commercial

Commercial working donkeys, horses and mules are animals primarily used to earn an income for their owner in a number of industries (e.g. agriculture, tourism, public transport, construction, transport of goods) either directly (payment for service) or indirectly (support to owners' income generation activities). Commercial working equine animals also very often perform domestic tasks.

After reviewing the available evidence on the economic contributions of working animals, including equids, the report explores the challenges and obstacles that impact on working equine animals' ability and capacity to generate economic outputs for their owners.

The report then considers the health and welfare implications of using working equine animals and considers their economic (monetary) and inherent values. Finally, the report makes a series of recommendations aimed at increasing and improving the recognition of working equine animals in research, policy and practice.

The content of this report is primarily based on studies that have quantified the economic contributions of working equine animals, as well as qualitative studies that have highlighted how they support households' incomes. The report also includes key findings from the Brooke and the Food Economy Group's (FEG) HEA baselines conducted in India, Pakistan and Kenya in 2013 and 2014.



*A donkey rests between carrying tourists in Petra, Jordan*

# 2

## Invisible Livestock

Working equine animals as money earners and money savers

## Evidence on working equine animals as economic assets

As noted by the Brooke in its *Voices from Women - Invisible Helpers*<sup>16</sup> report, "Literature on the contribution of livestock to livelihoods has only rarely included or focused on working animals (no international report has ever focused on working animals). When they have working animals have also been primarily limited to oxen, camels and cattle and their contribution has been primarily framed in terms of animal traction to improve crop production."<sup>17</sup>

"About 80% of Ethiopian farmers use animal traction to plough their fields. Both the mean area cultivated by a farm household and their yields per hectare are positively associated with cattle ownership and ploughing, in comparison to hand cultivation. Despite these contributions to agricultural output, no attempt is currently made to impute the monetary value of animal traction for Ethiopian agriculture."<sup>20</sup>

A few studies that explored the contributions of livestock to national economies have acknowledged the lack of attention to draught power animals. The Intergovernmental Authority on Development (IGAD) in Eastern Africa, which published a series of reports between 2010 and 2012 on the contribution of livestock to its member states' economy stated: "None of the reports in this series – on Ethiopia, Kenya, Sudan or Uganda – has been able to obtain sufficient information to reliably estimate the economic importance of animal power. IGAD should consider introducing a region-wide programme of work on the prevalence and economic value of animal power usage in IGAD countries, a subject that is chronically neglected by both academic research and government agricultural monitoring systems."<sup>18</sup>

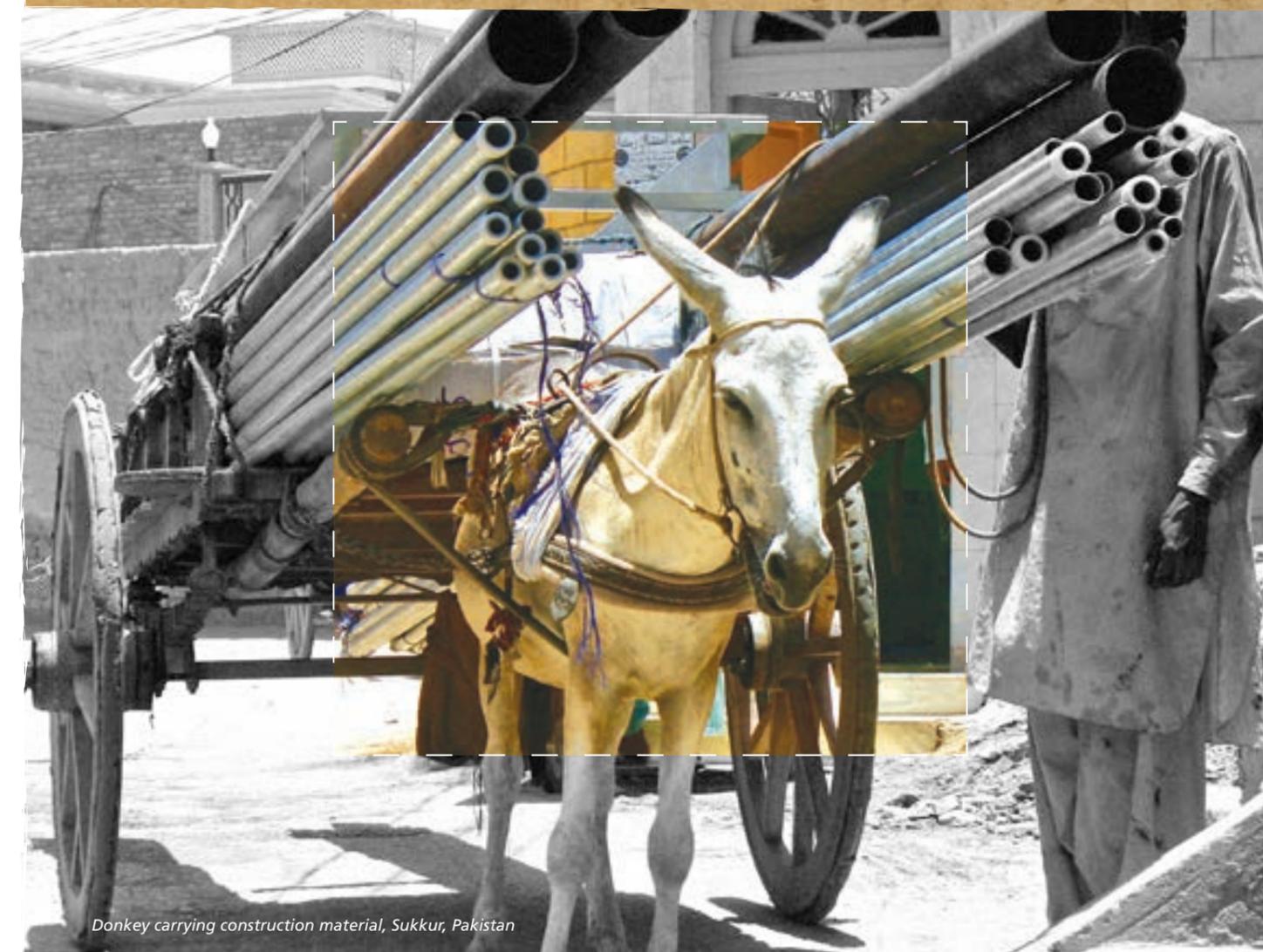
In its report on Kenya, IGAD also noted: "There is material (...) on working equines, but there is not enough information in these sources to quantify the economic benefits of donkey usage."<sup>21</sup>

Over the past few years, there has been an increase in evidence on the role of working equids in supporting people's livelihoods. This was evident in the 2014 International Colloquium on Working Equids<sup>22</sup>, which included the role that working equine animals play in human livelihoods and how well that role is currently recognised as a key theme.

The lack of inclusion of draft and traction animals in GDP calculations was noted by IGAD Center for Pastoral Areas & Livestock Development: "To understand the significance of livestock in Ethiopia we must look beyond GDP and examine the kinds of livestock benefits that are intentionally excluded from national accounts. With few exceptions, estimates of the contribution of livestock to GDP are based on the output of goods – material products such as milk and meat."<sup>19</sup>

However, the evidence on working donkeys, horses and mules as economic assets primarily stems from animal welfare organisations including the Brooke, animal traction experts, and academia and is, for the large part, available as "grey" literature.<sup>23</sup> Consequently it is rarely seen by or accessible to policy makers and livestock and livelihoods experts. There are no large-scale studies similar to the ones carried out for other livestock<sup>24</sup>, and no studies on the economic impact of working equine animals on the national economy.

Although rare, attempts to incorporate animal traction in the calculations (in the context of agriculture) seem to have also been largely confined to cows and oxen:



Donkey carrying construction material, Sukkur, Pakistan

## Working equids as a source of direct income

Commercial working equine animals provide traction and transport services that enable their owners and their families to generate a disposable income. As such they are a source of employment as cash income is generated as a direct result of the animals' work (i.e. financial transaction for a service).

Working donkeys, horses and mules generate direct income in a number of industries in both urban and rural settings. Common sectors where they are extensively employed comprise: transport (goods and people) including as taxis (e.g. gharry horses in Ethiopia, Tonga horses in Nepal, India and Pakistan); agriculture (e.g. ploughing, transport of rice, coffee, cotton, milk); tourism (e.g. donkeys and horses in Petra, Jordan and in Cairo, Egypt); construction (e.g. bricks, sand); mining (e.g. coal); sale of goods and produce (e.g. vegetables, grain, dung cakes for fire; manure; firewood, water; animal feed); and rubbish collection and recycling. In addition, they can be hired for a

fee, earning the owners an income from the rental of animals and the users an income from the use of the animals (e.g. transport of people and goods, ploughing etc.). Finally they can be sold as adults or as foals.

For equine owning communities, the direct income earned by the equids can often be the only or the main source of income. This is often the case in agro-pastoral and mixed crop production systems. Equids working in an urban setting are also likely to be the sole source of income for their owners.

The Brooke's Voices from Women research highlighted the importance of working equine animals in providing cash. Of the 22 focus groups that participated in the study in Ethiopia, Kenya, India and Pakistan, 17 - including all of the groups in India and Kenya - ranked equids as their most important livestock, mainly because they provide regular income, often earning money every day.<sup>25</sup>

## IN FOCUS: Working Equids in the Brick Kilns



Donkey transporting bricks by pack, Kathmandu Valley, Nepal

Brick kilns are brick making factories. Donkeys, mules and horses work in the traditional brick kilns and are commonly used in India, Pakistan, Nepal and Afghanistan. They are also used in other parts of the world for example in Egypt. Brick kilns may operate seasonally or throughout the year.

Traditional brick kilns use human and animal labour at every stage of the brick making process. Brick kilns are notorious for being largely a "hidden industry" which is often unorganised and unregulated, and where animals and humans endure the harshest working conditions with limited – if any – legal protection and rights.

The bulk of the donkeys, mules and horses' work consists of transporting wet and dry bricks by cart or pack within the brick kilns and from the brick kilns to external locations for use in the construction industry.

Each animal carries tonnes of bricks each day with loads exceeding a reasonable weight. They suffer from extensive and serious welfare issues caused by a number of factors related to the setting they work in as well as to poor husbandry and management practices. Very frequent problems include wounds and lameness.

There are opportunities for the animal welfare sector and human development sector to work together on specific issues such as human and animal welfare in brick kilns. A recent regional workshop organised by the Brooke on influencing the brick kiln advocacy agenda in South Asia gathered representatives from the sectors of animal welfare, child and human labour and the environment. The meeting led to the identification of cross-sectoral collaboration needs on the brick kiln agenda in the region, leading to a number of positive discussions on how to move the agenda forward.



Horse Carriage, Petra, Jordan

The direct financial benefits resulting from owning working donkeys, horses and mules have also been explored by other researchers in Africa, Asia and Latin America. Although these studies remain limited in geographical scope, their number is increasing and they provide initial evidence of the monetary value of commercial working equids and the benefits of equine ownership.

A number of studies have also compared income between equine owning households and non-equine owning households. A study in Ethiopia found that the use of donkeys by women in peri-urban areas had direct benefits in increasing their income, and that income ranked higher for donkey owners than non-donkey owners.<sup>26</sup>

The study was linked to the distribution of donkeys to 380 female-headed households in 15 Kebeles (districts) between 1998 and 2001, with an average of 32 female beneficiaries in each Kebele. At least one adult woman was present in 99% of the households receiving a donkey, and 53% of the households were female headed due to being widowed or divorced. One of the objectives of the study was to identify the impact of a donkey on the livelihood of a household.

Eighty-three individual interviews were conducted as part of a survey in 11 selected Kebeles at the end of the research. In terms of ways of earning a direct income, even though mentioned as an after thought by the respondents, hiring out donkeys was a supplementary income and was ranked 2nd most important source of income by the respondents behind daily labour.

Sixty-five donkey owners lent or hired out their donkey for income: 60% hired out their animal to contractors and 33% charged to carry goods for others.

The study reported a link between donkey ownership and an income increase. Hiring out donkeys to a contractor was found to bring higher income than gathering wood, maid work or daily labour in 47% of the respondents. Selling milk and guard work generated more income than hiring out donkeys because the women who sold milk had several cows and guard work provided a salaried income. When asked if their lives had changed as a result of owning a donkey, 39% of women stated that their income had increased, and 6% also said that they were able to save money. 84% of the female donkey owners said that their lives were better than 1-2 years before, compared with 16% of non-donkey owners.

In Mali<sup>27</sup> a survey of 350 donkey owners in the regions of Sikasso, Ségou, Koulikoro and the District of Bamako found that donkey use generates a wide range of monthly incomes, with around 47% of the surveyed equine owners earning between GBP £100 and GBP £300, 33% earning less than GBP £100 monthly, and 20% of owners earning more than GBP £300. The research found that 66.7% of owners have monthly income of more than GBP £100 (US \$167) earned from using donkeys whilst the average monthly income per capita in Mali is GBP £32.5 (US \$55).

The direct income provided by working equids was also considered in a study on the economic contributions of draught animals to Mazahua (peasant) smallholder

farmers in the Highlands of Central Mexico.<sup>28</sup> One of the farming systems considered was in San Pablo Tlalchichilpa (SPT) where 13 farms, including 9 with equids which had replaced draught bulls, were included. Horses and mules were used for a number of activities including draught power for ploughing and cultivating the land, as pack animals for the transport of agricultural produce, grain and straw harvest, fertilizers, manure, water, firewood, construction materials, clothes and groceries, and as saddle animals for transportation of people.

Five farms earned a direct income from the horses and mules derived from renting them out for ploughing and cultivation, generating a mean average of US \$277.80 per year per farm. The study's authors calculated the net economic contributions of equids in SPT by deducting the cost of maintenance from gross income. They found a net margin of US \$356.50/year per farm plus additional money saved from manure, totaling US \$412.50, representing a net daily income equivalent to 30% of the minimum daily wage in the area, plus the opportunity value (i.e. what would they have to pay if they had to hire animals) of using equids as pack animals.

Another study in Ethiopia highlighted the importance of direct income generated by working equids.<sup>29</sup> The study commissioned to Tufts University by Brooke Ethiopia took place in three Woredas (Lemmo, Meskan, and Shashego) in the Southern Nations and Nationalities People's Region (SNNPR) using the DFID sustainable livelihoods framework. Data were collected between March and July 2010 from 528 households that owned, accessed or used horses, mules and donkeys, and were categorized by wealth group. Income derived from equids accounted for 14% of the total households' income and a large majority of households kept equids for income generation. 37% of households (particularly poor households) earned a direct income from equine use (cart work and gharry use) averaging US \$752 per year. Renting out equids brought an average direct income of US \$233 per year and selling equids generated US \$96 on average per year.

The average household-level net return from equine ownership and use (based on income earned minus expenses linked to equine ownership) was US \$330 per year. An interesting finding from the study was around the opportunities for income diversification associated with equine ownership. This is particularly important in the case of landless households who rely on equids as their sole or main source of income.

## Donkeys: old fashioned or "drivers" of modernisation?

The innovative use of donkeys and their critical role in generating business for women was recently featured in the context of the increasing use of solar panels in Kenya. Green Energy Africa's<sup>30</sup> Women and Entrepreneurship in Renewable Energy Project (WEREP) trains groups of Maasai women in solar panel installation. The women then use their donkeys to haul and then sell their solar products at a profit of around 300 shillings (US \$3) for each product, which is used by the groups to buy more products.

This finding echoes that of an earlier study in Ethiopia, which also found that donkeys were key in enabling rural households to diversify their income:

"In Tigray and the Rift Valley areas their contribution in terms of firewood trade to the family income was found to be in the range of 156 to 1404 Ethiopian Birr annually (US \$1 = Ethiopian Birr 8.8). In Ejersa, sand is transported in 20 litre containers fitted on the back of a donkey. Each day a donkey makes 80 shuttles from the river basin to the roadside transporting a volume of sand amounting to 4 m<sup>3</sup> and costing 90 Birr (...) Ownership of donkeys offers an opportunity to diversify income and supplement on-farm incomes in rural areas."

**"47% of rural households in the study areas reported that ownership of donkeys has given them an opportunity to conduct off-farm income generating activities."**<sup>31</sup>

A survey carried out by Brooke India in 2013 across 50 brick kilns in 10 districts of Uttar Pradesh found that overall 80% of total annual income earned by equine owning families working in the brick kilns was generated by equids (transport of bricks) and 20% from other sources such as agricultural labour outside the brick kiln season. It also found that for forty-seven out of the two hundred equine owners interviewed (23.5%) the work from equids during the brick kiln season (which covered 6-8 months per year) was their only source of income.<sup>32</sup>



Vegetable seller and her horse, Lucknow, India

## Using the Household Economy Approach in the context of working equids

The HEA baselines conducted by the Brooke and the FEG in Kenya and India highlighted the direct income provided by working equids in various industries and settings, and the reliance of owners on this income to access food.

The HEA methodology was developed by Save the Children,<sup>33</sup> and has been extensively used in the context of food security by development actors including international non-governmental organisations and UN agencies. The HEA tools were adapted for the Brooke's studies to incorporate working equine related dimensions. As the original methodology only includes food production animal specific questions, additional sections on income generated by, and expenses spent on equids were added to the questionnaires and forms.

The overall objectives of the HEA baselines were to:

- > Increase understanding of the use of working equids for income generation and quantify the linkages between working equids and households' livelihoods;
- > Measure the direct and indirect economic contributions of working equids in households' access to food and non-food items; and
- > Pilot a measurement of financial and time savings related to use of working equids.

### CASE STUDY: HEA in Kenya

The HEA baseline conducted in June 2014 focused on the urban areas falling within the National Irrigation Board's Mwea Irrigation Scheme Water Improvement Project in the Mwea Peri-Urban High-Production Rice HEA Sub-Zone, which included Kimbimbi, Ngurubani, Thiba and Mutithi towns. 254 respondents were interviewed as part of the study.

3 wealth categories and a control group were identified and used for the assessment:<sup>34</sup>

- 1 Donkey owners who do not use the animals themselves to generate income but hire donkey drivers/porters to use their animals for commercial transporting activities. The donkey driver/porters are paid a daily wage by the donkey owners.
- 2 Donkey owners that use their own animals and cart for commercial transportation activities.
- 3 Casual labourers (donkey drivers/porters) that are hired by donkey owners to drive/transport commercial goods.

A control group that earned a similar amount of income was identified as motorcycle taxi owners / operators (the Boda-Boda<sup>35</sup> group). Within the peri-urban zone donkeys are used mostly for commercial purposes, primarily for the transporting of goods in carts. Commercial donkey transportation is performed throughout the year. Donkey owners and casual labourers hired as drivers and/or porters are busiest during the rice harvest but they also find work fetching water, transporting construction materials and hardware in town at other times of the year. In addition, some households work in the rural areas around the towns transporting fodder and manure.

The results showed that the majority of the households who use donkeys directly or indirectly to earn an income are able to reach the recommended annual energy requirements. They are however heavily dependent on the local market to buy food as they live in an urban setting and do not grow their own food. Food availability, the most basic survival expenditure among the donkey-user population, is largely determined by donkey-related earning activities.

The study also compared income levels and the net income generated from donkey-related activities. It found that donkey owners who use the donkeys themselves get the most income (net) from donkey related activities (approximately US \$2272 per annum). Casual labourers and donkey owners that hire labourers get US \$1389 and US \$640 respectively from donkey related activities.





Mule transporting bricks, India

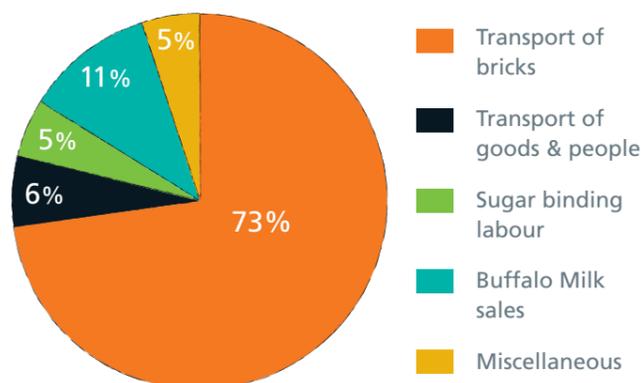
## CASE STUDY: HEA in India

A rural HEA baseline conducted in India also demonstrated the reliance of equine owning households on their animals for direct income, with equids providing owners with the main and the largest proportion of their income. The HEA was conducted in the western part of Uttar Pradesh, specifically in Muzaffarnagar, Meerut and Mathura districts in July and August 2013.

Three groups of households were identified for the study: the equine owning households, the landless households and land owning households with small plots of land (on average 2.5 bigha, equivalent to 0.24 hectares). The main uses of working equids are the transport of bricks, produce and people.

Equine owning households reported total annual income of INR 108,475 (US \$1711) of which nearly 80% was represented by direct income from working equine animals, 73% of which was from the transport of bricks. Buffalo milk sales account for slightly over 10%. Sugarcane binding labour, which typically occurs during the 'off-season' in July, contributes 5% to the equine owning households' annual cash income. The remainder is earned from an array of different income generating activities households may be engaged in, including pottery sales, loans, etc.

### Breakdown of equine owning households' annual income



## Working equids as a source of indirect income

Aside from earning direct income for people, working donkeys, horses and mules also generate indirect income by supporting their owners' other means of livelihoods. Indirect income generated by the animals results from their draught power, which is used by households to support their income generating activities.

Whilst there is qualitative evidence on the indirect income generated by working equids, the data on quantifying that financial contribution are extremely limited as owners and researchers struggle to put a value on the economic benefits derived from their animals in relation to non-equid employment opportunities.

Indirect income generation from equine animals is common in rural areas where equine owners rely on and use their animals for agricultural and livestock rearing. The main indirect economic benefits from working equids result from their role in enabling their owners to produce and transport agricultural and other outputs (e.g. grains, seeds, milk, meat, pottery) to be sold in markets or shops.

Dairy production is a primary example of the indirect economic benefits that working equine animals provide to their owners. The "missing mile" is a term used to refer to the first mile between small-scale dairy facilities and the nearest road from which the milk is collected. Working equids are commonly used in some less developed countries to carry milk across this "mile" often over rough terrain, to ensure that the milk can be collected and transported to cooperatives and market places.<sup>36</sup>

This was highlighted in the Voices from Women research by a number of focus group participants in Kenya and Pakistan, with women mentioning the use of working equids to transport the milk or rice to the market or to cooperatives for sale.<sup>37</sup> This vital contribution to livestock production is often unacknowledged.

## CASE STUDY:

During the Voices from Women research, we met Faith Wamarwa Kinuya, a 29-year-old farmer working in rice production in Mwea, Kenya. Faith's income is generated through using her donkeys. She buys unprocessed rice from farmers in her area, gets it processed and then sells it to retailers and private customers. This makes her business entirely dependent on donkeys as they carry the rice from the farms or farmers' stores to drying places, and later to the rice mills and market. She uses a capital of around Ksh 200,000 (US \$1,986) which enables her to buy 30 bags of rice weekly, later selling it at around Ksh 220,000 (US \$2,185), hence making a profit of Ksh 80,000 (US \$794) monthly.



Faith Wamarwa Kinuya, Mwea, Kenya

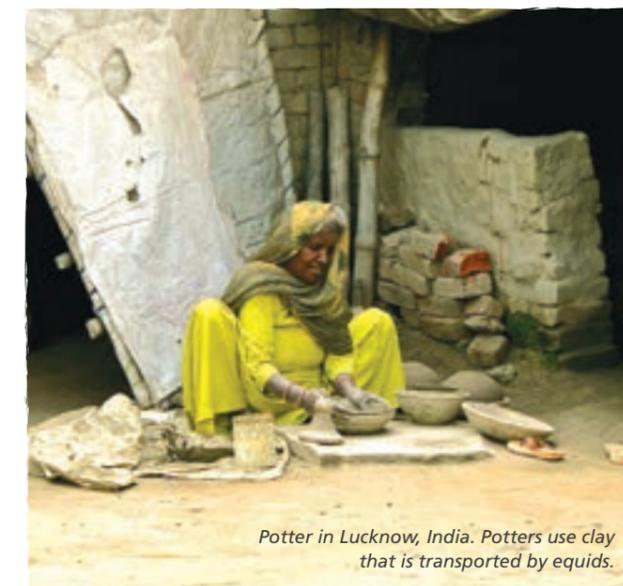
In addition women emphasised the importance of the equids to their dairy production business through their vital help in carrying water and feed to their bovines (cows and buffaloes). Without them, many households in developing countries would struggle to keep any livestock at all.

**"Farming is made possible by donkeys. All household animals rely on donkeys which are the ones carrying and bringing feed and water for cows, chickens, sheep and goats".**

(Voices from Women research participant, Tharuni's Women Group, Kenya)

Working equine animals also generate indirect income when used for ploughing and cultivation. The Arriaga-Jordan et al. study in the Highlands of Central Mexico<sup>38</sup> highlighted the use of horses and mules for the ploughing and cultivation of land by farmers who use their own animals. This includes draught power for ploughing the land but also carrying inputs such as manure and fertilisers needed in the maize fields. The researchers calculated the value of using animals (equids or bulls) for agriculture related tasks as US \$96.77/ha,

based on the costs of ploughing the land (US \$32.26 per hectare – 2 passes of the plough), sowing (US \$10.75), first cultivation (US \$10.75), second cultivation (US \$21.51), and the harvest of grain and straw (US \$21.51). They also deducted the costs of renting out ploughing teams (US \$10.75 per day) for farmers who did not own equids. The overall total gross mean income was US \$490.78 per farm per year.



Potter in Lucknow, India. Potters use clay that is transported by equids.

## CASE STUDY: HEA Pakistan

A rural HEA baseline carried out in Pakistan by the Brooke and FEG provides interesting data on the indirect income generated by domestic working equids. The assessment, carried out in North East Punjab in September 2013, identified five wealth groups: commercial equine owners, households relying on labour, crop and milk sales, and two wealth groups made up of households which both rely on crop and milk sales but which differ in the size of the cultivated land available to them. The 5th group identified, landless households, relies solely on labour.

The study found that working equids participate in the vast majority of tasks related to agriculture and livestock rearing carried out by three out of the five wealth groups.

The role of working equids in supporting owners in agriculture and livestock rearing activities makes their owners' income highly dependent on them. Through indirect income generation using their draught power, working equine animals support 100% of the annual income of households who rely on crop and milk sales. Similarly, they underpin 60% of annual income for households who rely on labour, crop and milk sales. Estimated gross annual income for these households ranged between PR250,000-900,000 (US \$2,500-9,000) per annum. These households were unable to estimate equine-related expenses since they could not disaggregate them from those relating to livestock.

In the area studied, a small proportion of households use equids for commercial purposes. These households' income is primarily derived from equine-related activities but supplemented to a variable extent by agricultural and/or industrial labouring activities. The study found that ownership and maintenance of equids, based on local practices, is relatively cheap and the return on initial investment (the purchase of the animal) is high.

Despite their substantial contribution to household income, recognition of even direct economic contribution of equids remains tacit for local households and as a result, only small amounts are spent on their equids' well-being. Whilst gross equine-related direct income for these households ranges between PR200,000-350,000 per annum (US \$2,000-3,000), reported equine-related expenses range between PR30,000-50,000 (US \$300-500) per annum, the bulk of which were represented by feed costs.



Donkey transporting grain, Multan, Pakistan

Evidence from the field such as the Voices from Women research shows that working equine animals are also used by their owners to access loan and credit. In this instance, owners take up loans with their equids as a security guarantee. A common way for

people to get a loan is by applying to social groups (including self-help and women's groups) of which they are members. Loans can be given for equid related expenses but also non-equid related household expenses for example for weddings or funerals.

## Working equine animals as money savers

The ability of households to save on expenses is also an important indicator of household income. Both domestic and commercial working equine animals play an important role in enabling their owners to make savings on costs they would have to incur if they did not have them.

Admassu and Shiferaw (2011) found that working equids (especially donkeys) saved money that would otherwise have been spent on other forms of labour or transport. Almost 100% of households who owned or kept equine animals used them in the homestead, leading to an average annual saving on homestead labour of US \$267. This estimate was based on the cost of paying for transporting goods, materials or people. Being the most undervalued equids, it is worth noting that the costs saved by households using their own donkeys for homestead purposes were larger than the costs saved using commercial horses and mules for domestic purposes.

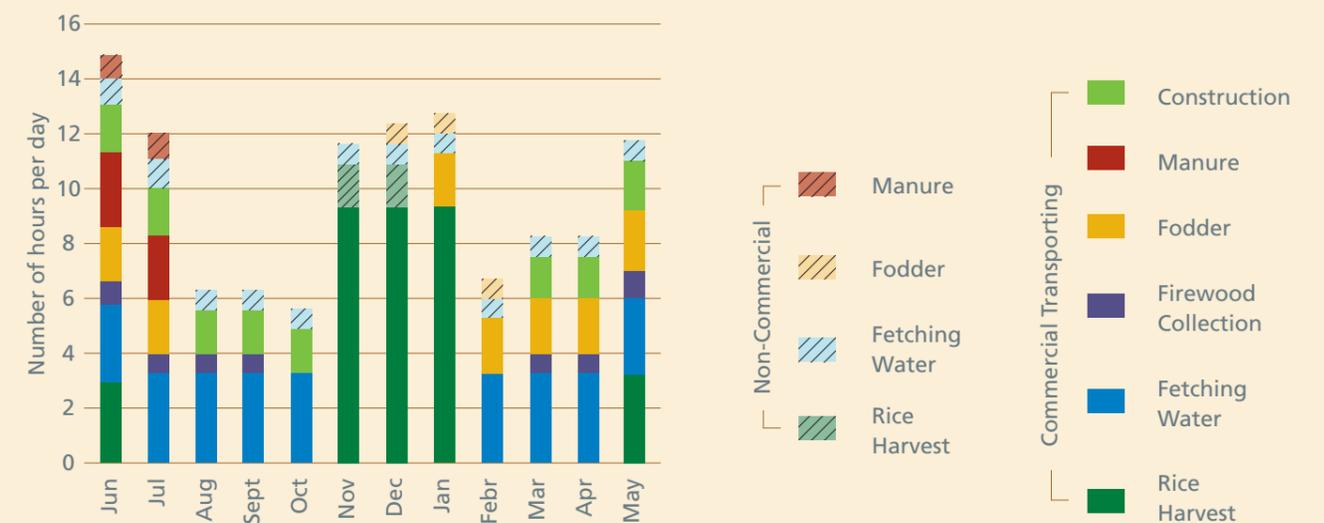
As part of the HEA study in Kenya, an attempt was made to quantify the monetary value of "non commercial" activities undertaken by commercial and domestic donkeys. This was based on the extrapolation of data for daily donkey rental rates collected during

community leader interviews. The figure below shows an average of the different activities (commercial and non-commercial) donkeys engage in on a monthly basis in the HEA Mwea Peri-Urban Sub-zone.

The monetary value of non-commercial activities performed by donkeys was estimated by summing the non-commercial hours donkeys work per month, and multiplying them by the average hourly rate of renting the donkey. The figure below shows an average of the different activities (commercial and non-commercial) donkeys engage in on a monthly basis.

The monetary value was estimated by summing the non-commercial hours donkeys work per month and multiplying it by the average hourly rate of renting the donkey. Given that the daily rental rate of donkeys is 300 Ksh (US \$3.09) and a day of work is approximately six hours, the hourly rate for donkey rental is estimated to be roughly 50Ksh (US \$0.51). If the donkey is engaged in non-commercial activities for 660 hours – that is the hours used per day multiplied by 30 days in a month and then multiplied by the hourly rate of 50Ksh – the approximate annual savings is roughly 33,000 Ksh (US \$339.65).

Commercial and Non-Commercial Hours Worked by Donkeys in Mwea, Kenya





# 3

## Invisible Livestock

The economic and inherent values of animal welfare

Another area where working equine animals enable households to save money involves using their manure as fertilisers for agriculture. As noted by Hassan et al.<sup>39</sup> for farmers in urban and rural areas in northwest Nigeria, “donkeys were the primary pillars in the farming system of smallholder donkey farmers. They provided manure to crops in both rural and urban areas. Manure serves as an alternative to chemical fertilizers, thereby lowering the cost of crop production”.

There is very limited quantitative evidence on the monetary value of use of manure from working equine animals (as well as other livestock). Arriaga et al. estimated that donkeys produce approximately 1.7 tonnes of manure dry matter (DM) per year for a 140 kg donkey. Applying this measurement to the farms studied the authors concluded that based on the draught animal inventories (equids and bulls) from the farms that participated in the study, farmers saved an average of

US \$56 per year on artificial fertilisers by using manure produced by equids and bulls, but did not break this down between the two species.<sup>40</sup> However referring to evidence from Ethiopia, the researchers also mentioned the problems of quantifying what they refer to as “a correct opportunity value for manure” of the additional positive effects of manure on organic matter in the soil.<sup>41</sup>

The economic contributions of working donkeys, horses and mules are unequivocal. These animals provide employment opportunities and generate a direct income for their owners. They also enable them to sustain their livelihoods by contributing to value chains in a number of industries which could not function without their draught power. Finally, they enable households to save money on a number of transport related expenses, benefiting families financially.



Donkeys carrying water, Mwea, Kenya

**“Animal Welfare means how an animal is coping with the conditions in which it lives. An animal is in a good state of welfare if (as indicated by scientific evidence) it is healthy, comfortable, well nourished, safe, able to express innate behaviour, and if it is not suffering from unpleasant states such as pain, fear and distress. Good animal welfare requires disease prevention and veterinary treatment, appropriate shelter, management, nutrition, humane handling and humane slaughter/killing’.”<sup>41</sup>**

World Health Organisation for Animal Health

Because the economic contributions of working equine animals to people’s livelihoods go largely unnoticed and unacknowledged by policy makers, the health and welfare needs of working donkeys, horses and mules are not addressed in policy and programmes. This increases the likelihood of very poor animal welfare outcomes, which negatively impacts on household incomes.

There is a large body of published and unpublished evidence on the welfare issues suffered by working donkeys, horses and mules using various models of welfare assessment.<sup>43</sup> These tools provide evidence on the type, severity and prevalence of welfare issues amongst working equine animals in various settings (e.g. rural and urban; hills and plains) and industry types.

For example, the Brooke has worked with Bristol University to develop a welfare assessment tool which is used to provide baseline data at population level using animal based indicators and to measure the impact of animal welfare interventions. More project specific indicators (at the animal level and the resource

input level) are also used, and participatory approaches helping equine owning communities to identify and measure changes in their animals’ welfare themselves are increasingly applied by equine welfare organisations.<sup>44</sup>

Working equine animals are subject to welfare problems which tend to be similar whether they are used for domestic and/or commercial purposes although their frequency and severity vary and depend on a range of factors including the setting they work in, the season, and whether they are used by owners or rented out.<sup>45</sup> Commercial equids’ welfare needs are also highly dependent on and influenced by the type of industry and environment they work in. Industries like the brick kilns<sup>46</sup> provide some of the toughest working environments for animals, just as they are some of the most hazardous places to work for people.

The factors associated with poor working equine welfare are multi-layered<sup>47</sup> and can be categorised as individual (animal), immediate, intermediate and underlying causes.

## Causes of Poor Animal Welfare



These factors have been explored in various studies<sup>48</sup> although the underlying causes of poor working equine welfare have received less attention. Some analyses have highlighted the negative impact of government policy on equine owners’ ability to work due to the constraints put on them in using equids to earn an income.

Hassan et al. noted that “the smallholder donkey farmers were constrained by the livestock development policy of the federal government of Nigeria because donkeys were not valued compared to other livestock species. The farmers lacked donkey drawn equipment (e.g. ridger, cart or wagon) to ease their work with donkeys.”<sup>49</sup>

In Ethiopia, Pearson et al. found that “one of the important problems donkey owners faced is that there is no separate route for donkeys in urban areas and as a result they share the roads with vehicles. Existing regulations of the Municipality does not support the victim’s household to get compensation for any accident. In general, the Municipality has a negative attitude towards donkeys in urban areas

due to the traffic jams and increased accidents.”<sup>50</sup> This is an example of how government policy not only directly affects equine owners’ ability to work but it also directly impacts on the welfare of working equine animals. Poor or inadequate traction equipment will lead to welfare problems for the animals including wounds. Similarly the lack of adequate legal frameworks for the use working equine animals as taxis and public transport (e.g. lack of registration of carts; lack of safety equipment) can lead to accidents.

In addition, the lack of attention and recognition of horses, donkeys and mules in the various sectors that they fall under such as livestock, construction, agriculture, transport, and tourism, directly affects their welfare. One of the most obvious examples is their exclusion from livestock health campaigns.

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.





Gharry horse, Halaba, Ethiopia

Many notifiable diseases listed by the OIE affect working animals, but they are not part of surveillance systems.<sup>51</sup>

Similarly, despite their significant impact on the animals and their ability to support people's livelihoods, little attention is being paid to the prevention and treatment of equine infectious diseases:

"Infectious diseases are an important constraint to the health and productivity of working equids. However, there are often limited or no data quantifying the occurrence, prevalence, and distribution of many infectious diseases in working equids in low-income countries. Many countries known to have large populations of working equids do not have an OIE official status for certain diseases, and many countries have no reporting history regarding many infectious diseases. Numerous viral, bacterial, fungal, and parasitic diseases affect working equids. These diseases are widely distributed and cause considerable morbidity and mortality (...) There are, however, considerable technical (e.g. lack of epidemiologic data), social-behavioral (e.g. limited equine-specific owner knowledge and education), and institutional (e.g. the low recognition of the role of working equids) impediments globally to reducing the burden of infectious diseases on working equids."<sup>52</sup>

Working equine animals are truly invisible at all levels of society, including to the eyes of governments from countries where equids are a critical element of value

chains, not least livestock and agriculture related businesses such as coffee, cotton and milk production.

## Considering the Multiple Values of Animal Welfare

The economic argument says that good animal welfare supports human livelihoods.

"Economists do see animal welfare as valuable and something to be incorporated into decision making. The obvious question is, therefore, how much is animal welfare worth? Is an improvement in animal welfare worth risking revenues or other benefits?"<sup>53</sup>

In the context of the economic contributions of working equine animals to households' economy, the value of animal welfare needs to be considered as it impacts on people's welfare. Animal welfare largely remains associated with physical health and animals thought of as commodities. For example, until 2015, domestic pets and farm animals had the same status as a sofa in the France Civil Code. They are now recognised as sentient beings capable of feeling pain, fear and distress, which commonly affects working animals and which also impacts on their efficiency.<sup>54</sup>

The economic argument for good animal welfare is simple: an animal in good welfare will deliver more and will earn more than an animal that is sick or injured. For households who rely primarily or solely on a donkey for example, the loss of that animal will have catastrophic consequences.<sup>55</sup>

Infectious diseases such as epizootic lymphangitis (EZL) have a direct impact on working equids and how they can support their owners and users to earn a livelihood. Although it has been eradicated from large areas of the world, EZL is still a major cause of morbidity and mortality in working equids in many countries, particularly in African nations. Bekele et al. examined the economic impact of epizootic lymphangitis (EZL) in cart mules in North West Ethiopia. The study found a significant difference in the capacity for working hours between EZL-infected and non-infected mules, which translated in to a reduction of daily income.<sup>56</sup> Yet, as stated above, infectious diseases are one of the neglected areas of working equine welfare.

Feeding is another area that impacts on an animal's efficiency and performance. A Brooke India study found that optimising feeding practices by development of a balanced feed formula led to owners reporting improvement in the welfare status of their horses and mules and enhanced energy levels and alertness and was also cheaper for the owners.<sup>57</sup> In this example productivity of an animal was measured as time taken to complete a specific work task and carrying capacity.

However, is the economic argument strong enough for owners to consider the welfare of their working animals, and what do they prioritise? Devereux has explored the economics of animal welfare in the context of food production livestock in Africa, and argued that the importance given to welfare by owners in terms of economic return is largely based on "implicit or explicit cost-benefit calculations" made by the owners.<sup>58</sup> This means that owners are more likely to address the obvious or most visible elements of welfare such as feed because they can see the return on investment immediately. However, if the return on investment is not obvious or the investment exceeds the economic benefits they may not address the welfare problems, one explanation being that households live from one day to another on the money they earn and may not be able to make that longer-term investment. Devereux gives the example of infectious diseases but it is argued that this perception is applicable to a range of preventative measures such as deworming. Evidence on poor equine welfare and efficiency

remain limited, which compounds the lack of importance given to animal welfare amongst owners, users at the community level and policy makers.

As stated by Maria, "Economic incentives are likely to be one of the most effective ways of raising animal welfare standards."<sup>59</sup>

"An important emphasis has been placed on the need to change attitudes of people towards their donkeys in terms of social status and animal welfare. Social status can be enhanced by highlighting the contribution that donkeys make to household economies and better donkey welfare can be prompted through low or preferably zero cost to the end users.

**End users are unlikely to adopt any interventions unless there is a significant benefit over cost, little or no opportunity cost and no perceivable impact on risk.**<sup>60</sup>

It is worth noting that whilst poor feeding and lack of preventative measures are common factors of poor welfare, deliberate harmful activities that impair animal welfare are often motivated by false interpretations of economic or cost efficiency. One example is the very common assumption that donkeys are lazy and stubborn and therefore need to be beaten or whipped to make them move and go faster. Not only is this untrue, but the stress, injuries, and pain inflicted on the animals will impact on their productive life.

"A well-cared for donkey can work for up to 40 years; if that donkey works six hours a day, four days a week this can amount to 50,000 hours of work...A prerequisite (is) calculating the value of donkeys and ensuring they give a proper return for cost. Not by overworking them and thus reducing their efficiency or being so uncaring as to reduce their life-span, but by ensuring maximum health and ability to work, since work is their most valuable contribution."<sup>61</sup>

At a policy level, the economic value of working equine animals can provide a strong entry point for raising their profile. It is an argument that is more likely to resonate with policy and decision makers as well as other stakeholders who see working animals as a means to an end; that is to support household and country economies. It is therefore important that existing evidence be shared more widely with policy makers and implementers engaged in livestock and livelihoods, and that more data also be generated in order to inform a response that benefits the animals and respond to the needs of their owners.



## The intrinsic value of animal welfare: working equids as sentient beings

Whilst good animal welfare may make sense economically, it also has an inherent value. Working equine animals are sentient beings, and whilst the purpose of those animals is not called into question – they are “animal workers” – they are not machines, and as such have limitations and needs, which need to be considered.

The inherent or non-economic value of working equine animals is reflected in the way some owners and users treat the animals, addressing their welfare needs and problems because they do not want their animal to suffer. The costs of doing so may benefit the owners economically, but the costs of ensuring good welfare may also be higher than the economic benefits,<sup>62</sup> although ultimately, a healthier and happier animal is likely to bring benefits to their owners not only in terms of work performance, but also by supporting them with a range of domestic chores and facilitating “social connections” within their communities.

Yet animal welfare is currently a poorly understood concept in less developed countries and something that poor households may perceive as unnecessary or trivial when they are struggling. It is the role of NGOs like the Brooke as well as governments to ensure that communities understand that some of the most prevalent poor welfare factors can be addressed through cheap or even free measures, including changes in handling and management practices.

The lack of understanding or recognition of the importance of the intrinsic value of animal welfare is also widespread at the policy level.

Yet a change in perception and understanding of the intrinsic value of horses, mules and donkeys is a critical step towards addressing their welfare needs as working animals and livestock.

At the institutional level, animal welfare policy and legislation including for working animals remain inexistent or poorly implemented.

World Animal Protection’s Animal Protection Index (API)<sup>63</sup> which ranks 50 countries according to their commitments to protect animals and improve animal welfare reveals the overall weak and inadequate legal and policy environment in countries with the largest number of working equine animals. Through policy and legal gap analysis in some of the countries where the Brooke works, we also know that whilst a number of countries have initiated legislation on animal welfare, most of the proposals have been waiting for approval by the relevant Ministers or Parliaments for several years. In addition, in some cases, animal welfare legislation does not expressly include working animals (and draught animals), another example of where they are invisible.

There are some rare but positive examples of changes that authorities have made to the conditions of working equids. One comes from Halaba in Ethiopia, where the government working with Brooke Ethiopia, established an animal welfare by-law which authorised the euthanasia of abandoned gharry horses left to die in terrible conditions.

## **CASE STUDY: Euthanasia and the Animal Welfare by-law in Halaba, Ethiopia.**

Gharry horses are used in the town of Halaba in the Southern Nations, Nationalities, and Peoples' Region (SNNPR) of Ethiopia. They are usually hired out to users who drive them and provide transport services to customers. The welfare and working conditions of the gharry horses are extremely poor with the animals being chronically overloaded and overworked and poorly treated. One of the reasons is that the animals are primarily used by taxi drivers who rent them rather than own them so they can hire any they want and do not have an incentive to take care of the individual animal. Animals usually suffer from wounds, lesions, and spinal pain, are undernourished and are afflicted by various untreated diseases. A Brooke welfare assessment of gharry horses and donkeys in Halaba carried out in June 2013 concluded:

"The gharry horses were worst (and often far worse) of all equine groups for all of the following assessed parameters, and the assessor considered these animals to be in the worst condition of any group of working equine animals observed in any country context to date".

When the animal can no longer work, they are abandoned by their owners in the rubbish dumping area of Halaba market or by the side of the road. Some spend years suffering from painful and debilitating diseases and are left to fend off predators such as hyenas. Brooke Ethiopia worked with Halaba town municipality for several years in order to set up a euthanasia project for abandoned horses. This was a long process, which involved dealing with difficult and sensitive cultural issues but led to the Municipality issuing an animal welfare by-law authorising the euthanasia of abandoned horses in Halaba, without the consent of the owner. In July 2014, the Municipality started implementing the by-law. Eleven horses who had been abandoned, some for years, were put to sleep. This project is to continue to ensure that abandoned horses do not suffer and will be complimented by community engagement work to prevent abandonment.

In this case, the by-law was based on the inherent value of working horses and it did not have economic implications for the owners who had abandoned the animals as they could no longer work. But it also shed light on the necessity to work with communities and the authorities to foster a preventive approach to the welfare and health problems of the animals, and to highlight the positive contributions of the animals to their owners, users (taxi drivers) and the municipality.

It may be assumed that promoting the inherent value of animals will jeopardise the economic benefits from using them when in fact the health and welfare of the animals are paramount to them being able to provide services efficiently and for a number of years.

Experience from the field indicates that there are positive economic consequences to addressing the health and welfare needs of working equine animals with interventions that are cost-effective.

Handling is one area whereby improvement in welfare is down to the physical interaction of the handler with the animal. Improving the way owners and users interact with working donkeys, horses and mules will reduce the stress on the animals and will make the animals easier to manage. Stopping painful and harmful practices such as inappropriate hobbling and tethering, nostril slitting, firing and ear cutting do not have a cost on the owners but have an immediate impact on the welfare of the animals. Just as in the case of the gharry horses in Halaba, policy makers can support action to stop those practices by introducing and implementing supportive law, policy and programmes, including awareness raising campaigns.



# 4

## Invisible Livestock

### Conclusion and Recommendations

*Equids transporting goods for people living in remote areas, Nepal*



## Conclusion

The relationship between working equine welfare and human livelihoods is evident when one considers the economic contributions of working horses, donkeys and mules to household economies, and by extension national economies. They provide employment opportunities for hundreds of millions of people and a number of industries in rural and urban settings rely on their draught power to operate.

**“To the whole world it might be only a donkey, mule or horse, but for the poor owner it is the whole world.”**

*Ganesh Pandey, Convener, Shramik Bharti, a community development organisation in Kanpur, India.*

The documented evidence available on the financial contributions of working equine animals to household incomes, although still limited, provides an unequivocal picture of the versatility and critical role that those animals play in household incomes. Whether it is transporting people and goods for a fee, carrying feed and water for small ruminants and bovines, ploughing and cultivating land, providing and transporting manure, transporting construction materials, or being used domestically by families for transport, working donkeys, horses and mules make a significant contribution to and support people’s livelihoods.

Yet, working equine animals are invisible to policy makers and implementers, nationally, regionally and internationally. Because they do not produce food outputs, they are undervalued and perceived as of secondary importance in livestock policy and programmes. In addition, and particularly in the case of donkeys, they are often seen as anachronistic and an obstacle to progress. The policy, legal and institutional framework for working equine animals is weak and inadequate, therefore unable to address their health and welfare needs. Horses, mules and donkeys suffer from chronic poor welfare which not only leads to physical and mental suffering but also impacts on their efficiency. As a result both the economic and inherent values of working equine welfare are compromised.

Better working equine welfare is not just about the animals; it is also about the people and countries who rely on them. Animal and human welfare should not be seen as separate and unconnected spheres. Instead the emphasis should be on understanding and better articulating the linkages between them and connecting the dots.

A number of actions can help us move forward towards a more coordinated, integrated and collaborative approach that benefits both the animals and people. This starts with increasing awareness, knowledge and evidence of the role of working equine animals in people’s livelihoods, and the recognition that the economic and inherent values of working equine animal welfare must be considered as a whole to optimise the balance between human benefits and animal benefits.

Finally, whilst this report put emphasis on the economic contributions that working equids provide it is not intended and should not be seen as a call for increased use of those animals. The livelihoods of equine owning communities must ultimately be enhanced and improved through the diversification of income generating activities and access to modern technological inputs. Their needs should therefore be included in debates and policy development on livelihoods diversification.

# Recommendations

## 1.

### Inclusion of working equine animals in livestock policy and programmes

Working donkeys, horses and mules should be explicitly included in livestock policy and programmes. If they are not defined as “Livestock”, horses, mules and donkeys should be defined as “working animals” and their needs be addressed accordingly in policy and programme development and implementation.

Sector specific policies such as transport, agriculture and rural development, and construction should be “working equine welfare friendly” and incorporate the roles and subsequent needs of horses, mules and donkeys. By doing so they will lead to the consideration of the needs of the families who rely on them day in day out.

## 2.

### Increased visibility of working equine animals in data collection and research

The data presented in this report show that working equine animals make significant contributions to individual and national economies through their role in an extensive number of industries in rural and urban settings. The economic value of animals should not be solely measured by the food outputs they produce.

Working donkeys, horses and mules are livestock and contribute to supporting the livelihoods of hundreds of millions of people. Although this has not been quantified, experiences from the field show they also are making a significant contribution to national industries in several countries. They should therefore be included in livestock and livelihoods collection data tools and reports, and in studies on the GDP contributions of livestock. An example of a positive development around this is the inclusion of working equine animals in an increasing number of HEA baselines carried out by the Food Economy Group – a leader in livelihoods-based household food security analysis.

## 3.

### Reconciling the multiple values of working equine welfare

Working equine welfare and human welfare are inextricably intertwined. The economic and inherent values of working equine animal welfare should be seen as complementary. The welfare of working donkeys, horses and mules should also not be seen as secondary but part of a holistic and sustainable response to poverty alleviation.

Greater collaboration and understanding between animal welfare and development stakeholders is needed to foster cross-sectoral and complementary strategies and interventions that reflect the linkages between animal workers and human workers.

## 4.

### Greater political commitment for working equine welfare

OIE Member States must adopt the forthcoming OIE Standards for the Welfare of Working Equids and show leadership in implementing them. The implementation of the Standards must be driven by a critical understanding of the roles and contributions of working equine animals, and the involvement of stakeholders which can provide technical expertise and support to the government and its partners.



*Donkey in brick kiln, Sukkur, Pakistan*

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