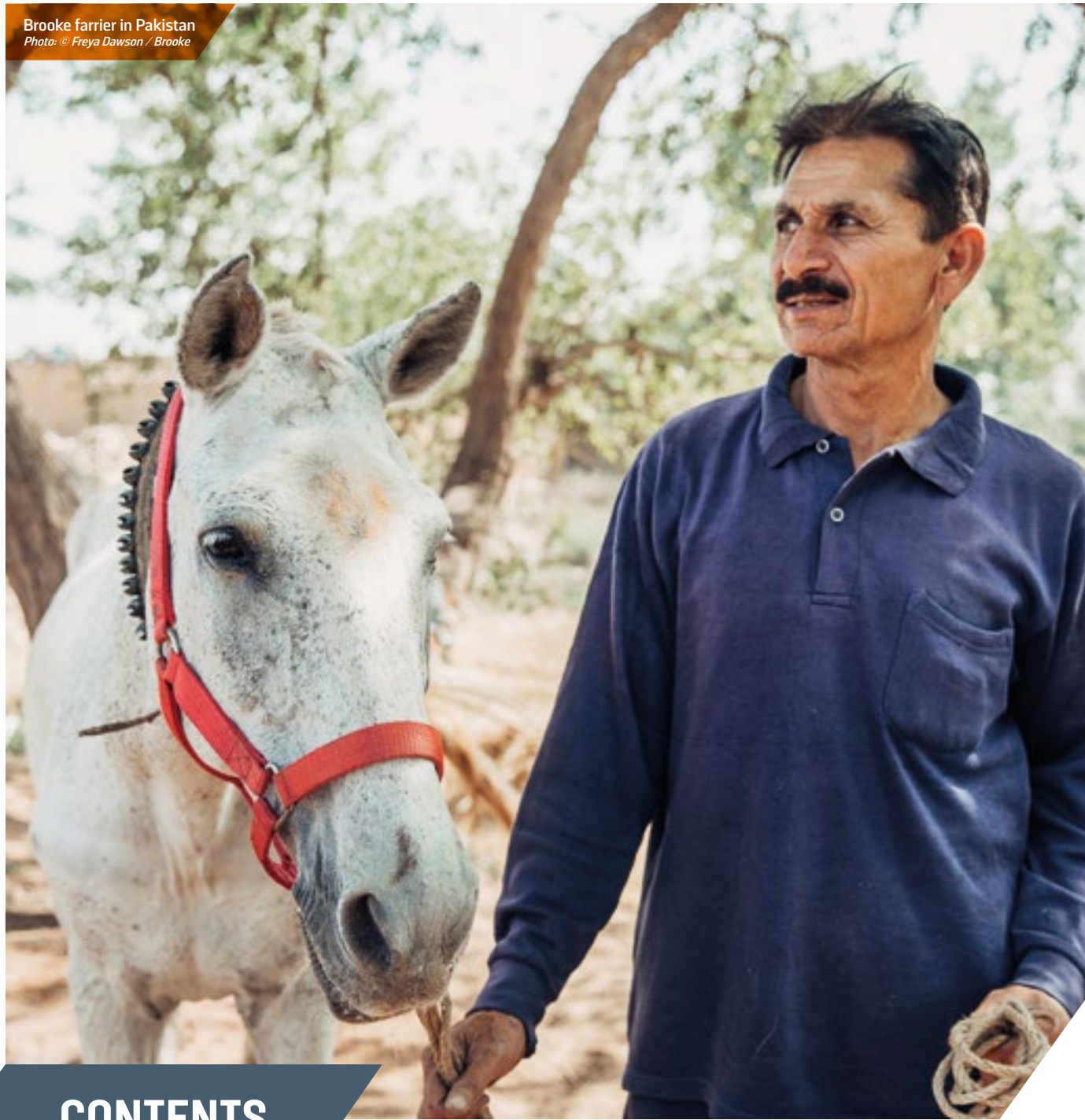




RESEARCH REVIEW

Introducing Brooke's
Global Research Programme
and Highlights of 2019



CONTENTS

- 03 Welcome
- 04 Introduction to research at Brooke
- 06 Key research projects
- 08 Case study 1 Research into use
- 10 Case study 2 Research partnerships
- 13 Ethics in research
- 14 Publications and conferences

INTRODUCTION

Welcome to Brooke's first Research Review.

Brooke's mission is to transform the lives of vulnerable working horses, donkeys and mules around the world. We do this by working with equine-owning communities – supporting them to have the knowledge, skills and resources to look after themselves and their animals; and strengthening animal welfare systems – supporting quality service provision along with the policies and laws that enable it.

We are committed to ensuring that the work we do and the approaches and policies we advocate are evidence-based.

In this review, we share our research related achievements and learnings from 2019.

A highlight was the establishment of new research partnerships, reflecting the appetite within Brooke and our partners to forge collaborations and address issues of shared concern. Over the year we successfully refined our approach to working with both programme and academic partners. This has resulted in new positive working relationships and the identification of learnings which we are using to improve existing and grow new partnerships.

We are particularly pleased with our relationships with universities who value our access to communities and deep local knowledge. The case study on page 10, which sets out our work with the University of Liverpool in Gambia, Senegal and Ethiopia illustrates this.

Putting research into action has been another success. Research outcomes are shaping our influencing work and are helping to ensure that the policy recommendations we make are underpinned by robust evidence. Our work on the use of donkeys in Karachi's waste management system on page 8 showcases this approach.

Looking forward we affirm our commitment to deliver research and learning that contributes to growing the body of evidence and knowledge that supports our work and the equine, animal welfare and international development sectors more broadly.

The newly created Strategic Partnerships, External Affairs and Research Department at Brooke, which I'm delighted to be leading, embodies our commitment to bring all these functions together to grow our partnerships and influence, underpinned by robust evidence.

The world's vulnerable equines and the communities that rely on them deserve nothing less.

Joseph Nhan-O'Reilly
Head of Strategic Partnerships, External Affairs and Research

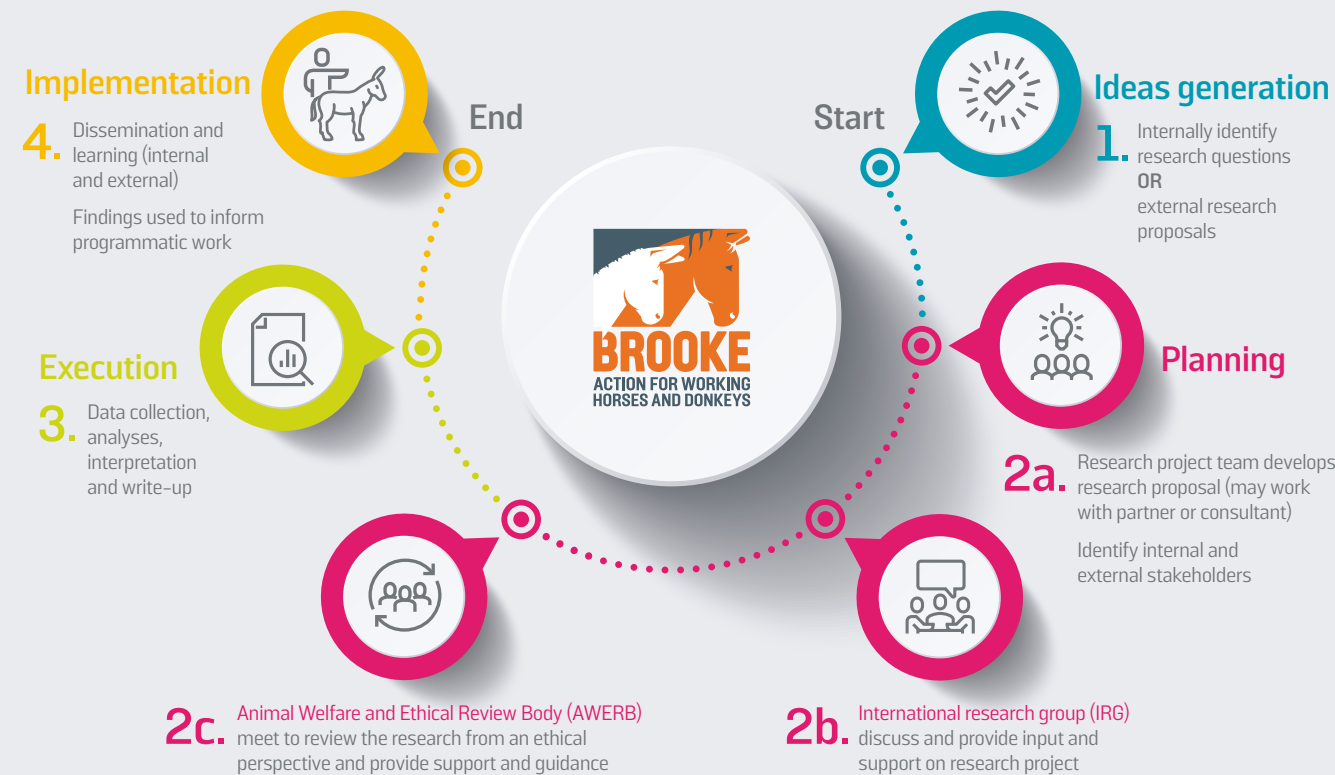
INTRODUCTION TO RESEARCH AT BROOKE

DEVELOPING EVIDENCE-BASED PROGRAMMES

Research is an integral part of Brooke's work. Our dedicated research function was created in 2002 to recognise our increasingly evidence-based approach. We use research, alongside other types of evidence, to make evidence-based programmatic decisions and develop messages for our advocacy and communications work. See our Research Process Infographic (Figure 1) for further information about how our research projects are developed. Our in-house programmatic research is focused on finding solutions

to support our committed teams working across Africa, Asia, Central America and the Middle East. Because Brooke's colleagues in-country are at the forefront of our work, they know the most pressing challenges being faced and are often best placed to identify new research questions. Whether in improving animal healthcare practices, engaging local communities or guiding policy decisions, working with colleagues ensures our findings are well-grounded and can be applied.

BROOKE'S RESEARCH PROCESS



ABOUT BROOKE

Brooke is an international animal welfare charity dedicated to improving the lives of working horses, donkeys and mules in low- and middle-income countries. We work with owners, users, caregivers, wider communities and governments to make changes that will directly improve animal welfare.

WORKING IN PARTNERSHIP

Brooke is proud to work in collaboration with academic and research institutions, other international NGOs and external consultants. Such partnerships allow us to gain new perspectives and skills, and increase our capacity to undertake robust research. Our collaborators are multidisciplinary and international, which ensures we engage the best expertise and are in-tune with the needs of each local context.

CHAMPIONING DIVERSITY AND INCLUSION

Brooke's International Research Group, comprised of Brooke staff with a range of roles, backgrounds and expertise from around the world, forms a community hub for our research activities. The group holds two key values: celebration of the diversity of research expertise available within Brooke; and inclusion of different voices (representing a variety of local contexts and including both non-research and research team colleagues) in our projects. The group aims to ensure that Brooke's research portfolio is joined up and that the work is carried out using best practice.

"Our International Research Group is now two years old and throughout 2019 has been a hub of activity. This has been an inspirational year of sharing ideas, expertise and experiences of conducting research in the field, with all of its complexities and challenges. Our research community is working as a team more than ever and makes me proud to work at Brooke."

Ruth Jobling,
Research Coordinator, Brooke, UK

"During 2019, we consolidated and improved Brooke's research process, allowing us to further inform our programmatic work based on robust evidence."

Mactar Seck,
Programme Manager, Brooke, Senegal



Veterinary assessment in Senegal
Photo: © Justice Nnyigide / Brooke

KEY RESEARCH PROJECTS

Brooke's research team developed the following projects in 2019, often working in partnership with universities and external consultants.



Coal mine worker in Pakistan
Photo: © Freya Dowson / Brooke

CASE STUDIES

CASE STUDY 1

RESEARCH INTO PRACTICE DONKEYS IN KARACHI'S WASTE MANAGEMENT SYSTEM

In low- and middle-income countries equids play a critical role in supporting people's livelihoods. In Karachi, Pakistan, donkey carts are frequently used to transport building materials, commercial produce and household waste. However, the role that donkeys play in the city's waste management system is rarely recognised by policymakers and has received little attention to date. Brooke's research team in Pakistan set out to address this by studying the role and welfare of cart donkeys, aiming to understand the challenges that communities face and help develop appropriate interventions at a community level.

Our researchers conducted interviews with 200 donkey owners who use their animals for waste collection and also administered surveys with 50 households who had their waste collected by cart donkeys. Interviews were conducted with town committee members and animal healthcare professionals. The welfare of 204 donkeys was assessed using the Standardised Equine-Based Welfare Assessment Tool (SEBWAT).



Donkey cart in Karachi, Pakistan
Photo: © Syed Zahir Ali Shah

KEY FINDINGS

Results from the research showed that:

- Donkeys and their owners play an important role in the collection of waste in the city, with customers who employ donkey cart owners reporting this to be their preferred and most prevalent method of household waste collection.
- Waste collection by donkey-pulled carts presents a livelihood opportunity for some of the poorest communities. For nearly 90% of donkey cart owners, collection of waste was their primary income source.
- Several household members, including men, women and children, are involved in waste collection. 62% of these were reported to be under 18 years of age.
- The welfare of donkeys used in waste collection was reported to be poor, with 78% suffering from muzzle mutilations and 67% with knee lesions.

RESEARCH IMPACT

This is one of the first peer-reviewed socioeconomic studies on working animals within a municipal waste management system, and yet the use of donkeys to collect waste is a global problem, prevalent in many low and middle-income countries. Our hope is that this project encourages future research into this neglected area. We recommend that a necessary first step is for the local government to recognise the critical role that donkey cart owners play in the waste management system in Karachi.

Our work has been presented and well-received at several international conferences, including the third Global Summit on Waste Management and Recycling held in Berlin in December 2019. In addition, in April 2019 our team in Pakistan used findings from the project to launch a policy brief, with representatives from civil society organisations, INGOs, local government and funders attending the launch event.

Brooke Pakistan's advocacy and regional teams are engaging potential partners from both the public and private sectors to identify areas of mutual collaboration based on the research findings. Together, we aim to plan and design interventions on issues such as animal health and welfare, poverty alleviation, waste management, environmental safety, and access to water, sanitation and education.

"This research not only highlights the role of cart donkeys in the waste management system but also unearths poor animal health and welfare, poor healthcare provisions for donkeys, and poor health and hygiene conditions for people. It also reveals the prevalence of child labour and lack of access to basic services such as drinking water, health and education for marginalised waste management communities. It is encouraging that our research has caught the attention of a number of Karachi's government departments and INGOs, compelling them to think and act collaboratively."

*Syed Zahir Ali Shah, Senior Researcher,
Brooke, Pakistan*

CASE STUDY 2

RESEARCH PARTNERSHIPS TACKLING EPIZOOTIC LYMPHANGITIS

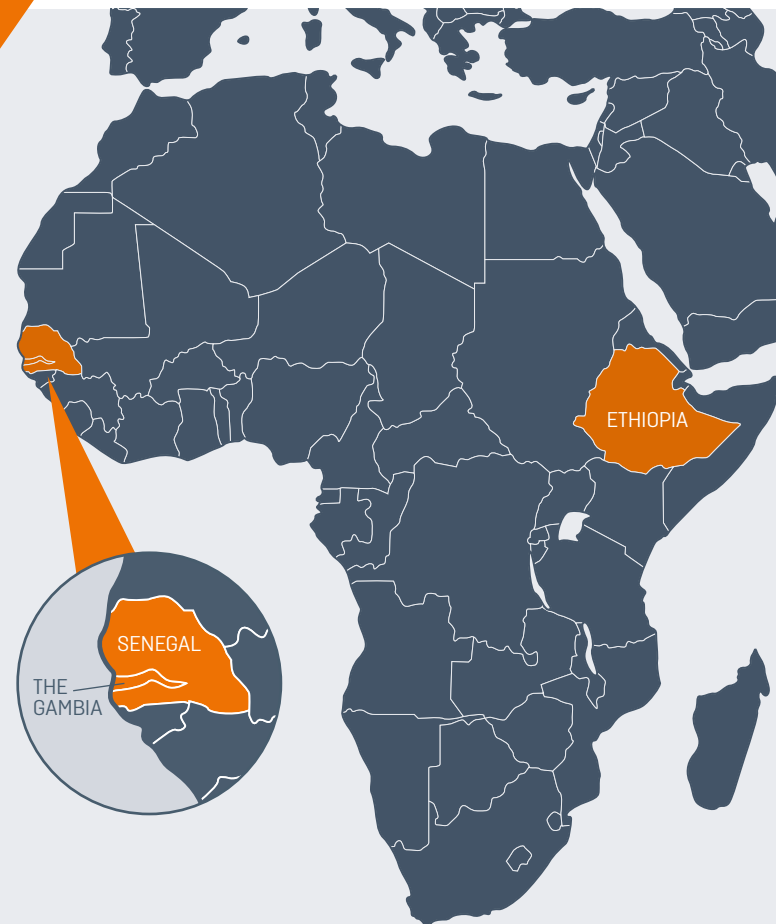
Epizootic lymphangitis (EZL) is a highly contagious fungal infection, caused by the fungus *Histoplasma*, which is a major cause of disability amongst equids in Sub-Saharan Africa. Symptoms include skin nodules and abscesses along the neck and limbs that can erupt and discharge a thick yellow pus. This causes swelling and lameness, swollen glands and in some cases eye and respiratory disease. The disease can lead to horses having to be euthanised as treatment is often not available or ineffective in the late stages of the disease.

The disease spreads easily when a vulnerable animal contacts other infected animals or equipment. As the majority of equids in Sub-Saharan Africa are essential in supporting people's agricultural or transport-based livelihoods, an illness such as this prevents animals from working and can have a critical impact on a family's income.

AN AMBITIOUS COLLABORATION

Brooke is partnering with the University of Liverpool, Society for the Protection of Animals Abroad (SPANA), The Gambia Horse and Donkey Trust and other academic institutes and INGOs, on a five-year Wellcome Trust funded project to investigate the epidemiology and ecology of EZL.

The study aims to contribute to the development of contextually relevant disease control strategies in Ethiopia, The Gambia and Senegal. The research will explore how EZL is transmitted. We will be gathering information about the management of animals, alongside environmental and clinical samples. Through analysis of animals with and without EZL, we will establish the main routes of infection, investigate whether particular strains of *Histoplasma* are contributing to disease patterns in these countries, and examine any similarities between *Histoplasma* species that infect horses and people.



The programme brings together a global multidisciplinary team. Led by the University of Liverpool, Brooke and SPANA field staff are directly co-ordinating sampling, diagnosing and treating cases in Ethiopia and Senegal. Gambia's Department of Livestock Services and The Gambian Horse and Donkey Trust are coordinating the research programme in their respective country. Other partners providing expertise and facilities include the National Veterinary Institute in Ethiopia, the College of Veterinary Medicine and Agriculture at Addis Ababa University, the Histoplasmosis Laboratory at Ohio State University, and the Global Health Group at North Carolina University.

These partners all bring different expertise, experience and value to the programme. It is anticipated that by working together as part of a strategic research partnership, the programme will have the capacity to gain a much better understanding of the disease.

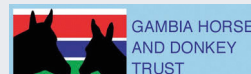
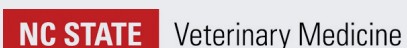
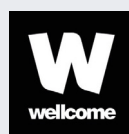
PROGRESS DURING 2019

This year saw the completion of the project set-up phase, which involved recruiting personnel, setting up laboratory facilities, and arranging the systems and processes to manage this large and ambitious programme. Ethical approval has been granted by Brooke, and is currently in progress with in-country institutes and the University of Liverpool. Questionnaires and data collection tools have been developed and research teams in Ethiopia and The Gambia have conducted sensitisation trips among a range of potential study sites to introduce the programme to regional veterinary and community officials. This is an important step in integrating the research within existing animal health pathways in each country.

Our team is currently considering methods to encourage participant engagement with the study over a sustainable period of time. Data collection for a one-year population-based study is scheduled to start towards the end of 2019 and will continue into 2020. Furthermore, over the last year we have recognised the potential of this research programme to support veterinary and livestock health students at universities and colleges in Ethiopia and The Gambia. By providing practical opportunities to learn laboratory techniques for disease diagnosis, research methods and equine health, the programme is inspiring and equipping the equine health professionals of the future.

"I am particularly proud of the national research teams who, over the past 15 months, have worked hard to develop a solid groundwork to enable this programme to be rolled-out in complex environments. They have worked alongside regional institutions, supported by the best placed international collaborators, so this project is in a strong position to tackle this neglected and challenging disease for the benefit of farmers, horse-owning communities and the horses themselves. The results generated from these studies aim to provide practical evidence to support the development of sustainable disease control strategies."

Dr Claire Scantlebury, Histoplasmosis Programme Director, University of Liverpool, UK





Coal mine in Pakistan
Photo: © Freya Dawson

ETHICS IN RESEARCH

Brooke's research involves both animal and human participants. While there is no legal requirement for our research to pass through an ethical review body, the consideration of ethics during our research contributes to the culture of care at the heart of all we do. In addition, an ethical review process enhances Brooke's credibility and enables us to publish and present our findings externally, where the expectation of ethical review is increasingly commonplace.

In 2017 Brooke established its own internal Animal Welfare and Ethical Review Body (AWERB), which aims to support the effective delivery of ethical research carried out by Brooke staff, consultants or research partners. Our AWERB comprises several internal and external regulatory frameworks and provides a supportive environment for discussion on ethical issues. Responsibilities of the group include reviewing submitted research proposals from our International Research Group and providing ethical training and guidance. In 2020 we are also planning to introduce retrospective reviews of completed research projects.

As an advisory and supportive group, the AWERB aims to be transparent with researchers about ethical decisions and protocols during research and aims to encourage researchers to see the value that ethical approval can provide to a piece of research. The group anticipates to increasingly see more ethical and high quality research proposals next year.

"Participation in Brooke's AWERB is voluntary and those who contribute really enjoy and gain from membership. The AWERB has also inspired other organisations to develop their own ethical review processes, demonstrating to us and our donors that Brooke delivers credible, high-quality work. As AWERB Chair, I hope we continue applying what we learn to improve the research Brooke produces. I'm proud the membership is developing a culture that cares about fair treatment of animals and people, as well as benefits over harm."

Kimberly Wells, Global Animal Welfare Senior Manager and AWERB Chair, Brooke, UK

PUBLICATIONS AND CONFERENCES

PEER-REVIEWED PUBLICATIONS

Selected studies have been published in key scientific journals, increasing the visibility of our research and sharing our results and conclusions with the academic and other professional audiences.

Carder, G., Ingasia, O., Ngenoh, E., Theuri, S., Rono, D. & Langat, P. (2019). The Emerging Trade in Donkey Hide: An Opportunity or a Threat for Communities in Kenya? *Agricultural Sciences*, 10 (09), 1152–1177

Mohite, D.S., Sheikh, C.S., Williams, S.D., Compston, P.C. (2019). Evaluation of Medical Management of Ocular Setariosis in Equids in India. *Indian Veterinary Journal*, in press.

Mohite, D.S., Sheikh, C.S., Compston, P.C., Jobling, R., & Upjohn, M.M. (2019). Prevalence of Heat Stress in Equids Working in Brick-kilns in India. *Indian Veterinary Journal*, 96 (08), 32–35

Mohite, D. S., Sheikh, C. S., Singh, S., Kalita, J., Williams, S., & Compston, P. C. (2019). Using Qualitative Methods to Explore Farrier-Related Barriers to Successful Farriery Interventions for Equine Welfare in India. *Animals*, 9 (5), 252

Shah, S. Z. A., Nawaz, Z., Nawaz, S., Carder, G., Ali, M., Soomro, N., & Compston, P. C. (2019). The Role and Welfare of Cart Donkeys Used in Waste Management in Karachi, Pakistan. *Animals*, 9 (4), 159

Star Brilliant Donkey Export Abattoir, Naivasha, Kenya

Photo: © Petteerik Wiggers



THE EMERGING TRADE IN DONKEY HIDE: AN OPPORTUNITY OR A THREAT FOR COMMUNITIES IN KENYA?

Donkey hides are used in a form of traditional Chinese medicine called ejiao. Africa's donkey population is a key source of the trade, with Kenya being particularly affected. This study (Carder et al. 2019) aimed to explore the potential impact of the donkey hide trade on smallholder farmers' livelihoods in Kenya. 62.5% of household survey participants reported that due to the loss of their donkey they faced higher costs in transporting farm produce, water and firewood. In addition, many focus group participants reported that they had previously sold their donkeys to raise money for school fees or medical bills. The results suggest that smallholder farmers in Kenya are selling their donkeys for an initial boost in income, but long-term this is unlikely to provide a sustainable livelihood.



Research poster presentation at the 7th Pan Commonwealth Veterinary Conference in Bangalore, India.

Photo: © Anna Marry



Shereene Williams, Brooke UK, presenting at the 7th Pan Commonwealth Veterinary Conference in Bangalore, India.

Photo: © Anna Marry

CONFERENCES

During 2019 Brooke's team attended a number of international conferences where we presented our work, engaged with key stakeholders and conducted workshops. For example, at the 7th Pan Commonwealth Veterinary Conference in March 2019 in Bangalore, India, we presented research on the impact of glanders on livelihoods in India's brick kilns, the role and economic contribution of working equids in Afghanistan, and the socio-economic impact of the donkey hide trade on women in Kenya.

We also provided technical sessions at the 7th All Africa Conference on Animal Agriculture in Accra, Ghana, in July

2019, alongside presentations of research on the threat of the donkey hide trade, aiming to prompt action from the audience of agricultural researchers and private sector representatives. In addition, at the Animal Welfare Research Network Conference in September 2019 in Bristol, UK, Ali Jameel from Brooke Pakistan gave a plenary talk on animal welfare challenges and opportunities in Brooke Pakistan's operational areas. Colleagues from our UK research and animal welfare teams ran a workshop on our compassionate handling programme. We also exhibited our virtual reality headsets, where delegates could experience what life can be like for animals and people working in a brick kiln in Pakistan.

BROOKE'S RESEARCH TEAM

ETHIOPIA

Alemayehu Hailemariam Programme Development and Quality Assurance Manager

INDIA

Sarita Negi Team Leader Animal Welfare & Research

KENYA

Desmond Rono Knowledge Management and Research Officer

NICARAGUA

Fredred Valdivia Programme Manager

PAKISTAN

Syed Zahir Ali Shah Research Coordinator

SENEGAL

Mactar Seck Programme Manager

UNITED KINGDOM

Gemma Carder Research Coordinator

Marcela Randau Research Coordinator

Ruth Jobling Research Coordinator

For more information on our research work or to discuss a potential research partnership with us, please contact the Research Coordinators Dr Marcela Randau or Dr Ruth Jobling via research@thebrooke.org



Women and horse cart in India

Photo: © Atul Loke / Panos Pictures



Brooke

2nd Floor, The Hallmark Building, 52-56 Leadenhall Street, London, EC3A 2BJ

Tel: +44 20 3012 3456

www.thebrooke.org

Registered charity No: 1085760