



MEETING REPORT

UK BUSHMEAT WORKING GROUP

Understanding bushmeat practices and changing behaviour

21st March 2012, 1000-1600

Council Room, Zoological Society of London (ZSL)

Attendees

Hannah Thomas	ZSL Conservation Programmes
Juliet Wright	ZSL Equatorial Guinea
Marcus Rowcliffe	ZSL Institute of Zoology
Paul de Ornellas	ZSL Conservation Programmes
Sarah Papworth	Imperial College London
Ana Nuno	Imperial College London
Amy Preston	Imperial College London
Lauren Coad	University of Oxford – Environmental Change Institute (ECI)
Sylvia Wicander	University of Oxford
Daniel Stiles	International Union for Conservation of Nature (IUCN)
Nathalie van Vliet	CBD Bushmeat Liaison Group
Neil Maddison	Bristol Conservation and Science Foundation
Nancy Gladstone	Siren Conservation Education
David Jay (online)	Born Free Foundation
Alasdair Davies	The Great Primate Handshake
Seamus Gallagher (online)	International Conservation and Education Fund (INCEF)
Elisabetta Bizzarri	University College London
Alison Rosser	UNEP World Conservation Monitoring Centre (UNEP-WCMC)
Ian Watson	Watson Fish Consulting/Durrell Institute of Conservation and Ecology (DICE)
Ned Kingcott	Edward Kingcott Associates
David Gill	Fauna and Flora International (FFI)
Chloe Hodgkinson	FFI
Rebecca Drury	FFI
Helen Anthem	FFI
Heather Eves (online)	Bushmeat Crisis Task Force
Rui Sá (online)	Cardiff University

Apologies

Noëlle Kümpel	ZSL Conservation Programmes
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Chris Ransom	ZSL Conservation Programmes
Eric Arnhem	ZSL Cameroon
Guy Cowlshaw	ZSL Institute of Zoology
Trevor Salmon	Department for Environment, Food and Rural Affairs (DEFRA)/CITES
Mark Baxter	DEFRA/CITES
EJ Milner-Gulland	Imperial College London
James McNamara	Imperial College London
Matthew Hatchwell	Wildlife Conservation Society (WCS) Europe
Michel Ikamba	WCS/Rare Conservation
David Macdonald	University of Oxford - WILDCRU
Ian Redmond	Ape Alliance
Steve Trent	WildAid
Amy Butler	WildAid
Heather Sohl	WWF-UK
Andrew McVey	WWF-UK
Beatrix Richards	WWF-UK
Susanne Schmitt	WWF-UK
John Fellowes	Independent
Lios McGilchrist	Living Earth Foundation/FCTV Cameroon
Penny Fraser	United Africa Association (UNAFAS)

Introduction

Hannah Thomas, ZSL's Acting Programme Manager for Central, East and Southern Africa, introduced the purpose of the UK Bushmeat Working Group (UKBWG), noting that it was a group set up to bring together experts and interested individuals from government, industry, academia and NGOs to discuss issues related to bushmeat, both in the UK and overseas. She noted that the usual Chair of the group, Noëlle Kümpel, was on maternity leave, and in her place, the Chair of this meeting would be Juliet Wright, ZSL's Equatorial Guinea Project Manager who coordinates research to identify feasible alternatives to bushmeat.

Session 1 – Bushmeat practices, sustainability and management options

Juliet introduced herself and asked all participants to introduce themselves and their organisation/institution before welcoming the first speaker, Sarah Papworth.

Sarah Papworth, Imperial College London

Patterns of local resource use by the Waorani in Yasuni National Park, Amazonian Ecuador

Sarah presented part of her PhD research, described her focus on mapping human resource use and noted that when looking at resource extraction, researchers need to know the area under study and the land ownership. Sarah described the GPS tracking methods she used for mapping hunter behaviour in western Amazonia, where hunting is legal. Her research aimed to answer the question 'Do hunters and non-hunters use the forest differently?' Her results didn't correspond to theories of radial resource use, but were polarized around the distribution of homelands. Undesirable landscapes can therefore be identified and may act as refugia for wildlife. The GPS tracking method therefore offers opportunities to develop active community-based mapping.

Daniel asked if there was an assumption that all species were distributed evenly. **Sarah** explained there was a short interview with all hunters to get an idea of what they were aiming for and what they obtained. Blowpipe use has decreased whilst hunting with guns has increased. **Lauren** asked what alternative livelihoods there were. **Sarah** noted that there were none and alternative livelihoods might not be appropriate in such a traditional society. Hunters sell some meat but always continue to hunt. **Ian** asked if there had been conflict between Waorani people and the oil companies. **Sarah** replied that there are oil companies within the national park and a lot of the alternative livelihoods are associated with the oil

industry but this has changed the economy and created conflict between the different groups of people as they compete for these well-paid jobs. **Ian** also asked if hunters were supplying the oil companies with meat. **Sarah** explained that all food is shipped in and workers are not interested in eating bushmeat.

Juliet thanked Sarah and introduced the next speaker, Ana Nuno.

Ana Nuno, Imperial College London
Application of novel approaches to assess sensitive behaviours

Ana clarified that 'sensitive' behaviours usually meant illegal behaviours and that her research was looking at methods to assess illegal resource use. She found that social surveys are common but open to bias. Her PhD research was conducted in the western Serengeti with multiethnic communities including hunters and herders. Bushmeat is sometimes legal here but usually requires a license, and these regulations are not respected. She looked at the problems of investigating sensitive issues with respondents who do not like to answer questions and techniques for overcoming this. Ana outlined four techniques she had piloted to investigate sensitive behaviour. She selected the un-matched count technique for her main study because she found that the non-response rate was very low with less than 3% of interviewees refusing to answer. She also noted that this was the first time this technique has been used in developing countries and in conservation. She found that 20% of households were involved in hunting and that the wet season was a more important season for hunting than previously thought. Ana recommended using the un-matched count technique for investigating sensitive topics but warned that a large sample size was required to get reliable data.

Nathalie asked if the technique can be used for more qualitative questions. **Ana** explained that the technique was designed to collect quantitative data. It is more suitable for estimating the number of people involved in hunting rather than establishing why people hunt, however it would be possible to rephrase some questions to provide a selection of closed responses. To obtain more in-depth information, the un-matched count technique could be used alongside focus groups. **Marcus** asked whether the other methods were tested, in addition to the un-matched count technique. **Ana** had tried the others in the pilot but felt they were not so well received. She thought the others would probably work, as recently demonstrated in a bushmeat study in Madagascar which used the randomised response technique, but she found that respondents had difficulties understanding this exercise and expressed a level of mistrust, believing it to be a trick. **Daniel** asked how the respondents were selected and wanted to know if ethnicity had been used as one of the selection criteria. **Ana** responded that approximately 80 interviewees per village were randomly selected and this encompassed people of different ethnicities.

Juliet thanked Ana for her presentation and introduced Lauren Coad.

Lauren Coad, University of Oxford
Changes in village bushmeat hunting: a case study from rural Gabon

Lauren introduced a follow-up study conducted in 2010 to look at the changes in hunting sustainability over time. Techniques that can be used to look at change over time include direct counts of prey populations which can be biased if populations are very small, market surveys which are difficult to undertake and village hunter surveys which often don't take effort into account. This research looked at offtake per trap and hunter effort. Data were collected in two rural villages during June to August in 2001, 2004 and 2010. Interviewees said prey populations had plummeted as a result of overhunting due to the increased usage of guns. There was little change in offtake between 2004 and 2010 and the species composition remained the same with blue duikers and red duikers making up most of the catch. However, hunting strategies had changed with a shift from trap-hunting to gun-hunting. The number of traps per hunter remained the same but traps were being placed further from the village, however this was biased by two hunters and is not thought to be due to declines in prey populations. At the trap level, people were catching more per trap in 2010 than in 2004. The biggest changes were social with the village halving in size between 2001 and 2010. The number of households decreased and therefore the number of hunters decreased from 54 to 43. The

main livelihood activity for men switched from hunting to agriculture. The men still hunting in 2010 were the ones with the highest hunting incomes in 2004. The reason overall offtake levels have not changed is because the successful hunters have remained. The mean size of prey was only around 3kg in 2001 with many of the large-bodied species already locally extinct, so there could be post-deletion hunting sustainability in this area. Linking her research to the discussion on alternative livelihoods, Lauren suggested that only the less successful hunters are likely to readily shift to other sources of income. Conservation efforts must target the successful hunters more effectively by identifying what is going to make these individuals switch.

Nathalie asked whether the amount sold and consumed was monitored and why the offtake had remained the same even when the size of the village had decreased. **Lauren** suggested that this was due to the movement of bushmeat from the villages into larger towns. **Nathalie** added that since those that move to towns continue to eat bushmeat, the problem is shifted from one area to another. **Ian** asked whether a constant level of offtake indicated some sustainability. **Lauren** thought that it really depended on the definition of sustainable. In social sustainability terms, bushmeat is still feeding people but the level of offtake is unlikely to be ecologically sustainable. She considered that the constant level of offtake probably indicated that both the first and repeat studies had been conducted at a point after a dramatic decline in prey populations when the numbers were simply remaining at a very low level. **Ian** asked whether there was any chance of re-colonisation by larger-bodied species. **Lauren** referred to a study by Philipp Henschel that looked at the overlap between bushmeat hunters and leopards in terms of prey requirements. Leopards were found to be present but outside of heavily hunted areas due to limited prey availability. If prey populations increased, large carnivores would probably return. **Nathalie** added that when people move away from an area there is always a risk that logging and mining companies might move in and destroy the habitat for larger-bodied species preventing re-colonisation. **Daniel** asked if there were elephants and elephant hunters in the area. **Lauren** confirmed that elephants were present and crop raiding was an issue but that there was no specific elephant hunting, no significant ivory trade and little motivation to hunt elephants for meat.

Juliet thanked Lauren for her presentation and adjourned the meeting for a coffee break, after which she invited Daniel Stiles from the IUCN to present his recent report on elephant hunting in Central Africa.

Daniel Stiles, International Union for Conservation of Nature (IUCN)
The elephant meat trade in Central Africa

Daniel explained the context of the recent IUCN report (<http://data.iucn.org/dbtw-wpd/edocs/SSC-OP-045.pdf>) on elephant hunting and described the role of the MIKE (Monitoring the Illegal Killing of Elephants) programme in investigating elephant killing for meat. The report examined why elephants are poached and found that historically this has been purely for ivory but poaching has increased and this may be driven by the increased demand for elephant meat. The objectives of the report were to examine dynamics, patterns and trends in the elephant meat trade, the relationship between the trade in meat and ivory, linkages between multiple resource extraction industries and how development influences offtake at the regional level.

The report collected data from MIKE monitoring sites in four countries in Central Africa: Okapi Faunal Reserve in Democratic Republic of Congo (DRC), Dzanga-Sangha Complex in Central African Republic (CAR), Bomba-Bek National Park in Cameroon and Odzala-Koukoua National Park in Republic of Congo. Researchers interviewed hunters, middle men, vendors and consumers. The study used volunteer respondents to identify elephant poachers in each area. All elephant hunters interviewed were commercial rather than subsistence hunters. The majority hunted on command (32 out of 54), often supplying influential people. The primary motivation was found to be ivory with a very low percentage hunting for meat. Ivory has a higher price to weight ratio and is easier to transport than the meat. Of the weapons used, the most common was the AK-47 (which was considered unsuitable for elephant poaching). Daniel described the methods used to smoke the meat and demonstrated the price differentials involved, e.g. smoking and selling all the meat from an elephant could earn 5,000 USD, which is more than the ivory.

Daniel suggested that the low level of elephant meat poaching was due to logistical issues associated with transporting it. To reduce the weight the meat must be smoked and many people are required to carry it. These conspicuous activities can create unwanted signals to law-enforcers and cause a security risk for those that primarily want to obtain ivory. The most meat was taken from the Okapi Faunal Reserve, possibly because of the low risk of being caught. The majority of the meat is consumed in the local area, with small quantities going to regional urban centres, and even smaller amounts going to large cities. However, urban demand for elephant meat is increasing as it becomes associated with high status and there is potential for this trade to grow if transportation becomes easier and law enforcement declines.

Lauren asked what incentive volunteers had to talk to the researchers. **Daniel** responded that the researchers often knew the informants and had already developed trust. They made clear that they had no brief to arrest or inform law-enforcers about illegal activities and that questions were only asked for the purpose of gathering information. **Neil** noted that 400 elephants had been massacred in Cameroon in January 2012, which he felt was on a different scale to the situation described. **Daniel** added that there are two different forms of elephant poaching. There is poaching that is conducted by local communities, which is what the IUCN study focused on, and poaching conducted by foreigners. The massacre in Cameroon is being conducted by Sudanese coming from Darfur, but there is a need to know exactly who they are ethnically in order to identify who their leaders are. He also suggested that government rapid response teams couldn't deal with the issue because it was simply too big. **Neil** wanted to know what the strategy would be to address the issue of elephant poaching when it becoming a large-scale industry involving foreigners. **Daniel** mentioned that the Sudanese were active in CAR during the IUCN study in July 2010 and this was reflected in the elephant meat prices which were comparable with other bushmeat species due to the large volumes coming onto the market at that time. He then explained that national governments did not seem to be able to handle these sorts of situations. He felt that a solution might be to find out who the leaders are and persuade the higher-levels of government in Sudan that it would raise the country's international profile if they took action

Juliet thanked Daniel and invited Nathalie van Vliet to speak about her report to the CBD Bushmeat Liaison Group on small-scale alternatives to bushmeat.

Nathalie van Vliet, Convention on Biological Diversity Bushmeat Liaison Group
Small scale livelihood alternatives for the unsustainable use of bushmeat

As author of the recent CBD report '*Livelihood alternatives for the unsustainable use of bushmeat*' (<http://www.cbd.int/doc/publications/cbd-ts-60-en.pdf>), **Nathalie** explained that the report had been prepared for the Secretariat of the Convention on Biological Diversity in response to a request at the Conference of the Parties in October 2010 for more information on experiences of implementing alternative livelihoods in sub-tropical and tropical areas. The objectives of the report were to list options, describe examples of successes or failures, and provide recommendations.

In compiling the report, Nathalie reviewed the existing literature, project reports and websites, as well as conducted interviews with experts in the field. Bushmeat is a source of food and income, but it also has other values, such as medicinal and cultural values. Alternatives were examined for each of these values but it was difficult to find successes and failures because most projects were just being implemented or there had been no monitoring afterwards. Nathalie explained the various forms of alternatives. The wide range of alternative sources of income included handicrafts, beekeeping, cocoa farming and eco-tourism, but in most cases it was difficult to establish their profitability and confirm whether they were an alternative or additional source of income. Nathalie raised the issues of how to ensure compliance with conservation goals and whether these alternatives take into consideration the socioeconomic context. For example, alternative livelihoods for women don't stop the men from hunting.

Alternative sources of meat included chicken, goat and cattle but the likelihood of substituting bushmeat with domestic meat was very low in most places due to food preferences and various health issues. Domestic meat production is often not competitive with hunting; it can still be cheaper and easier to hunt. Mini-livestock breeding with indigenous species can be a practical option because animals can be feed with

local foods and enclosures do not require a lot of space, so can be established in both rural and urban settings. Mini-livestock species include rodents, snails and insects. The main difficulty is the lack of legal framework to ensure animals are captive bred and not from the wild. There is also a lack of environmental controls and other safeguards to reduce ecological risks associated with disease transmission. In addition, projects need wild animals and institutions to provide technical assistance. Community-based wildlife management (CBWM) initiatives attempt to make hunting sustainable through community empowerment. Examples are mostly from East Africa and Latin America, with only Cameroon in central Africa having the legal framework for CBWM systems. There are many examples of failures, often due to overly high expectations, lack of political will and the fact that participation is often dominated by elites. CBWM only works if it is a participatory process which is usually difficult to achieve. Game ranching similarly needs a legal framework to be established successfully. Examples in the report are of private owners who can afford to invest in fencing, stocking and maintaining the habitat of target species and the ecosystem.

Nathalie described payments for ecosystem services (PES) and certification schemes as the more innovative ways of providing financial alternatives. PES schemes can either be direct payments or indirect, product-based payments. There are increasing examples of product-based schemes, whereby products are certified because they protected wildlife, such as certifying and selling chilli pepper which prevents human-elephant conflicts. Similarly, peccary pelts are hunted from a sustainable source in Peru, the pelts processed, certified and sold, and the meat distributed to the community. The advantages are increased compliance with environmental regulations to retain the certification label but compliance monitoring is required.

Recurrent challenges associated with many of the examples mentioned were issues of profitability and initial investment costs. General recommendations were difficult to make as successes tended to be geographically and context specific. For every potential alternative the same questions needed to be asked – where should alternatives be implemented, in rural or urban areas? What type of alternative is needed; income, food etc? Alternatives are needed for whom and why? What is the likelihood of substitution; is the alternative in line with preferences? How can success in terms of ecological, social and economic impacts be measured? There should be an ability to monitor the system and the necessary legal frameworks (e.g. law enforcement, sanitary regulations for livestock production etc). It has to be a multidisciplinary and multi-ministerial effort with consultation with all relevant stakeholders and not only those working within conservation. This would be the first step in scaling localised projects up to the national or even a regional level adopting a landscape approach.

Ian asked how bushmeat and bushmeat alternatives contribute to food security at the country and global level and whether alternatives can create alternative conservation problems (e.g. clearing of land for grazing). **Nathalie** agreed that it is important to look at the impacts of alternatives. She gave the example that to produce the equivalent amount of domestic meat in the Congo Basin as consumed bushmeat would require clearing an area the size of DRC. Nathalie made the point that bushmeat has various important roles that mean it cannot be replaced altogether. She cited a recent study from Madagascar that had investigated the role of bushmeat as a critical protein and haemoglobin source and was therefore essential to the health and nutrition of children. There are many decisions to be made at both the national and international level.

Alison asked what the next steps would be and whether there would be further analysis on trade-offs. She also asked to what extent development agencies provided input to the report and were engaged with CBD Bushmeat Liaison Group since bushmeat is also a development problem. **Nathalie** responded that the next step is to develop a tool kit for practitioners in early 2013, informing them of which alternatives would work in any given context. In terms of development sector involvement, the UK Department for International Development (DfID), the FAO and CIFOR are involved with the CBD Bushmeat Liaison Group.

Daniel asked if successful game ranching projects were only private ones. From his experience in Kenya, populations were increasing despite offtake and communities were becoming involved before the Kenyan government outlawed all wildlife utilization. Is private not considered to be a valid alternative option? **Nathalie** agreed that private ownership was a valid alternative but that such initiatives were limited in geographic scope, particularly in central Africa where very little land is privately owned. **Hannah** suggested

that further investigation would probably reveal that central Africa provided some good examples of CBWM even if the legal framework was lacking. **Lauren** mentioned that two MSc students would be looking at creating a framework to evaluate these projects to follow on from Nathalie's recommendations.

Helen commented that the FFI Livelihoods and Governance Team are discouraging use of the term 'alternative livelihoods' without knowing the complexity of livelihoods and the issues. It is often better to talk about 'enhancing, supporting or diversifying sustainable livelihoods'.

Juliet asked how many of the projects reviewed were implemented by conservation organisations and how many were implemented by development organisations. **Nathalie** said that was a big problem because she is sure there are a lot more projects than we think. There are probably many development projects that have had an impact on reducing the dependency of people on wildlife despite that not being their aim. So they may have contributed towards conservation but that was not measured because it was not part of their stated objectives. More development projects are now trying to incorporate a conservation aspect, but bushmeat is still not specifically used as an indicator to measure impact. If conservation indicators are not measured in a standardised way, how do you determine the conservation impact of a development project or policy?

Juliet thanked Nathalie and all the speakers from the morning session and adjourned the meeting for lunch.

Session 2 – Changing bushmeat behaviours: rapid-fire presentations

After the break, **Juliet** explained that the afternoon session would adopt a slightly new approach for the UKBWG with a series of five minute 'rapid fire' discussion talks from both the UK and international speakers. She introduced Neil Maddison.

Neil Maddison, Bristol Conservation and Science Foundation **Should we eat our words? The need to define the 'bushmeat' brand**

Neil asked the question – how do we re-energise the issue and push it back into public focus? The term 'bushmeat' has become well-recognised but it is currently used to define two separate issues: 1) unsustainable resource use (scientific), and 2) illegal poaching of high profile species (emotive). This conflation of issues into a single word may be presenting us with a problem. 'Bushmeat' is associated with poverty. The effect of attempts to prevent bushmeat hunting could signify hardship to already disadvantaged people who depend on wild-caught meat for subsistence. Donors and the general public are switching off because the issue is too complicated and too hard to solve.

Neil asked whether bushmeat meant all species or just charismatic species. The bushmeat language did a great job at bringing the issue to the world's attention, but if the language is now making our lives more difficult, should we re-brand the bushmeat issue? Should we adopt more of a sustainability approach, similar to fisheries, and focus separately on the urgent need to conserve the high-profile charismatic species? Marketing campaigns have proven that re-branding can keep products in the marketplace and could help revitalise the public's appreciation of the issue.

Nancy Gladstone, Siren Conservation Education **Co-creating conservation education resources with teachers in Cameroon**

Nancy described the history of Siren Conservation Education, an NGO established with the aim of producing educational resources to assist conservation. She illustrated Siren's work by explaining the 'Silent Forests' project designed to facilitate discussion about bushmeat in schools, both in the UK and Cameroon, with students exchanging ideas via video link. She also introduced the Pan African Conservation Education (PACE) Project which is about sharing problem-solving ideas regarding clean water, sustainable agriculture,

human-wildlife conflict mitigation and other issues. It is based on the premise that someone somewhere has found a solution to the many environmental problems in Africa.

Nancy felt that bushmeat was becoming a cliché, leading to it being dismissed, and pointed out that bushmeat awareness campaigns are often treated with suspicion in Africa. Siren adopts a neutral, non-campaigning approach which aims to get the message out as widely as possible through the national school system. In partnership with UNAFAS, an organisation in Cameroon which aims to develop positive attitudes towards the environment, Siren started a project to strengthen conservation education in schools by designing resources with the teachers that will share the message. Siren has reviewed the national syllabus and found that there are plenty of opportunities to cover topics such as wildlife law, extractive industries, conservation research, waste management etc. Working groups from the natural and social sciences are currently reviewing conservation case studies from Cameroon for inclusion in the curriculum. This approach tackles the lack of information in schools about the natural world, for instance most children do not understand the concept of endemism or know how important their country's wildlife is globally. Siren and UNAFAS are also using environmental topics as a vehicle for teacher training, which is needed in all subject areas. Teachers are able to take ownership of the messages and feel confident about teaching environmental topics.

David Jay, Born Free Foundation (via video link)

Bushmeat enforcement and behaviour: an overview of the Last Great Ape Organisation

David Jay explained that the Born Free Foundation has supported the Last Great Ape Organisation (LAGA) in Cameroon for 10 years and that he wanted to give an overview of the important work that they do. The story of LAGA is unusual in that it was started by Ofir Drori, a journalist researching a story in central Africa, who rescued a chimpanzee orphaned by poaching. He became aware that there were so many other chimpanzees in the same situation and that, although the law was in place to prosecute the people involved, nothing was being done to enforce this law. He started working with the authorities to facilitate the first ever prosecution under any wildlife law in Cameroon. Since then he has worked on investigations into the trades in African grey parrots, cat pelts and ivory, as well as continuing to investigate bushmeat hunters and dealers. LAGA was unique in that it was the only NGO that focused entirely on wildlife law enforcement and raising public awareness about wildlife laws. The LAGA model has since been replicated in Gabon, CAR and the Republic of Congo.

David provided further details of the LAGA formula, which involves investigations, prosecution operations, huge media outputs and public awareness. The situation for many species is critical and urgent and LAGA is actually doing something to stop the trade that is happening now. LAGA have received a great deal of support and awards for their work. In the context of changing behaviour, LAGA play a key role in deterring large scale dealers by demonstrating the much higher risk of prosecution. The premise is that if there is immediate action on infringements it will become a public issue and as such act as a deterrent.

Alasdair Davies, The Great Primate Handshake

Is there a role for new media in changing bushmeat practices?

Alasdair described the Primate Handshake as an organisation initiated by technology specialists collaborating to support primate sanctuaries in Africa through digital media. The Primate Handshake recruits students with relevant media skills and connects them with sanctuaries where they can volunteer their time to benefit primates. The fields of expertise that are sought are graphic design, website production, journalism, music, sound and video production. Students are invited out into the field where they can work in a mobile studio to produce communication tools for conservation, ensuring these are designed to be appropriate for the local setting. For example, producing videos is a good idea but should be done using local languages, involving local people and distributed appropriately. They use cinema showcases to screen the films locally but it is important that these are held regularly and have defined aims and objectives. Local conservationists are now trained so that they can undertake media outreach themselves. Alasdair concluded that various media provided great opportunities to alleviate bushmeat, so

long as the communication channels are tailored to the audience, i.e. rural communities may only see printed material rarely but radio and word of mouth are important means of spreading a message.

**Seamus Gallagher, International Conservation and Education Fund (INCEF)
Use of locally produced films as a conservation education tool (via video link from the USA)**

Seamus introduced INCEF, an organisation working mainly in the Republic of Congo and the DRC using locally produced films to raise awareness of critical conservation and health issues. The films are made by local people for local people in their languages. Conservation issues are explained in the films by recognised leaders from within the communities. The films are then taken on road-trips and shown from village to village using portable projection kits. All films deal with bushmeat but cover a range of issues including zoonotic diseases and wildlife laws. Films are accompanied by pre- and post-discussion sessions with different groups within each community. The local educators who distribute the films spend several days in each village repeating the films and explaining the issues. Film remains such a novelty that people are willing to watch the same films time and again. INCEF workers found that there was poor knowledge of environmental and health issues in the villages. Pre- and post-questionnaires have demonstrated both increases in knowledge and changes in attitudes.

[A 3-minute presentation of an INCEF film was shown]

Session 2 – Changing bushmeat behaviours: discussion

Juliet highlighted that we have had talks on a variety of topics that have stimulated ideas and some discussion about ways to change behaviour and influence bushmeat practices. She opened the floor to discussion by asking for any suggestions or conclusions about what the next stages might be for action.

Ned stated that conservation films were obviously changing behaviour on the ground, but asked Seamus what he felt the alternative livelihoods were that people might take up if they were deciding to avoid killing certain species. **Seamus** answered that films were clearly having a positive effect on the status of charismatic species such as gorillas and chimpanzees, so the obvious next steps would be to look at other species. In addition, he felt that collaboration with other organisations for law enforcement would be extremely beneficial.

Ian made a comment on Neil's talk and felt that this group used to consider it necessary to stop bushmeat entirely, without due consideration of the views of those in-country and he was pleased to see that the group had moved on from there, but felt it would be good to have a positive message on bushmeat. **Nathalie** responded that case studies were always driven by the 'problem' so there were rarely positive stories to tell. She noted that David Brown had done a study about the contributions of hunting in terms of fulfilling peoples' income, as well as their cultural and health needs and felt this marked a new way of thinking about how much bushmeat contributes.

David Jay felt that South America had a better legal framework for community-based work, which was supporting the development of alternatives more than in Africa. **Sarah** agreed and said that people don't talk about bushmeat in the same way in South America, where she felt there was less concern about sustainability. She noted that Carlos Peres had done some work on primate harvesting and found that it might be sustainable, potentially offering some sustainability lessons that could be learnt.

Ian asked Sarah if there was a cultural coherence aspect to hunting in the Waorani people with more sharing of bushmeat. **Sarah** said there was a strong cultural coherence, but it might be due to the very low level of commercialisation and that although there are commercial markets there, this is not to the same extent as is present in central Africa.

Rebecca commented on Neil's talk adding that she works in Asia and thinks that the focus should be on 'wild meat' not 'bushmeat' since there are a lot of lessons to be learnt between the regions and 'bushmeat' is primarily an African concept. She felt that discussions relating to the hunting of wild meat should be clear

about the species, so that gorilla hunting was not being confounded with other essential bushmeat hunting. **Juliet** agreed and noted that when everything is described as bushmeat, local people become concerned that they will have to stop harvesting everything, including non-threatened species such as cane rats.

Lauren raised the point that marketing campaigns in any other field would be targeted and they have not been significantly targeted when related to bushmeat. **Rebecca** added that when changing behaviours market research is the key to ensuring there is a targeted message. **Juliet** made the point that large corporate companies in Africa often tend to be drivers of behaviour change, for example MTN, the mobile telephone network, and asked (while noting that the UKBWG is not the appropriate forum to launch public awareness and marketing campaigns) if others such as the Ape Alliance might be appropriately placed to coordinate this kind of strategy and whether this could have a positive conservation impact. **Nathalie** commented that it is important to consider the way of transmitting the message as well as the message itself. The message depends on how the problem is perceived. The central African context is very different from the South America and Asia contexts. We don't really know how Gabonese or Cameroonians for example perceive bushmeat. Do they perceive there to be a problem? Launching national debates to find out how people feel about bushmeat would identify the key messages that need to be communicated. **Nancy** said that some of the teacher surveys were revealing some of the key issues and **Lauren** added that radio would be a good medium in Africa. **Alison** considered linking with local education institutions in-country would be a good approach. **Daniel** wanted to raise the point that conservation PR often means getting into controversy because there is always an alternative message and potential opposition. He felt it was better to maintain a science-based point of view. **Seamus** added that there was a lot of mistrust between the local people and the organizations working in-country, which would need to be bridged if trust were to be built up successfully.

Juliet brought the discussion to a close and introduced the last speaker, Elisabetta Bizzarri.

Elisabetta Bizzarri, University College London
Bushmeat and livestock perceptions in Equatorial Guinea

Elisabetta introduced her research in Equatorial Guinea (EG), where she examined perceptions of bushmeat and livestock. EG is an unusual country in that it is very reliant on imports from neighbouring countries and further afield. After gaining independence from the Spanish, the economy slumped and both agriculture and livestock initiatives were abandoned. The country is now experiencing a revival due to the oil boom but this is associated with unregulated exploitation of bushmeat, meaning that food security is at risk. Several projects have aimed to address this problem, including some Integrated Conservation and Development Projects (ICDPs) but these have had limited success.

Elisabetta explained that the most popular bushmeat species are ungulates (specifically duikers), then primates and cane rats. Livestock production was nearly self-sufficient before independence, but dropped dramatically afterwards. Her research found that there is high livestock mortality due to disease, lack of veterinary care and lack of infrastructure. Bushmeat hunting is not necessarily considered as a livelihood but as a cheap source of protein. Livestock rearing is considered to be less safe, more expensive and not very widely accessible, so locally-produced domestic meat is only eaten on special occasions. Elisabetta commented that there should be educational campaigns targeted at the health aspects of eating bushmeat.

Sarah asked how much of a health issue eating bushmeat posed. **Elisabetta** suggested that since HIV came from the butchering of primates that it was a serious health issue. **Lauren** felt that although this may be the case, there were other priorities associated with bushmeat hunting that should be tackled in advance of the health issue.

Juliet thanked all the speakers for their stimulating presentations and all the participants for their attendance and contributions. Since there was no other business, Juliet closed the meeting at 16.07pm.