LINKING GREAT APE CONSERVATION AND POVERTY ALLEVIATION: SHARING EXPERIENCE FROM AFRICA AND ASIA

A workshop organised by the International Institute for Environment and Development (IIED) and the Center for International Forestry Research (CIFOR)

CIFOR Campus, Bogor, Indonesia

January 11th to 15th 2012

A MULTI-MEDIA REPORT

Photo: Terry Sunderland, Indonesia, 2011

BACKGROUND TO THE WORKSHOP

Great ape ranges coincide with some of the poorest countries of the world – particularly in sub-Saharan Africa. Great apes attract a great deal of conservation interest and funding, due to their close genetic relationship with humans and their status as global flagship species for conservation. Consequently they are often protected through strictly controlled and enforced conservation areas that can – intentionally or otherwise – have negative impacts on the livelihoods of the already poor local communities, through restrictions on resource access and so on. At the same time, the economic benefits derived from great ape conservation – for example from tourism – are not often shared with local people at a level that generates real incentives for landscape-scale conservation.

These two outcomes have implications of concern to both conservation and development communities. Firstly, a valuable resource may fail to realize its full poverty reduction potential. This is not only a shameful waste in some countries that need all the help they can get to tackle poverty, but also means that the value of great apes – and biodiversity in general – is not subsequently factored in to development policy and, its loss not considered significant as a result (see the results of The Economics of Ecosystems and Biodiversity (TEEB)[1] initiative for more details on how biodiversity is undervalued and how this contributes to its loss).

Secondly, the actual, or perceived, negative impacts of conservation may result in local antipathy – or even outright hostility - to conservation efforts. For example, prior to 1991 the Bwindi Impenetrable Forest in Uganda – home to a population of mountain Gorillas - was a forest reserve which provided local people with access to critical resources, such as firewood, medicinal plants, bushmeat and so on. In 1991 the reserve was upgraded to a National Park and even the sustainable use of forest resources was made illegal. Subsequently it has been documented that a series of fires were started by local residents with the deliberate intent of destroying government property, while relationships with park staff (many of whom were recruited locally) reached an all-time low, with frequent attacks by local people on rangers and their families. While there has been no systematic analysis of the degree to which failure to address the negative social impacts of conservation this is just one of a number of documented examples, and it has long been recognized that, as land and habitat becomes increasingly fragmented and human populations continue to grow, conservation will only be effective in the long term if it takes account for human needs. This was the foundation of early efforts at Integrated Conservation and Development which started in the 1980s and continues to this day.

Consequently, organisations concerned with biodiversity conservation are increasingly aware of the need to address poverty and improved livelihoods in combination with conservation efforts. Often this is for purely pragmatic reasons (to reduce the threat to target species or habitats). However, for a number of organizations including development agencies and those working with or for indigenous/local community rights, poverty alleviation is a key objective and biodiversity conservation is a mechanism to

[1] www.teebweb.org

deliver on that objective. Specifically related to great apes, the 2005 Kinshasa Declaration on Great Apes reinforced the connection between poverty alleviation and great ape conservation[2].

At the same time there is only limited sharing of information and experience between organizations on what works – and what doesn't – in linking conservation and poverty alleviation. As a result there is much duplication of effort, a lack of learning from past failures, and missed opportunities to replicate or scale up successful approaches.

Since 2004 IIED has coordinated an international network of conservation, development and indigenous/local community rights organisations who are interested in improving their understanding of, and sharing their experience in, the links between biodiversity conservation and poverty reduction. The Poverty and Conservation Learning Group (PCLG)[3] works by collecting, analysing and disseminating information that can help shape better policy and practice. Since 2009 the PCLG has received additional support from the Arcus Foundation specifically to introduce a great apes component to this work. Consequently, in 2009-2010, a scoping study was undertaken to explore the extent to which conservation and poverty are currently integrated in African Ape range states. [4]

Following publication of this report, a workshop was held in Masindi, Uganda, in November 2010 to bring together organizations from different African ape range states to share their experience on what works (and what doesn't) in terms of engaging communities, generating income and reducing poverty.[5] The workshop was attended by around 30 participants from a variety of organizations and countries and identified a wide range of follow up activities at national, regional and international levels from practical work on human wildlife conflict to policy advocacy. Amongst the follow up activities identified was a demand for a similar event involving organizations working on ape conservation and poverty in Asia. This built on a presentation given at the Masindi workshop by Dr Terry Sunderland from CIFOR which provided an overview of efforts to link orangutan conservation with poverty alleviation and compared this experience with African apes. Participants at the workshop all felt they could learn a great deal - and equally had much experience to share – from closer networking and collaboration with like-minded organizations and institutions in Asia. This workshop was the response to that expressed demand.

The workshop was hosted by CIFOR at their Bogor Campus and was made possible through financial support from the Arcus Foundation, the US Fish and Wildlife Service, the UNEP Great Ape Survival Project (GRASP) and in-kind support from CIFOR. The workshop was a multi-media affair. The presentations were live-streamed from the CIFOR website; CIFOR and IIED communications staff supplemented the formal presentations with a series of blog posts; and the workshop field trip was filmed, including interviews with workshop participants. Full details of the workshop are available at http://www.cifor.org/events/linking-great-ape-conservation-and-poverty-alleviation-live-video-

[2] http://www.unep.org/grasp/Meetings/IGM-kinshasa/Outcomes/docs/Declaration_E.pdf
[3] http://www.povertyandconservation.info
4 http://povertyandconservation.info/docs/20100808-Linking_Ape_Conservation_and_Poverty_Alleviation.pdf
[5] http://povertyandconservation.info/docs/Masindi_Workshop_Report-Final.

stream.html. This report presents a summary of the highlights and is intended to be read in conjunction with the multi-media products on the CIFOR website:

Video produced and filmed by James Maiden, Edited by Mokhamad Edliadi, Interviews by Leony Aurora

SETTING THE SCENE

After a welcome address from Robert Nasi, deputy director of CIFOR, the workshop started with an ice-breaker – to introduce participants to each other and to explore different perspectives on the links between ape conservation and poverty.

Blog: Game reveals complex links between poverty and threats to apes[6]

There were 50 ape experts in a room and a quick game to play to break the ice. "If you agree with the statement, go to the left side of the room," said the facilitator. "If you disagree go to the right." She then unveiled eight simple words that split the room in two: "Local poverty is the main threat to apes."
On the right side, speakers said the primary problem for orang-utans in Malaysia and Indonesia is not local people, that hunters there tend to target other species. It is the private sector that destroys the forests that both orangutans and local people depend on, added a third speaker, and this deforestation itself creates poverty. Someone else added that it was the wealthier people from local populations, not the poor, who were encroaching on the national park he worked at in Indonesian Borneo.
A speaker from Democratic Republic of Congo said it was rich people in urban areas – not poor communities near forests — who fuelled the market for ape meat. Another from Cameroon said that in some places local people do hunt chimpanzees for meat but at such low levels that this is not a major threat – logging and mining activities that destroy ape habitat were bigger concerns.
The ape experts had gathered at the Center for International Forestry Research (CIFOR) in Bogor, Indonesia for a three day workshop on the links between great ape conservation and poverty, because it just so happens that all of the world's great apes – gorillas, chimpanzees, bonobos and orangutans – live near people who are poor.

[6] This blog was posted by Mike Shanahan on January 11th 2012 at: http://underthebanyan.wordpress.com/2012/01/11/game-reveals-complex-links-between-poverty-and-threats-to-apes/

The workshop, organised by IIED and hosted by CIFOR on 11-13 January, was designed to share lessons learned in Africa and Asia and to identify practices that benefit both apes and local communities. And while the people on the right side of the room felt that local poverty was not the main threat to these apes, those on the left side of the room — mostly from Africa — disagreed. People kills apes because they are poor, said one. Conservation creates costs to local people and this is an issue of justice, said another. If you solve local poverty you solve a lot of problems for great apes, added a third.

Of course, the statement itself was flawed – as the workshop organisers designed it to be. In reality, the situation varies from location to location and the many threats apes face are all interconnected. My favourite answer, though, came from one of the Indonesian experts. He said that if the 'poverty' in the statement referred to a lack of money then the answer was no, but that if it referred to the mind and a lack of information, then the answer was yes.

As an ice-breaker, the contentious statement did its job well. It made me wonder… if every poor person who lives near an endangered ape was suddenly ten times richer, would the apes be safer or would they just face new threats that affluence and indifference can bring?

The ice-breaker was followed by a key note presentation from Ian Redmond, Founder and Chair of the Ape Alliance. Ian's presentation provided a great overview for the workshop – highlighting the current status of ape conservation in both Africa and Asia and exploring the main threats - and the role of poverty within that - and the larger macro-economic drivers behind those threats: over-consumption, industrial agriculture and so on. The presentation is available to view here:

Blog: Great ape conservation must be integral to REDD+, says leading primate biologist [7]

BOGOR, Indonesia (13 January, 2012):Great apes play an important role in the long-term health of forests and climate change schemes such as Reducing Emissions from Deforestation and forest Degradation (REDD+) should be structured so that they can channel funds to primate conservation projects, leading biologist Ian Redmond said. "Conservation is not an optional extra that you might add on if it is convenient, it's integral [to REDD+]… If you want to have permanence in your forest carbon

[7] This blog was posted by Michelle Kovacevic on 13th January 2012. See http://blog.cifor.org/6945/great-ape-conservation-must-be-integral-to-redd-says-leading-primate-biologist/ for the full post

store, you need the animals as well as the plants," Redmond said at an event hosted by the Center for International Forestry Research and the International Institute for Environmental Development that looked at how Africa and Asia can learn from each other's experience in great ape conservation. "But I still get the feeling that those people in closed rooms, working at the details of REDD+ are still thinking that it is the trees that are the most important because that is where the carbon is."

Fruit-eating animals have been long known to play a very important role in the lifecycle of tropical forests, with between 75 to 95 percent of tree species having their seeds dispersed by such animals.[8] The role of primates in seed dispersal has been shown to have significant unique effects on plant demography and forest regeneration,[9] which also has knock-on effects for human populations who rely on forest resources for their livelihoods. Despite their recognised importance to the ecology of the forest, primate habitat has become increasingly fragmented as deforestation rates have climbed. What was once a continuous supply of critical natural resources from the forest has now become scarce and apes are forced to forage close to human settlements and cultivated fields, often resulting in aggression and even conflict.

As the human population continues to balloon and demand for food and land becomes more insistent, Redmond notes that the number of great apes is steadfastly decreasing, with only an estimated 50,000 gorillas left in the wild of Africa. "I feel that we have to turn that around. I know that the only populations of great apes that are known to be increasing are the two tiny populations of mountain gorillas who got down to fewer than 300 each. Other gorillas, chimpanzees, bonobos, orangutans, gibbons are all declining," he said. "So whilst we have been hearing people saying 'this is a crisis, we need more effort', clearly the response to that crisis has not been adequate except in one or two small places where enough money, effort, resources, dedicated people, courageous conservationists have turned things around."

The past two years have seen an influx of donor support for REDD+,[10] with multilateral pledges to the World Bank's Forest Investment Program (FIP), exceeding US $500 million and bilateral financing, for example from Norway to Indonesia, seeing as much as $1 billion committed to successfully reducing deforestation. However, Redmond asks, where does this money go? "I see a lot of governments struggling to conserve their wildlife…[it seems that] REDD+ money is for reducing emissions from deforestation and then there is a tiny stream of money that goes to conservation of wildlife as if it isn't part of the same thing.

Bringing conservation and climate mitigation funding streams together is key, says Redmond, so that "conservation is adequately funded and REDD+ is successful in the long-term." "The hope is that the realisation that forests are not just an ornamental part of our planet but they are integral to function of our biosphere and future survival. Perhaps that would be enough motivation so that enough resources

[8] http://www.annualreviews.org/doi/abs/10.1146/annurev.es.13.110182.001221?journalCode=ecolsys.1
[9] http://tropicalconservationscience.mongabay.com/content/v1/08-09-15-Kone_et_al_293-306_2008.pdf
[10] http://blog.cifor.org/6113/world-bank-more-donors-supporting-redd/

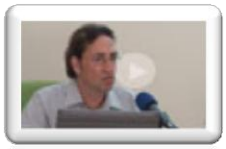
are put in to protect the whole forest ecosystem. Then we might start to see ape populations recovering."

THEME 1: CAN REDD+ DELIVER POVERTY AND APE CONSERVATION BENEFITS?

The first full day of the workshop started with a focus on the potential of new carbon markets to generate benefits for both conservation and local livelihoods. Picking up on Ian Redmond's key note speech, Terry Sunderland of CIFOR provided an overview of the opportunities and challenges associated with REDD+ in Africa and Laura D'Arcy of the Zoological Society of London did the same for Asia. Both presentations are available here:


Johannes Refisch of GRASP provided a tangible example of how forest management and ape conservation can be linked, presenting the findings of a recent GRASP study11 on the economics of sustainable forest management in Sumatra. The study looks at the trade-offs between unsustainable and sustainable forms of land use, and considers the role of REDD and other payment schemes in linking conservation and development.

Full presentation:



Blog: Preserving peatlands benefits orangutans, makes economic sense, experts say [12]

BOGOR, Indonesia (13 January 2012): Preserving peatlands for their high carbon content make economic sense as significant funding flow in from financial schemes such as REDD and benefit orangutans who prefer these habitats compared to tropical forests on mineral soil, experts say.

The high water level in peatlands allow flowers and fruit to be available all year long for orangutans, said Laura D'Arcy, the Zoological Society of London's Co-Country Coordinator in Indonesia. "Across Borneo, you can clearly see that where they have peatland forests, there's a higher density of orangutans," she

[11] http://www.un-grasp.org/sumatran-orangutan-atlas
[12] This is an abridged version of a blog posted by Leony Aurora on the CIFOR Forests News site: http://blog.cifor.org/6958/preserving-peatlands-benefits-orangutans-makes-economic-sense-experts-say/

said at the sidelines of a workshop on great apes held in the campus of the Center for International Forestry Research (CIFOR) in Bogor, Indonesia, today. Carbon credits generated from protecting forests that have "charismatic" species like orangutans and tigers also would get first preference from businesses looking to invest in REDD+, said D'Arcy. "The company can put them as flagship species and say that the credits they're buying go directly into conserving these species," which will improve its public image.

Forests have received renewed attention as the global community recognizes the role that they play in storing carbon and the potential to slow global warming by reducing emissions from deforestation and forest degradation, known as REDD+. With fresh funds coming in under climate change schemes, environmentalists are studying how to include biodiversity conservation as a co-benefit to keeping trees for the sake of carbon and are urging for its corporation into such schemes.

In terms of biodiversity in general, lowland forests on mineral soil have much higher biodiversity levels than peatlands.[13] *Looking from an emissions perspective, forests on peatlands store about eight times more carbon than mineral soil, including above and below ground storage, according to the study. Protecting these resources is therefore key in the fight against climate change. A report from Great Apes Survival Partnership (GRASP), in collaboration with PanEco, ICRAF, YEL and GridArendal, calculated that the carbon value of swamp forests in Sumatra, Indonesia, was between US$7,420 and $22,090 per hectare for a 25-year period. The carbon value of forests on non-peatlands was estimated to be between $3,711 and $11,185 per hectare in the same period, according to the study, which was published last year. In comparison, oil palm plantations, which give the highest yield of all land use types, were estimated to worth $7,832. Economic calculations show that "it doesn't make sense to clear forests on peatlands," said Johannes Refisch, GRASP Programme Manager. A conservation scenario would benefit local communities more than the business as usual scenario, while providing the same level of income for the local and central government, he said.*

Discussion points

REDD+ implementation is more advanced in Indonesia and Malaysia then in great ape range states in Africa. There is also a greater political awareness and media coverage of REDD+ schemes in Asia and a greater technical and resource capacity of NGOs to develop REDD+ schemes. Nevertheless, some of the drivers of REDD+ are becoming increasingly important in Central Africa, for example a number of Malaysian and Indonesian palm oil companies are scoping and purchasing land for oil palm development in countries such as Cameroon, Liberia and the Democratic Republic of Congo. There is therefore potential for learning from Asian experiences in relation to mitigating the negative impacts of palm oil production on great ape conservation.

[13] http://www.biomedcentral.com/content/pdf/1750-0680-5-7.pdf

In both continents REDD+ has the potential to provide multiple benefits for great ape conservation and poverty alleviation such as through the protection of great ape habitat, the replanting of forest areas for biodiversity and employment opportunities. However, there is a lack of clarity in general amongst communities, as well as researchers and government officials as to what REDD+ is and its implications. In order for REDD+ to be effective and contribute to both great ape conservation and poverty alleviation, good governance and transparency will be essential. REDD+ projects should also learn and build from previous attempts to combine conservation and poverty alleviation such as ICDPs; payments for environmental services (PES) schemes; and community-managed forests and protected areas.

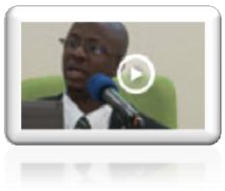
THEME 2: CAN TOURISM DELIVER POVERTY AND APE CONSERVATION BENEFITS?

The tourism session started with overviews of great ape tourism in Africa and Asia respectively provided by Dilys Roe of IIED and Anne Russon of York University in Canada. The presentations, highlighted key differences between the two continents - particularly the solitary, and therefore hard to spot, nature of orang-utans compared to chimpanzees and gorillas and the specific problems associated with the number of rehabilitant orang-utans in Indonesia. Case studies from Uganda, Rwanda and Indonesia emphasised the stark contrasts.

In Uganda, Akankwasah Barirega from the Ministry of Wildlife, Tourism and Heritage highlighted how the permit fees charged to tourists wishing to view gorillas generated over US$4 million per year for conservation. Indeed, tourism is the second largest earner of foreign exchange in Uganda, worth $662million in 2010. As well as national level income, great ape conservation and tourism generates significant other impacts including:

- jobs (200 tour operators in Uganda most of whom include great ape tourism employ an average of 12 staff each);
- markets for locally produced goods and services;
- revenue sharing - 20% of all protected area entry fees is allocated to community projects in addition to a so-called “gorilla levy” of $5 per permit
- social welfare projects – including schools, hospitals, water (some funded from revenue sharing and others independent)
- enhanced security – as a result of the extra security provided for tourists, for example near the border with the Democratic Republic of Congo.

Full presentation:



Antoine Mudakikwa from the Rwanda Development Board presented a similar picture:

- 5% of the total tourism revenue from parks goes to local communities (40% of the total to Volcanoes National Park and 30% each to the other two parks);
- This revenue currently totals 232 million Rwandan francs (over 350,000 USD) per year
- The revenue provides support to social infrastructure projects such as schools, clinics, roads and to local enterprises such as bee keeping, mushroom farming, crafts, community-based tourism etc.

He noted some major challenges however, not least in that the scale of revenue – while seemingly impressive – makes little contribution to local peoples livelihoods compared to the level of need. Furthermore, the revenue is not sufficient to compensate for the level of wildlife damage endured by park-adjacent communities.

In Indonesia the situation is very different as Bambang Supriyanto of the Ministry of Forestry pointed out. Here ecotourism is considered to have potential as an income generating strategy while efforts to establish REDD+ schemes are underway but the main tourist attraction is semi-captive, often orphaned orang-utans that are in the process of being rehabilitated to the wild from being former pets or from rescue centres. In Tanjung Putting National Park, for example, orang utan sighting is pretty much guaranteed because of previous rehabilitation activities. The number of visitors is increasing every year and mainly comprises foreign tourists since the entrance fee is considered too expensive by the majority of local people.

Blog: Would tourists in Indonesia pay $500 to see orangutans? [14]

Twenty-two dollars in Indonesia buys a 90-minute boat ride to watch orangutans. In Rwanda, to catch a glimpse of a mountain gorilla costs $500 – and the tourists are lining up. Could Indonesia charge foreign tourists $500 to see its great apes? "When we started (gorilla) tourism in Rwanda, people were paying $50. Now we are at $500," Antoine Mudakikwa from the Rwanda Development Board, told a workshop on great apes at the Center for International Forestry Research. "Countries like Indonesia with a lot of natural resources have the potential to learn a lot from a country like Rwanda."

[14] This is an abridged version of a blog posted by Leony Aurora on the CIFOR Forests News site: http://blog.cifor.org/7258/would-tourists-in-indonesia-pay-500-to-see-orangutans/

Mudakikwa said that one of the keys to charging tourists significant fees to see the animals was to give visitors a feeling that they are privileged. "You can make the visit exclusive," he said on a field trip with about 20 other great ape experts and conservation practitioners from Africa and Asia to Kaja island, home of about 45 rehabilitated orangutans in Central Kalimantan, Indonesia. Villagers from the nearby Sei Gohong community established the boat tours three months ago, hoping to attract as many tourists as possible who want to watch orangutans in their natural habitat. From the $22 that visitors pay, nothing goes to the government

Anne Russon, a leading orangutan scientist from York University, raised several concerns about such tourism initiatives. She said that to ensure that conservation of endangered orangutans remain the priority rather than organizations or governments seeking profit, orangutan-focused tourism should preferably not be operated or promoted. If orangutan tourism is planned, the advice is to plan and prepare thoroughly and responsibly, proceed only if life-long support for the orangutans visited can be guaranteed, start small, and stay small. Great apes, which also include gorillas, chimpanzees and bonobos in Africa, are the closest species to humans and share the same needs, the same diseases (such as tuberculosis and hepatitis), and sophisticated learning abilities. Tourism encourages them to learn how to manipulate humans and exploit the human world: that learning is very dangerous and it is almost irreversible. Russon said that financial incentives precipitated by tourism may also encourage bad practices such as overcrowding and inappropriate behavior to satisfy tourists' curiosity, like touching and feeding the primates. Regulations already in place to control these bad practices, such as banning eating or offering orangutans food, and avoiding contact with orangutans, have proven very difficult to control. More stringent regulations are now recommended by the IUCN, however, such as limiting groups of tourists to no more than four people at a time, limiting visits to one hour a day, requiring all visitors to wear surgical quality masks while visiting orangutans, and keeping a distance of at least 10 meters from orangutans.

Discussion Points

In Africa high revenues are generated from a few high-profile examples of 'exclusive' great ape tourism, which is usually highly regulated (for example in Uganda gorilla permits alone are worth over $4 million a year). In many African great ape habitat countries local people are directly employed as trackers, guides and porters. They are also involved in great ape tourism through community enterprises, joint ventures and spin-off activities such as handicraft sales and cultural displays. By contrast, in Asia a focus on 'package tourism' has resulted in high numbers of tourists paying relatively low amounts of money to see orangutans (for example the foreign entrance fee to visit national parks with wild orangutans is well under $30 per person/day). The more solitary and slow moving nature of orangutans compared to group-living chimpanzees and gorillas makes them harder to find and less interesting to view in the wild. As a result great ape-based tourism in Asia does not presently, and may not have the potential, to generate the kinds of contributions to GDP that are seen in Africa or the local level revenues that can make a significant contribution to poverty alleviation. Local people have still developed small

enterprises associated with tourism, including boat trips, has led to greater long-term conservation for orangutans and increased livelihood benefits to local people at some sites in Malaysia and Indonesia.

Tourism can also have numerous adverse effects on great ape conservation if not properly managed. Unregulated enterprise development, poor tourism management, and uncoordinated land-use planning has arisen in numerous great ape sites in both Africa and Asia due to tourism. In Malaysia and Indonesia there is also the issue of the majority of great ape (orangutan) tourism being directed to former captive or semi-wild orangutans, which has been criticized for potentially diverting tourism income from in-situ conservation of wild orangutans. Habituation for the purpose of tourism makes great apes more susceptible to poaching, crop-raiding, and other forms of conflict with humans. Disease transmission between humans and great apes is another serious problem in both continents. For great ape conservation, the most serious problem is spreading human diseases to great apes so tourists, especially foreign ones, potentially create serious disease risks

THEME 3: ADDRESSING A CONSTRAINT TO BETTER APE CONSERVATION – POVERTY LINKAGES: DEALING WITH HUMAN – WILDLIFE CONFLICT

The final session of the workshop was opened by Tatyana Humle from the Durrell Institute of Conservation and Ecology at the University of Kent in the UK. Tatyana is the co-author of the IUCN Primate Specialist Group's Best Practice Guidelines for the Prevention and Mitigation of Conflict between Humans and Great Apes. on Mitigating Great-Ape Human Conflict and provided an overview of the current challenges in Africa and the implications for such conflict for poor people – particularly crop raiding, livestock predation, damage to property and in some cases loss of life. She highlighted how generally, gorillas and bonobos tend to live in protected areas but chimpanzees are widely found outside of protected areas so their impact is particularly intense and lends itself less to any formal regulation or compensation efforts. Linda Yuliani from CIFOR provided a complementary presentation from the Asian perspective, again highlighting how the majority of orang-utans live outside of protected areas.

These two overviews were then followed by practical case studies from Cameroon, Uganda and Indonesia. Antoine Eyebe from CARPE described how there is a compensation scheme for human-wildlife conflict events in Cameroon but its implementation appears to be somewhat random with no clear framework in place. Likewise, in Uganda, Panta Kasoma from Jane Goodall Institute, also highlighted the existence of policies to tackle conflict but the limited capacity to do so. Various approaches have been tried in Uganda including typical preventive activities such as crop guarding, selective planting and physical barriers, but also some mitigative activities including education, livelihood support programmes and tourism incentives. Rondang Siregar, an Indonesian scientist, described how one of the main issues with orang utans was their incursions into oil palm plantations where they are killed by workers because they eat young plants which the workers have to pay to

replace. This issue of plantations is very different to the situation in Africa where it is mainly small scale farmers with subsistence crops and livestock herds who bear the costs of wildlife incursions.

Blog: Chillies- a hot and spicy solution to human-wildlife conflict in Africa? [15]

Planting a thick hedge of repellent plants – such as hot chilli peppers – around farms can help African forest communities keep out primates who often raid crops to survive amid widespread deforestation and loss of habitat."Chilli peppers are non-palatable to apes and have, in some cases, proved a successful deterrent to invading primates," said Tatyana Humle, primatologist and lecturer at the University of Kent.One of the main challenges facing primate conservation is the rising level of interaction between humans and great apes. "Humans and great apes basically are forced into conflict situations as land use changes to accommodate ever growing human populations and plantation expansions shrink existing forests to mere fragments," said Terry Sunderland, a senior scientist at CIFOR. Compounding this issue is that in many areas of Africa, great apes, especially chimpanzees, occur outside protected areas and have become less fearful of humans. They are therefore more likely to raid crops, approach human habitation or even potentially attack humans if provoked.

IUCN guidelines on human and great ape conflict compiled by Humle and colleagues highlight that due to slash and burn practices, agricultural fields are often located adjacent to the borders of protected forest areas and forest edges and are therefore vulnerable to crop raiding by primates. Greater distance from the forest reduces the susceptibility of farms or plantations to primate invasion, but this can also be effectively achieved by establishing buffer zones – blocks of land intended to discourage wildlife entrance –in the form of impenetrable barriers such as thorny bushes, or the use of unpalatable crops such as chilli peppers, chilli infused rope, or tea. "Tea plantations, if wide enough, appear to provide effective barriers that mountain gorillas and other animals do not cross," said Humle. Where great ape populations occur in fragments, the establishment and preservation of forest corridors that include a buffer zone, especially along riparian areas, may also reduce conflict in promoting greater availability and access to natural foods for the apes, while also helping link core habitats and preserve water sources.

These approaches however, are not without their challenges, with issues such as land tenure and financial sustainability due to requirements for buffer zone maintenance and management often arising. "There is also some concern that the allocation of prime farming land for non-utilitarian buffering plants may impact local livelihoods i.e. the farmers are giving up valuable land to plants which may hold no economic gain to them. However, the resulting alleviation in crop losses due the presence of the buffer may outweigh such costs. A multi-buffer zone approach is also being encouraged, with farmers additionally planting "useful" subsistence and cash crops such tea that are non-palatable to apes. According to Humle, animals – especially those as intelligent as great apes- may habituate to ranging in buffer areas containing chillies, reducing their effect as a deterrent. "Solutions designed by humans are constantly challenged by adaptable wildlife. Once a human-wildlife conflict strategy has been designed

[15] This is an abridged version of a blog posted by Michelle Kovacevic on the CIFOR Forests News site: http://blog.cifor.org/7246/chillies-a-hot-and-spicy-solution-to-human-wildlife-conflict-in-africa/

and implemented, it needs to be properly monitored and constantly reassessed and revised otherwise it is not worth the investment."

Africa's experience in conflict management with buffer zones could yield many important lessons for Asia, said Humle. "The multi-buffer approach appears more promising since it provides an economic gain to local communities." However, constraints unique to Asia may limit the effectiveness of buffer zones. Agroforestry schemes often encourage farmers to grow fruit trees, which could exacerbate the problem of crop-raiding, said Humle. Compared to Africa, Asia also has a higher human population density, more fragmented primate populations outside protected areas, and a larger expansion of commercial activities that impact natural habitats – for example oil palm plantations. "In situations of wildlife-human conflict, all stakeholders including villagers, local and national authorities, NGOs and relevant institutions etc., should be consulted in the design and implementation of mitigation schemes with expert advice. The greatest challenge is to strike a fitting balance between the needs of humans and great apes." Humle said.

Discussion points

There appear to be big differences between Africa and Asia in the prevention and mitigation of great ape-human conflict. Law enforcement to prevent the killing of problem animals appears to be more effective in Africa than in Asia but this may have more to do with the context of where conflict occurs – commercial plantations in Asia compared to smallholder farms in Africa. In both cases compensation schemes do not appear to have been very effective as a mitigation measure and while physical barriers may have had some success in Africa they don't work for orang utans because they are arboreal. Tea planting, might, however be an interesting option to explore. Another potentially interesting option that could be further explored is the use of conflict response teams. These have been used to a limited extent and with some success in Indonesia – based on the use of a 24-hour "hotline" to report problem animals. A similar approach is also under consideration in Sierra Leone. Overall. However much better education is needed of both local people and plantation companies as to how to deal with ape encounters, and how to reduce potential problems in the first place.

POLICY RECOMMMENDATIONS

The workshop concluded with joint elaboration of some policy recommendations which will be disseminated in the form of a CIFOR policy brief as follows:

REDD+

- Great ape range states should develop national and project level safeguards and actions for REDD+ projects that promote attention to biodiversity including great apes.
- REDD+ should contain national and project level safeguards to ensure implementation does not adversely affect poor people.

- Clear communications are needed (using locally relevant language) to ensure local communities understand what REDD+ is and what the implications are, this should include managing local expectations as to REDD+ benefits due to factors such as long timescales, long term sustainability of funds, and the likelihood of long term increases in local wildlife.
- REDD+ projects should be developed on a multi-stakeholder basis from project start-up to enable the management of trade-offs, such as between national and district level priorities.
- National level policy and regulatory frameworks – land tenure and historical rights will have to be harmonised when dealing with REDD+ projects, including ones that straddle national boundaries.
- REDD+ funding will have to be managed transparently and address appropriate payment types.

Tourism

- The potential for high value great ape tourism should be explored in Indonesia and Malaysia.
- The IUCN best practice policy guidelines for great ape tourism (Macfie and Williamson 2010) should be adhered to in any new or existing tourism development.
- A national programme for conservation-oriented orangutan tourism, which includes visitor regulations (e.g., visitor numbers, visit duration, behaviour, health, guide licensing), conservation management structures and authority, and a formal payment structure, and will be required in order to implement high-end great ape tourism in Asia.
- Long-term finance must secured before attempting to habituate great apes for tourism.
- When habituating great apes, individuals or groups located further from local communities should be chosen in order to reduce the potential for human wildlife conflict.
- In order to enhance livelihoods benefits, additional activities such as cultural tours should be promoted alongside ape tourism.
- Local capacity should be developed so that local people can gain the skills to benefit from working in great ape tourism.

Human- great ape conflict

- The IUCN best practice guidelines on great ape–human conflict (Hockings and Humle 2009) should be adhered to in all cases.
- Translocation of problem great apes in human-wildlife conflict should only be considered as a last resort.
- Recommendations need to be developed for handling livelihood damage caused by great apes that can reasonably be attributed to conservation efforts. Compensation has been provided in some areas but it raises serious problems from a conservation perspective, so alternatives need to be developed
- Greater engagement with the private sector (for example oil palm companies) is needed to effectively mitigate human-wildlife conflicts, but conservation authorities should maintain jurisdiction over the mitigation practices adopted and the private sector should cover the costs of the mitigation methods adopted, including any follow-up.

Annex: Workshop Agenda

Day 1: Wednesday January 11th, 2012		
Introductions and scene setting		
Session Start Time	Item	Lead
2.45 pm	Registration (and tea)	
3.15 pm	Welcome address from CIFOR	Robert Nasi, CIFOR Acting Director General
3.30 pm	Overview of the workshop – and overall aims, objectives and expected outputs. Workshop structure and process Field trip arrangements	Dilys Roe, Tom Blomley and Linda Yuliani
4.00 pm	Participant introductions and ice-breaker	All and Linda Yuliani
4.30 pm	Linking ape conservation and poverty alleviation: global issues, challenges and lessons	Ian Redmond, Ape Alliance
5.30 pm	Poster session	
6.30 pm	Welcome reception & pool-side cocktail	
7.00 pm	Dinner	
8/8.30 pm	Bus to hotel for participants not staying on CIFOR campus	

Day 2: Thursday January 12th, 2012		
Theme 1: Can REDD+ deliver poverty and ape conservation benefits?		
Session Start Time	Item	Lead
07.30 am	Bus from hotel to CIFOR campus	
08.30 am	Official opening and keynote speech	Mr. Tachir Fathony, Director of the Indonesian Forest Research and Development Agency (FORDA) and CIFOR Board member
09.00 am	Linking REDD+ with ape conservation in Africa – opportunities and challenges	Terry Sunderland, CIFOR
09.20 am	Linking REDD+ with ape conservation in Asia – opportunities and challenges	Laura D'Arcy, ZSL
09.40 am	Case study: orangutans and the economics of sustainable forest management in Sumatra	Johannes Refisch GRASP

10.15 am	Refreshment break	All
10.45 am	Feedback from participants: first impressions on Africa-Asia similarities and differences	Tom Blomley
11.00 am	Verbal inputs from African participants: different organisations experience of linking REDD+ and conservation in Africa	All African participants –Tom Blomley
11.30 am	Verbal inputs from Asian participants: different organisations experience of linking REDD+ and conservation in Asia	All Asian participants – Linda Yuliani
12.00 am	Lunch break	All
1pm	Break-out groups for discussion	
2 pm	Feedback from breakout groups – Gallery Walk	Group chairs
Theme 2: Can tourism deliver poverty and ape conservation benefits?		
2.30 pm	Ape tourism and poverty in Africa – issues, themes and lessons	Dilys Roe, IIED
2.50 pm	Ape tourism and poverty in Asia - issues, themes and lessons	Anne Russon Glendon Coll; York University , Canada
3.10 pm	Refreshment break	
3.30 pm	Case Study: linking ape tourism and poverty in Uganda: opportunities, limitations and lessons learned	Akankwasah Barirega Ministry of Tourism, Wildlife and Heritage
3.50 pm	Case Study: linking ape tourism and poverty in Rwanda: opportunities, limitations and lessons learned	Antoine Mudakikwa Rwanda Development Board/ Tourism and Conservation
4.10 pm	Case Study: linking ape tourism and poverty in Malaysia : opportunities, limitations and lessons learned	Datuk Lawrentius Ambu, Director of Sabah Wildlife Department – tbc
4.30 pm	Case Study: linking ape tourism and poverty in Indonesia : opportunities, limitations and lessons learned	Bambang Supriyanto, Deputy Director for Program and Evaluation of Environmental Services, Ministry of Forestry, Indonesia
4.50 pm	Feedback from participants: first impressions on Africa – Asia similarities and differences	Tom Blomley
5.15 pm	Close of formal sessions for the day	All
5,30 pm	Return to hotels and dinner at leisure	All

Day 3: Friday January 13th , 2012		
Session Start Time	**Item**	**Lead**
07.30 am	Bus pick up from hotels	
08.30 am	Recap on tourism issues	Dilys Roe
08.45 am	Break out groups	All
9.45 am	Feedback from break-out groups – Gallery Walk	All
10.15 am	Refreshment break	Group chairs
Theme 3: Addressing a constraint to better ape conservation – poverty linkages: dealing with Human – Wildlife Conflict		
10.45 am	Human-wildlife conflict in Africa: its impact on ape conservation – poverty relationship and how to tackle it	Tanya Humle, Durrell Institute
11.10 am	Human-wildlife conflict in Asia: its impact on ape conservation – poverty relationship and how to tackle it	Linda Yuliani, CIFOR
11.30	Tackling human-wildlife conflict in Africa in order to improve attitudes to ape conservation Practical experience from Cameroon	Antoine Eyebe, CARPE
12.00 pm	Lunch	All
1 pm	Tackling human-wildlife conflict in Africa in order to improve attitudes to ape conservation Practical experience from Uganda	Panta Kasoma, JGI – Uganda
1.20 pm	Practical experience of tackling human-wildlife conflict in Asia	Rondang Siregar, scientist
1.40 pm	Break-out groups for discussion	Tom Blomley
2.40 pm	Feedback sessions from groups – Gallery Walk	Group Chairs
3.15 pm	Refreshment break	
Theme 4: Agreeing a way forward and next steps		
4 pm	Group discussion - policy pointers for good practice	Terry Sunderland
5 pm	Next steps immediate follow up eg the best practice guidelines and policy note and future possible activities, ongoing engagement etc eg return visit to Africa?!	Tom Blomley
5.30 pm	Field trip logistics	Linda Yuliani
5.45 pm	Drinks and Indonesian dinner in Bogor	ALL
8pm	Bus to Amaris hotel in Jakarta	

Day 4: Saturday January 14th , 2012		
Session Start Time	**Item**	**Lead**
04.30 am	Depart for airport	All
06.20 am	Flight from Jakarta to Palangkaraya	All
08.00 am	Check in and breakfast at Aquarius hotel	ALL
0900-10.00 am	Travel to Kereng Bangkerai village by car and boat	ALL
10 am – 3 pm	Visit to orangutan conservation project with a strong livelihoods component FURTHER DETAILS TO FOLLOW	ALL
5pm	Feedback from African participants	Tom Blomley
7 pm	Dinner	

Day 5: Sunday January 15th , 2012		
08.00 am – 12.30 pm	Visit Kaja Island where the orangutan released candidates are based, and nearby village (including long-house) Sei Gohong to meet local people and discuss some social issues.	ALL
12.30-13.00	Quick lunch in the village	
2.30 pm	Flight back to Jakarta (arrive 16.15)	ALL
Evening	Participants depart	ALL

Annex 2: Workshop participants

Name	Organisation	Country
Aggrey Rwetsiba	Uganda Wildlife Authority	Uganda
Antoine Eyebe	CARPE/PCLG	Cameroon
Antoine Mudakikwa	Rwanda Development Board	Rwanda
Augustin Basabose	International Gorilla Conservation Programme	DRC
Barirega Akankwasah	Ministry of Tourism	Uganda
Dilys Roe	IIED	UK
Flavia Milly Lanyero	Daily Monitor	Uganda
Florent Ikoli	Ministere de Developpement Durable, de l'Economie Forestiere et de l'Environnement	CONGO
Ian Redmond	CMS	UK
Inaoyom Imong	WCS	Nigeria
Jillian Miller	Gorilla Organization	UK
Johannes Refisch	GRASP	Kenya
Liz Williamson	IUCN PSG	UK
Mike Shanahan	IIED	UK
Panta Kasoma	Jane Goodall Institute Uganda	Uganda
Tatyana Humle	Kent University	UK
Tom Blomley	Acacia Natural Resource Consultants Ltd.	UK
Yene Atangana Quentin	Ministry of Forestry and Widlife	Cameroon
Jamartin Sihite	Borneo Orangutan Survival Foundationa (BOSF)	Indonesia
Achmad Rizal	TNC Indonesia	Indonesia
Darmawan Liswanto	Fauna & Flora International	Indonesia
Ian Singleton	Sumatran Orangutan Conservation	Indonesia

	Programme,		
Valentinus Heri	Yayasan Riak Bumi	Indonesia	
Arif Budiman	WWF Indonesia	Indonesia	
Sulhani	Yayasan Titian	Indonesia	
Niken Wuri Handayani	Balai Konservasi Sumber Daya Alam Kalimantan Barat	Indonesia	
Soewignyo	Balai Taman Nasional Danau Sentarum	Indonesia	
Wendy Tamariska	Yayasan Palung	Indonesia	
Franky Zamzani	Balai Taman Nasional Gunung Palung	Indonesia	
Widada	Balai Taman Nasional Bukit Baka-Bukit Raya	Indonesia	
Gunung Sinaga	Balai Taman Nasional Tanjung Putting	Indonesia	
Hendra Gunawan	FORDA	Indonesia	
Rondang Siregar		Indonesia	
Anne Russon	Glendon College of York University	Canada	
Lee Shan Kee	Borneo Species Programme Officer	Malaysia	
Melvin Gumal	Wildlife Conservation Society	Malaysia	
Sumarto	Ministry of Forestry	Indonesia	
Adi Susmianto	FORDA	Indonesia	
Sri Suci Utami Atmoko	Forum Orangutan Indonesia (FORINA)	Indonesia	
Laura Darcy		Indonesia	
Yulita Kabanga	Balai Taman Nasional Kutai	Indonesia	
Deni Kurniawan	Orangutan Reintroduction Program, Nyaru Menteng	Indonesia	
Andi Basrul	Balai Besar Taman Nasional Gunung Leuser	Indonesia	
Michael Balinga	CIFOR	Burkina Faso	
Douglas Sheil	CIFOR	Uganda	
Terry Sunderland	CIFOR	Indonesia	
Linda Yuliani	CIFOR	Indonesia	