

POPULATION ASSESSMENT OF GIBBONS IN KALIMANTAN, INDONESIA: LONG-TERM MONITORING AND EMPOWERING LOCAL PEOPLE IN EFFECTIVE CONSERVATION EFFORTS

Name applicant	Dr Susan Cheyne
Institution/project organization	The Orangutan Tropical Peatland Project (OuTrop, UK registered non-profit organisation) in partnership with CIMTROP (Centre for the Management of Tropical Peatlands) at the University of Palangka Raya.
Project location (country/region)	Sabangau Forest, Central Kalimantan, Borneo, Indonesia
Project location coordinates	WGS84 2° 33' 0" S, 113° 50' 0" E
Email address applicant	scheyne@outrop.com
Project summary	This project funding the enhancement of locally-based community patrol units' capacity to protect and monitor the populations of the Bornean southern gibbon (<i>Hylobates albibarbis</i>). This proposal supports enriching team members' ability to patrol effectively, using dynamic patrol routes analyzed via SMART conservation software and through coordination with OuTrop and our local partners CIMTROP. Effectiveness will also be measured by assessing population trends of gibbons in different parts of the Sabangau forest. These activities are carried out in the Sabangau peat-swamp forest in southern Borneo. This is the largest non-fragmented rainforest remaining in Borneo and supports the largest known contiguous population of the White-bearded gibbon.
Project Goal	To improve effectiveness of locally-led patrol efforts through SMART conservation software, to provide training on SMART and to assess the impact of the new patrolling approach to deter illegal activities and to contribute to adaptive management led by the patrol team. Direct impacts of these improved patrolling methods will be assessed by monitoring gibbon population status as part of long-term population monitoring within the forest at 5 different sites. Gibbon population data will be compared to that available from previous OuTrop surveys dating back to 2005.
Organization Background	<p>The Orangutan Tropical Peatland Project (OuTrop) aims to protect and restore the tropical peat-swamp forests of southern Borneo, with a view to safeguarding critical habitat for the endangered Bornean orangutan and Bornean southern gibbon. Together with local communities, OuTrop undertakes in situ research, conservation and training/capacity building activities in the Sabangau Forest and surrounding areas. We work with local community leaders to promote sustainable development, to educate and protect natural resources for the future.</p> <p>Tropical peat-swamp forest cloaks the floodplains of southern Borneo and is a crucial habitat for conservation of the Bornean</p>

	<p>southern gibbon. The Sabangau Forest is the largest intact area of tropical peat-swamp forest remaining in Borneo, amidst a sea of development that has left vast areas of peatland either converted to plantations or left idle as burnt wastelands. In Sabangau can be found the largest known population of the white-bearded gibbon (ca. 20,000) dependent upon 6000km² of forest.</p> <p>Although now protected, Sabangau remains threatened as the result of rampant illegal logging during the late 1990's and early 2000's. The consequences of this logging, particularly the digging of narrow channels up to 15 km long for timber extraction, pose a long-term threat to the ecosystem by causing peat drainage, oxidation and subsidence. Meanwhile people use these drainage channels as access routes to illegally hunt wildlife and for small-scale illegal logging. Continued conservation action is essential if these threats are to be mitigated in the long term.</p> <p>OuTrop tackles these problems via a dual approach, in which we work closely with local communities to implement locally-led solutions to conservation problems, while at the same time seeking to increase our conservation impact across broader areas. We support and advise a Community Patrol Team, formed of committed people from local Sabangau villages, who tackle forest fires, patrol the forest for illegal activities, and socialise these programs within the local community. We carry out active restoration through our dam-building and reforestation programs, and support the development of alternative-livelihood solutions by our local partners. OuTrop adopt an experimental approach to these programs, to ensure that they are having the required impact and to trial different or novel techniques, so that full-scale implementation is practical, efficient and successful. We collect high-quality scientific data on the status and condition of the flagship gibbon species and the forest, to identify problems and solutions for gibbon conservation in the area, monitor the effectiveness of conservation programs and apply results to management decision making across the region. Finally, we provide training and advice to other organisations working to protect tropical peat-swamp forest, helping expand our reach through developing conservation policy and capacity in other important gibbon conservation areas.</p>
<p>Project Activities</p>	<p>By empowering local community members to protect their natural heritage and providing training and tools to evaluate their work, pride and ownership are instilled in the local community, and awareness is raised. By implementing analysis of patrolling efforts, the patrol team are better placed to make positive management decisions. A range-wide population level survey of the gibbons in Sabangau using established survey areas, will be conducted to determine what effect the new presence adaptive patrol routes will have upon the gibbons.</p>

<p>Project Activities (cont.)</p>	<p><u>SMART and the Patrol Teams</u></p> <p>Although patrols are already established at Sabangau, patrol routes and monitoring efficacy needs to be increased. While units are actively patrolling 12 days per month, routes are not systematically determined and depend more on perception of possible sources of threat. There is also an opportunity to increase the quality of monitoring of changes in gibbon population, the presence of other key species, and to create accurate logs of illegal activity and patterns of threats. Altogether, this represents a pressing need to enhance capacity in those who patrol the Sabangau and in the data gathered for research and enforcement purposes. Each unit member will be given a course on the implementation and usage of SMART Conservation Software, which is a bio-spatial analysis tool used to better plan, evaluate and implement patrolling activities. This will give the combined patrol members and OuTrop the ability to plan effective routes based on recorded threats.</p> <p><u>Population surveys</u></p> <p>OuTrop has been monitoring the population density of gibbons in 5 key locations throughout the northern part of the Sabangau forest since 2005. With a shorter inter-birth interval and complex group structure, gibbons are hypothesized to demonstrate susceptibility to anthropogenic disturbance in the short-term more rapidly compared to orang-utans (measured through changes in group demography and population density). Our teams use established methods (fixed-point triangulation). These long-term data allow us to build up a picture of how gibbons use the different habitats in the forest, which areas are experiencing a decline in density and what are the causes and also to identify areas in need of increased patrol efforts. Our teams are well trained in these methods and will continue to use this to monitor population density. Data will be compared to survey data from previous years to determine trends.</p>
<p>Working with local communities</p>	<p>The project works closely with people from the local communities of Kereng Bangkerai, Kalampangan and Sabarau villages. The Community Forest Patrols are staffed entirely by people from these villages, each member representing a sub-district in the village. People here are traditionally fishermen, relying on the forest for a wide variety of natural products and the forest also holds a strong cultural significance for the Dayak communities of Borneo. They are enthusiastic to protect their forest and we are proud to work with these people and support them. The core of the patrol team consists of ten people with another 100 people available to be called upon if necessary.</p> <p>The local university is another major stakeholder and permanent collaborator in our research, peatland management and sustainable income objectives. We help train students, work alongside Indonesian scientists in long-term research programs and contribute to international symposia and conferences. The research program employs a staff of 10 field assistants and support staff who work full-time on these objectives.</p>

Assessing progress	<p><u>1. Forest patrols and SMART:</u></p> <p>a. Frequency of forest patrols – target three times per week with adaptive patrol routes</p> <p>b. all patrol team members trained in SMART approach</p> <p>c. all patrol team members trained in standard ways of recording and entering data on illegal activities encountered</p> <p>d. altering of routes, activities etc. based on analysis of SMART data at regular intervals.</p> <p>e. All illegal activities recorded and compiled in SMART</p> <p><u>2. Gibbon population surveys:</u></p> <p>a. surveys of gibbon populations at key locations in the Sabangau forest (core study area and 4 remote locations).</p> <p>Progress towards meeting these targets will be evaluated at quarterly intervals.</p>		
Assessing success	<p>The project will be evaluated against the following criteria:</p> <p>1) All patrol team members able to use SMART and interpret results</p> <p>2) All patrol team members able to use SMART results to adapt patrol activities</p> <p>3) All 5 sites surveyed for gibbon populations and illegal activities</p>		
Amount requested from Gibbon Alliance	\$7,600		
Matched funding and other sources applied to	A laptop and other equipment have already been purchased for the patrol team through previous grants. We are applying to EAZA Ape Fund 2014 for additional funds to support this project		
Budget Item	Gibbon Alliance	EAZA (pending)	Total
Patrol team transport and fuel	1000	1000	2,000.00
3 x GPS to ensure each sub-team can record data needed for SMART	600	0	600.00
Patrol team salaries	3000	8000	11,000.00
Monitoring of gibbon population at 5 sites	2000	2000	4,000.00
Socialisation and Awareness of SMART including training workshops	1000	500	1,500.00
Project overheads, including utilities, rent and administration	0	500	500.00
Total	7,600.00	12,000.00	19,600.00
Managing the budget	<p>All individual activities and surveys will be budgeted in advance of implementation so everyone is aware of the funding limits. Expenses will be accounted in OuTrop's normal way by our dedicated accounts staff; with each item of expenditure assigned to a project and income source; monthly summaries distributed to all directors and annual accounts prepared by our accountants and submitted to Companies House in the UK.</p>		
Continuation of the project after the completion of the grant	<p>The regular gibbon population monitoring and patrolling objectives will continue beyond the life of this grant. The OuTrop research</p>		

	<p>project has been on-going since 1999, the community patrol teams have been in operation since 2004 and gibbon populations have been monitored since the inception of the gibbon behavioural ecology project in 2005. Once the patrol team is trained in the use of SMART and this approach has been integrated into their standard operating procedures, we anticipate long-term effectiveness of this approach and a reduction in costs. OuTrop has made a commitment to this forest and the local people and we will continue to support these efforts long-term through funding and logistical support.</p>
<p>Strategy for funds beyond the Gibbon Alliance support</p>	<p>The regular monitoring and patrolling objectives are prioritised in our core funding from charities, long-term supporters, volunteers and other visitors and these will continue for as long as OuTrop is working in Sabangau.</p> <p>Over the long-term the effective and adaptive patrolling and recording of illegal activities will allow the patrol team to better manage their efforts and resources, understand the impact of their work and be more proactive in targeting illegal activities.</p> <p>The implementation of SMART is a standalone project which will have a long-term impact on the current patrol team as well as ensuring future members are also trained to ensure the on-going effectiveness of the patrol efforts.</p>

Additional Information about OuTrop

The Orangutan Tropical Peatland Project (OuTrop) is a UK-registered non-profit organisation (Company No. 06761511), which is supported by the Orangutan Tropical Peatland Trust (UK Registered Charity No. 1142870). Our team of 25 full-time conservation biologists and researchers is dedicated to studying and protecting Borneo’s peat-swamp forest and its resident orangutan and gibbon populations. Since our founding in 1999 we have worked together with local partners and communities to identify conservation problems, and develop and implement conservation solutions, in the region.

OuTrop has a proven record of delivery of scientific outputs, including discovery of the conservation potential of Sabangau; dissemination of results and recommendations at various levels, including local conservation agencies and resource managers; publications in the scientific literature and presentations at international scientific meetings; and consultations on local, national and international ape conservation strategies. We have made major contributions to regional and national Orangutan Action Plans and Protection Workshops, the 2004 Orangutan Population and Habitat Viability Analysis, the 2008 IUCN Gibbon Rehabilitation and Reintroduction Guidelines, and the 2008 Gibbon Population Viability Analysis. OuTrop provide advice and training to local scientists and villagers around Sabangau (currently over 50), plus other organisations involved in Asian ape research and conservation, helping establish the future of ape conservation in the region. We continue to contribute to protection and education efforts throughout Borneo, including the Katingan Peatland Restoration and Conservation Project, which aims to protect a 200,000 ha area of forest estimated to be home to over 3,500 orangutans and 9,700 gibbons; plus advising on management of High Conservation Value areas in the production landscape; carrying out biodiversity and ape population surveys for a number of stakeholders; and identifying areas for rehabilitant orangutan release from the International Animal Rescue centre in West Kalimantan. We have considerable expertise in developing programs for monitoring orangutan and gibbon population density and behaviour, habitat quality and ecological indicators, and felid population distribution and activity. The continued input of

our experienced research group is extremely important to future habitat and species protection in both Sabangau and other key conservation areas in Kalimantan.

Our local partners, CIMTROP, are based at the University of Palangka Raya and are leading experts in tropical peatland ecology and management. CIMTROP continually consult on matters of peatland ecosystem management, habitat restoration, and fire prevention and control to the provincial government, Governor's office, regional conservation department (BKSDA) and regional Department of Forestry. They regularly organise and host conferences on peatland conservation, development and restoration, and have partnerships with many universities and NGO's worldwide. CIMTROP was established in 1997 and manages the 50,000 ha Natural Laboratory of Peat-swamp Forest in Sabangau. They established the Community Patrol Team and Fire Attack Force (TSA), which works to protect the forest in Sabangau from fire, illegal logging and other disturbances, maintain a link between OuTrop's research team and the local community in Kereng Bangkerai, and enhance local support for conservation in the area.