



Darwin Initiative Main Project Annual Report

To be completed with reference to the “Writing a Darwin Report” guidance: (<http://www.darwininitiative.org.uk/resources-for-projects/reporting-forms>). It is expected that this report will be a **maximum** of 20 pages in length, excluding annexes)

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Darwin Project Information

Project reference	23-013
Project title	Living with Tigers in Nepal: poverty reduction for human-wildlife coexistence
Host country/ies	Nepal
Contract holder institution	North of England Zoological Society (Chester Zoo)
Partner institution(s)	Green Governance Nepal Wildlife Conservation Research Unit, Oxford University Department of National Parks and Wildlife Conservation, Government of Nepal Buffer zone Management Committee, Chitwan National Park Buffer zone Management Committee, Bardia National Park Swarnim Academy of Community Development National Trust for Nature Conservation
Darwin grant value	£ 189,000
Start/end dates of project	1 st of April 2016-31 st of March 2019
Reporting period (e.g., Apr 2017 – Mar 2018) and number (e.g., Annual Report 1, 2, 3)	1 st of April 2017-31 st of March 2018 Annual Report 2
Project Leader name	Alexandra Zimmermann
Project website/blog/Twitter	http://www.chesterzoo.org/conservation-and-science/where-we-work/south-asia/living-with-tigers
Report author(s) and date	Valerie de Liedekerke & Tilak Chaudhary (30/04/2018)

1. Project rationale

Refer to year one report.

2. Project partnerships

The project activities are implemented in close coordination with partners. The project partners include Department of National Parks and Wildlife Conservation (DNPWC), Chitwan National Park (CNP), Bardia National Park (BNP), National Trust for Nature Conservation (NTNC), Pathabar Buffer Zone User Committee, Kareliya Buffer Zone User Committee, Ayodhayapuri Buffer Zone User Committee, and Kalabanjar Buffer Zone User Committee.

DNPWC, CNP, and BNP are the governmental partners whereas others are non-governmental organizations. DNPWC has provided the project with the necessary permissions and permits to conduct ecological research at project sites and played an advisory role. While CNP and BNP are major stakeholders directly involved in project site selection, field monitoring and providing research permission in the respective national parks and have provided constructive advice at every stage of the project activity implementation.

NTNC have trained staff in camera trapping who were mobilized during the ecological research phase of the project and provided technical advice. Buffer Zone User Committees are key community based partners of the project that were engaged in identifying and planning, implementation and monitoring of the project interventions.

To date the project has funded predator proof pen construction, biogas plant installation, capacity building trainings for alternative livelihood opportunities, supported local farmers for livelihood improvement with User Committees assistance and management, and with Living with Tigers (LWT) technical team support.

All partners maintain open and regular dialogue so that when challenges have crept up they have been expediently dealt with and resolved. The key to success has been to keep all partners involved in the decision making process and have the opportunity every step of the way to provide input, local knowledge and voice concerns.

3. Project progress

3.1 Progress in carrying out project Activities

In year two, emphasis was placed on activities centred around alternative livelihoods and income generation in project site villages mainly focused on livelihood improvement, safe working and livestock husbandry practices, alternative and efficient energy use and social marketing for behavioural change. Following are the details of activities conducted for outputs 1-5 in year two. Survey results of several workshop trainings show village members finding the trainings useful, applicable and able to assist them in making a living and raising income earnings.

The social survey was repeated in year two in September 2017 and data are being entered in excel (**Activity 1.1 & 1.2**). The project continued to conduct various livestock husbandry training workshops in all four project communities. The workshops conducted correspond to outputs 1 and 3, and included goat pig cow and poultry husbandry workshops (**Activity 1.5 & 3.6**). Altogether six goat farming workshops were delivered which benefited 236 local farmers, of which 140 were female. Two pig farming workshops were attended by 73 participants out of which 38 were female. One poultry and one cow farming workshop was held in Ayodhyapuri UC that was attended by 57 (18 female) and 39 (15 female) participants respectively.

Safe working and livestock husbandry practices and schemes (**Activity 1.6**) were successfully rolled out in project communities. Project supported construction of predator proof pens (PPPs) in all four communities, Ayodhyapuri, Kalabanjar, Patabhar and Kareliya. Altogether, 95 predator proof pens were financially supported in year two.

Project Site	User Committee	Number of PPP
Chitwan National Park	Ayodhyapuri BZUC	28
Chitwan National Park	Kalabanjar BZUC	21
Chitwan National Park	Patabhar BZUC	28
Chitwan National Park	Kareliya BZUC	18
Total Year 2		95

One of the significant human behaviours putting people at risk of tiger attacks is going into the Buffer Zones and National Parks to collect fodder for their livestock and fuelwood for cooking. Therefore it was felt that helping villagers grow their own livestock fodder and fuelwood in

hedge areas between agricultural areas would help reduce the risk of tiger attacks as they are less likely to need to go into forest areas and national parks for the resources. We have supported Patabhar User Committee with fodder trees for seedling production which will be planted next year. Most fodder trees are multi-purpose, providing products such as firewood, livestock feed and services such as soil erosion control.

The project team also led interaction and awareness programmes in the project communities as well as outside project sites (**Activity 1.8**). The LWT team shared project information regarding HWC mitigation measures via: 1) interaction programmes covering the importance of PPPs in Kalabajar UC, Chitwan, 2) an awareness programme on tiger conservation via a drawing competition for students in Ayodhyapuri UC, Chitwan, 3) a Community Based Anti-Poaching Day celebration in Bardia, 4) and during national celebration days, such as World Environment Day, and Wildlife Week.

Having lost several cameras to vandalism and theft in year one, we conducted community engagement meetings to share the purpose of the camera trapping work before deploying equipment in the field, as well as sharing preliminary findings at the end of field season with them. In addition small signs were put up next to the cameras in the field explaining what they were being used for. As a result we had a significant decrease in vandalism and theft of the cameras during our 2nd field data collection.

The PhD candidate working on the ecological research component of LWT project also delivered ecological survey training to members of the Community Based Anti-Poaching Unit (CBAPU) in March 2018 in Janaknagar with 21 participants (9 women, 12 men) and Rammapur with 21 participants (5 women, 16 men). These skills are useful as the government conduct regular camera trapping censuses and hire locals to help deploy equipment in the national parks. Additionally, four sets of four wildlife identification books were donated to each community to help community members further their knowledge of local wildlife.

The project team together with GGN representatives and local stakeholders (Buffer Zone User Committee, National Parks, NTNC and Nepal Army) have regularly monitored project activities that were conducted in year one and two (**Activities 1.7, 2.7, 3.4, 3.9.1**). Year two project activities were built on previous experience gained in year one. The team have also been evaluating the workshops delivered by Chester Zoo staff in Nepal. The results of the 1st horticultural workshops delivered in all four communities in January 2018 were very encouraging. The impact of receiving the training was deemed quite high in the areas of food productivity, poverty alleviation, and income generation according to survey results.

The greatest areas of learning were in organic pesticide production, vegetable farming, and vermi-composting. The main feedback was that villagers felt there was insufficient time to cover everything during the two day workshop and thus participants requested a follow up practical hands on training. As a result Chester Zoo will be funding two staff members of our Horticultural team to return to Nepal to deliver follow up practical hands on training directly in the field (will take place in May 2018). The LWT field team together with Buffer zone user committee are also monitoring project activity for improvement during implementation, refer to UC monitoring report in Annex 4.

Building on the experience from year one and considering the community demand for biogas plants, an extra 10 biogas plants in Ramvapour, Kareliya UC, Bardia were installed in year two (**Activity 2.6**). Together with the project's NRs. 10000 (C.a. £90) financial contribution, Kareliya Buffer Zone User Committee and Village Municipality also contributed matching support of NRs. 5000 (approximately. £45), NRs. 21000 (approximately £200) respectively to households installing biogas plant. The respective households installing biogas also contributed approximately NRs. 43000 (£400) for materials and labours.

An independent consultant was hired to conduct a study to assess markets and identify viable alternative livelihood options in the project sites (**Activity 3.4 & 3.5**). The report can be found in Annex 4: **Livelihood and market analysis within the Buffer Zone communities of Bardia National Park and Chitwan National Park, Nepal**. The findings of the report, including the results of the 1st year social survey and focus group discussions guided the LWT team's decision regarding the delivery of livelihoods workshops/trainings. It was found that primarily villagers wanted to improve upon or perfect the livelihoods they were already engaged in such as cow, pig, poultry and goat farming.

In order to support project communities' start up of alternative livelihoods, the project conducted various capacity enhancement training workshops. The trainings/workshops included: Horticulture, Goat Farming, Pig Farming, Pickle Making, Poultry Farming, Cow Farming, Hospitality and Sanitation for Homestay operators and Advanced Tailoring (**Activity 3.6**). Altogether 594 individuals participated in different trainings and workshops, out of which 48% were female participants.

The project has contributed towards improving the goat genetic stock through donating four billy goats and creating billy goat management groups in the project sites for management of breeding the billy goats (**Activity 3.7**). This will directly impact 48 households in Patabhar, 100 households in Ayodhyapuri, and 80 in Kalabanjar.

Additionally in Ayodhyapuri UC of Chitwan two local farmers have received farming equipment such as water sprayer, seeds, 150 litre drums, pesticide sprayers and seedling germination containers.

The year two camera trapping and transect survey in buffer zone community forest of Chitwan National Park has been completed (Sept-Dec 2017) (**Activity 4.4**). Due to the government-led National Tiger Census, camera trapping could not take place in the core national parks area only in buffer zones and near villages. The LWT team have submitted a data sharing request to DNPWC for data from core areas of the park that are of interest to the project in order to fill the gaps in our data collection.

Similarly, the year two camera trapping and transect survey in and around BNP and its buffer zone was completed (Jan-April, 2018), thankfully with no restrictions as government-led camera trapping was not taking place in our research sites simultaneously.

The year two social survey has been piloted and completed in all project sites of both national parks (**Activity 4.5**). Altogether 846 household interviews have been collected. Data are still being entered and analysis will follow soon.

Based on 1st year survey results, a social marketing campaign strategy was developed by the LWT project team in April, 2017 during the 2nd Social Marketing workshop held in Kathmandu attended by LWT team, government and park authorities, and chiefs of buffer zone user committees (**Activities 5.2, 5.3, 5.4**). During the workshop the project field team consolidated the field consultation information to identify the site specific message and target human behaviours that put people at risk that was then used to create the campaign. A participatory approach discussion around the appropriate means of message delivery was conducted. The LWT project as a result decided on street and radio dramas as appropriate tools for conveying campaign message to its target audience.

To develop scripts for the social marketing campaign, a local actor and script writer was hired. The script for the street drama was finalized after a series of reviews by our project Social Marketing and M&E advisor. Once the script for the street drama was finalized, local community performers from Kalabajar UC in Chitwan and Patabhar UC in Bardia were identified and trained for five days before the performance. Street dramas were performed in all four sites of the project (**Activities 5.5, 5.6, & 5.7**). In Bardia it was watched by about 800 people (Kareliya-200, Patabhar-600) and in Chitwan by 400 (Ayodhyapuri-250, Kalabanjar-150). The street dramas involved storytelling around ways of being careful while going to the forest, like going in the day time, going in groups, adopting mitigation measures against livestock depredation and human casualty from tigers and other wildlife. Two different street dramas were developed for the two national parks; for example, in Kalabanjar, CNP, drama highlighted issues related to human casualty while in BNP drama highlighted livestock depredation.

The radio drama script was finalized after review by our project Social Marketing and M&E advisor. It is currently being recorded and will be aired in two local radio stations in Bardia and Chitwan in May 2018. In Chitwan, Kalika FM (95.2) will air the 8 minute radio drama twice a week for eight weeks while in Bardia, Radio Tiger FM (88.2) will broadcast the radio drama.

3.2 Progress towards project Outputs

Output 1. Safe working practices in the buffer zone and community forests established, and predator-safe livestock husbandry methods adopted by project villages.

In year two, altogether 95 households owning livestock received support to build predator proof pens in CNP and BNP (49 and 46 respectively) from the project. To date 152 households (about 9%) have been supported by LWT to build predator proof pens in project sites. In Kareliya UC, BNP, LWT supported installation of 18 PPP while in Patabhar UC, BNP, 28 PPP have been installed. Altogether 55 PPPs have been built in project sites of BNP out of which 46 are supported by LWT and the remainder by other organizations. This shows that project interventions are being replicated by other conservation partners based on the success witnessed in our project sites.

Approximately 484 individuals (about 30% of total project households) from livestock-owning households from project sites and neighbouring communities participated in various awareness, training and workshop sessions. Around 236 individuals participated in goat farming workshops, 73 participated in pig farming workshops, 57 in poultry farming workshops and 39 participated in cow farming workshops, while 35 individuals took part in a PPP information sharing workshop and 44 in goat management meetings.

The final results of people adopting safe working practices and predator-safe livestock husbandry methods will be known once the final 3rd year social survey is conducted allowing us to analyse the baseline results against these findings to see the impact of these methods. The project is well on track to deliver the outputs by the end of the project.

Output 2. Household consumption of natural resources reduced by identifying, and building capacity for the uptake of resource alternatives or more efficient use practices.

In Kareliya UC, BNP, 10 natural resource user households received biogas plants support as alternative source of energy for cooking in year two. To date, altogether forty six households (16 in CNP and 30 in BNP) from project site communities (about 3%) have received support to install biogas plants from LWT project. In project sites in Kareliya UC, Bardia, 32 households were supported by the LWT project.

In addition we hope to see people increase their agricultural yields and grow more fuelwood as a result of the horticultural training and the seedlings supplied thus becoming less reliant on natural resources and decreasing risk of contact with wildlife.

The change in household consumption will be measured once the 3rd year social survey has been conducted and findings compared with the baseline results documenting the change in time spent collecting natural resources in buffer zones and national parks. The project is well on target to deliver the outcome, in year three we will continue to support biogas plant installations and PPPs in the project site villages.

Output 3. Capacity for, and new sources of, alternative livelihoods and income generation established in project villages.

Altogether 603 individuals (37% of total project households) from project communities participated in different alternative livelihoods and income generation capacity development workshops. In Chitwan, 375 individuals (about 58%) participated in different training/workshops, like goat, cow, pig, and poultry farming and horticulture, pickle and advanced tailoring workshops. In Bardia, 228 individuals participated in different workshops, like goat farming, pig farming, horticulture training and hospitality for homestay operators.

Altogether, three goat management groups (two in Chitwan and one in Bardia) were formed which are to support improved breed reproduction. It will directly benefit 220 goat farming households (Bardia-48 and Chitwan-180). Two households in the Chitwan project community have been provided with agricultural equipment.

In year three we will continue with some of the training, and in May 2018 will be helping support vermi-compost building, seedling bed construction, and poultry cage building. The number of households directly involved with the LWT project will continue to grow in year three. Year three social survey will hopefully show the uptake of alternative livelihoods and increased income in our project sites.

Output 4. Social and ecological conditions favourable to continued or increasing tiger presence in project area are achieved in project focal areas.

The first phase of camera-trapping and transect survey data collection in CNP and around its buffer zone, and the second phase in BNP have been completed. Forty four individuals participated in a community engagement meeting for camera trapping in BNP. Fifty four individuals participated in ecological survey training.

The project will have completed all the camera trapping and transect surveying by December 2018. The data collected from these activities will feed into the analysis of whether the HWC mitigation measures, and alternative livelihoods have helped villagers safeguard themselves and their livestock.

Output 5. Social Marketing Campaign.

The social marketing (SM) campaign has been developed and rolled out in year two. Two different tools were identified, street drama and radio drama. The street drama was successfully performed in all project communities. Altogether four street dramas were performed that were attended by almost 1200 (BNP- 800 and CNP- 400) individuals from project communities and neighbouring villages. Two radio drama programmes have been developed and are in the process of being recorded, it will soon air on local radio stations in Chitwan and Bardia.

To date people have said that they have learned a great deal in terms of how they can help themselves and their livestock stay safe. They also have a better understanding of how their behaviours put them at risk of conflict and how making changes in their behaviours will help them reduce their risk of human-wildlife conflict and the mitigation measure support they can request. The final social survey will hopefully provide the evidence of the positive human behaviour changes people have adopted long term.

3.3 Progress towards the project Outcome

Outcome:	In project sites around Chitwan and Bardia, the safety of people and tigers is secured and poverty reduced by changing behaviours, building capacity, improving livelihoods, and reducing human-tiger conflict.			
Indicator	Baseline	Change by March 2018	Source of evidence	Comments (if necessary)
0.1 The number of people attacked by tigers is reduced by 80% in focal communities around Chitwan and Bardia by project end compared to pre-project levels.	In Kalabajar, a tiger killed a man, but no killing or harming of tigers and leopards in Chitwan occurred. There were no attacks or deaths of humans caused by tigers or leopards in Bardia, and no killing or harming of leopards and tigers.	No incidence of human casualties occurred in project site	a) Regional human-tiger conflict monitoring system & official records by partners (DNPWC, NTNC) b) Local reports to project staff and verification c) Baseline and evaluation panel questionnaire surveys (i.e. surveying same people before & after interventions) carried out in project sites and matched comparison sites.	Still need to analyse the year 2 social survey results, so unable to fully confirm change at time of report.
0.2 50% fewer livestock attacked by tigers or leopards in focal communities by the end of year 3 compared to pre-project levels.	For our Bardia focal communities, out of those households that owned livestock, on average 17.9% stated they had lost livestock in the last 3 years by tiger, leopard, or other. This equates to 12 cattle, 3 oxen, 47 goats, 11 sheep, 34 pig, and 128 poultry. For our Chitwan focal communities, out of	In Chitwan: Kalabajar: Cow/Oxen-2 Ayodhyapuri: Goat-19 In Bardia: Patabhar: Goat-3 Pig-2 Poultry-10 Kareliya:	d) Baseline and monitoring participant observation & focus groups	The social marketing behaviour campaign will have hopefully made people to act differently in terms of their livestock husbandr

	those households that owned livestock, on average 6.9% stated they had lost livestock in the last 3 years by tiger, leopard, or other. This equates to 1 cattle, 6 buffalo, 5 oxen, 41 goats, 1 pig, and 204 poultry	Goat/sheep-20/2 Pig-8 Cow/Oxen-2	e) Government records of tiger losses and relocations.	y, and in their natural resources collection behaviours.
0.3 No tigers are killed by people from focal communities throughout project period, and number of 'problem tigers' removed by officials is reduced compared with pre-project levels and compared to comparison sites.	0	Waiting for the National tiger census data to be released by DNPWC in 2018.		
0.4 Levels of poverty reduced and wellbeing improved in ca. 375 (20-60%*) focal CFUG households <i>per park</i> by year 3. (Indicators to be developed as part of the initial learning to understand what wellbeing means to the beneficiaries	<p>238 Households (HHs) are under poverty line in Janaknagar (treat site) and 121 HHs in Saljhundi (control site) in Pathabar UC; and 187 HHs are under poverty line in Rammapur (treat site) and 326 HHs in Dangpur (control site) in Kareliya UC.</p> <p>In Bardia 66% of households stated having and holdings was the most important aspect for their wellbeing, and then 10% stated their children having education.</p> <p>206 Households (HHs) are under poverty line in Kalabajar (Treat – 135, Control – 71) and 569 HHs in Ayodhyapuri and 121 HHs in Saljhundi (control site) in Pathabar UC; and 187 HHs are under poverty line in Rammapur (treat site) and 326 HHs in Dangpur (control site) in Kareliya UC.</p> <p>In Bardia 66% of households stated having landholdings was the most important aspect for their wellbeing, and then 10% stated their children having education. 206</p>	Change to be confirmed once final social survey conducted in year 3.		

	<p>Households (HHs) are under poverty line in Kalabajar (Treat – 135, Control – 71) and 569 HHs in Ayodhyapuri (Treat – 182, Control 387).</p> <p>In Chitwan 49% of households stated having landholdings was the most important aspect for their well-being, and then 20% stated their children having education.</p>			
1. Safe working practices in the buffer zone and community forests established, and predator-safe livestock husbandry methods adopted by project villages				
1.1 Ca. 600 (40-80%) relevant target natural resource user households per park have had at least one member attend training sessions on safe working practices by end of yr. 2.		484 individuals participated in different training sessions	a) Verifying indicators will be attendance records, feedback surveys/discussions with participants.	Evidence will be supplied after yr 3 social survey conducted.
1.2 Ca. 450 (30-60%) relevant natural resource user households per park have members involved in safe working practice schemes by end of yr 3.		161 (Bardia-75, Chitwan-86) households have built predator proof pens.	a) Baseline & evaluation panel questionnaire surveys in project sites and matched comparison sites to explore working practices & livestock keeping, knowledge, attitudes and behaviour (quantitative).	Evidence will be supplied after yr 3 social survey conducted.
1.3 Participating households' perceived ability to protect themselves from tigers increased compared to baseline levels by end of yr 3.	In Bardia National Park, the majority of households responded either low or medium level of ability to protect themselves/ family from tigers and leopards. In Chitwan National Park, the majority of households responded either low or medium level of ability to protect themselves/ family from tigers and leopards.	Change will be evidenced after yr 3 social survey.	b) Participant observation & focus groups in project sites (by project staff and at project end by independent evaluator) on perception, social norms, and behaviours (qualitative).	Evidence will be supplied after yr 3 social survey conducted.
1.4 Ca. 450 (30-60%) of livestock-owning households per park have built & maintain tiger proof pens by end of yr 3.	Baseline data is from LWT 2016 household surveys. In Bardia NP, of those who owned livestock, 97.4% have a livestock shed. In Chitwan NP, of those who owned livestock, 78.2% have a livestock shed.	161 (Bardia-75, Chitwan-86) households have built predator proof pens.		As a result of our success with PPPs villagers have gone on to ask other NGOs to help them acquire PPPs which has resulted in ZSL

				and NTNC contributing quite a bit financially to supporting the construction of several hundred more PPPs.
1.5 Participating livestock-owning households' perceived ability to protect livestock from tigers improved compared to baseline by end of yr 3.	In Bardia National Park, the majority of households responded either low or medium level of ability to protect their livestock from tigers and leopards. In Chitwan National Park, the majority of households responded either low or medium level of ability to protect their livestock from tigers and leopards.	Will be evidenced after yr 3 social survey		
2. Household consumption of natural resources reduced by identifying, and building capacity for the uptake of, resource alternatives or more efficient use practices.				
2.1 Ca. 600 (40-80%) target natural resource user households per park have at least one member attend training on alternative/ efficient resource use by end of yr 2.	For Bardia NP, out of all households, 83% had not received any training. For Chitwan NP, out of all households, 80% had not received any training.	Workshop attendance will be confirmed in year 3. To date 484 individuals participated in different training sessions	a) Verifying indicators will be attendance records, and feedback surveys/discussions with participants.	
2.2 Ca. 450 (30-60%) relevant natural resource user households per park adopt at least one alternative natural resource use behavior by end of yr 3.		128 (Bardia-87, Chitwan-42) households in project communities have biogas plant.	a) Verifying indicators will be baseline & monitoring data (as above) using: b) Interview surveys on natural resource use, knowledge, attitude and behaviour (quantitative).	
2.3 Participating households' natural resource use (for fodder, household consumption) decreased by 50% relative to baseline at end of yr 3.	In Bardia NP, 341 out of 440 households collect natural resources for fodder (livestock feed), of these 341 households, 85% have not received any training in the last 3 years (from LWT, 2016 households survey data). In Chitwan NP, 393 out of 442 households	Too soon to show evidence of fodder growing and tree seedling	c) Participant observation & focus groups in project sites (by project staff and at project end by independent evaluator on perceptions, social norms, and	

	collect natural resources for fodder (livestock feed), of these 341 households, 79% have not received any training in the last 3 years (from LWT, 2016 households survey data).		behaviours (qualitative).	
2.4 Time spent collecting natural resources has decreased by 50% in participating households compared to baseline by end of yr 3.	For Bardia NP on average, household spend 4.2, 3.5, 2.8 hours per day in National Park, community forest and private land respectively. For Chitwan NP on average, household spend 2.9, 2.3, 1 hour(s) per day in National Park, community forest and private land respectively. (Information from LWT 2016 household survey.)	Evidenced by change between baseline and final social survey results in yr 3.		
3. Capacity for, and new sources of, alternative livelihoods and income generation established in project villages				
3.1 Ca. 600 (40-80%) target households per park have at least one member who has attended livelihoods training events by end yr 2.	In Bardia NP, 29 households have received livelihood training (agriculture/livestock husbandry/both) in the last 3 years (from LWT 2016 household survey data). In Chitwan NP, 33 households have received livelihood training (agriculture/livestock husbandry/both) in the last 3 years (from LWT 2016 household survey data).	603 (Chitwan-375, Bardia-228) individuals participated in various trainings/work shops.	a) Verifying indicators will be attendance records, and feedback surveys/discussions with participants.	
3.2 Number of cooperatives / self-help groups (SHGs) increasing in villages compared to baseline by end of yr 3.	In Bardia NP, 89% of all households surveyed are involved in a cooperative. In Chitwan, 62% of all households surveyed are involved in a cooperative.	3 billy-goat management groups formed (Chitwan-2, Bardia-1).	Baseline & monitoring data collected (as above) using following methods of data collection and observation a) Interview surveys on household economics, knowledge, attitude, and behavior (quantitative).	
3.3 Ca. 450 (30-60%) target households per park have at least one member who has taken up an alternative livelihood by end of yr. 2.		About 228 (Chitwan-180, Bardia-48) goat farming will be benefitted by the three improved breed billy-	b) Participant observation & focus	

		goats.	groups in project sites (by project staff and at project end by independent evaluator) on perceptions, social norms, and behaviours (qualitative).	
3.4 Participating households' natural resource use (for income) decreases by 50% relative to baseline by end of yr 3.	In Bardia NP, 221 households out of 440 surveyed stated they collect NR for additional income. Of these 221, 89% have not received any training in the last 3 years (from LWT 2016 survey data). In Chitwan NP, 5 households out of 442 surveyed stated they collect NR for additional income. Of these 5, 80% have not received any training in the last 3 years (from LWT 2016 survey data).	NA		Will be evidenced after yr 3 social survey
3.5 Time spent by participating households collecting resources for income has decreased by 50% compared to baseline by end of yr 3,	See 3.4	NA		Will be evidenced after yr 3 social survey
3.6 Participating households' perceived ability to generate income from alternative livelihoods increased compared to baseline by end yr 3.	In Bardia NP, 77% of surveyed households stated there were no new livelihood opportunities in the last 5 years. In Chitwan NP, 56% of surveyed households stated there were no new livelihood opportunities in the last 5 years. (Data from LWT 2016 survey)	NA		Will be evidenced after yr 3 social survey
4. Social and ecological conditions favourable to continued or increasing tiger presence in project area are achieved in project focal areas.				
4.1 More people in project communities willing to tolerate tiger populations in their neighbouring forest compared to baseline and comparison sites by end of yr 3.	In Bardia NP, 80% and 77% agreed that tigers and leopards respectively should be protected. In Chitwan NP, 86% and 85% agreed that tigers and leopards respectively should be protected. In Bardia NP, 51% and 51% agreed that tigers and leopards respectively could live alongside people. In Chitwan NP, 30% and 30% agreed that tigers and leopards respectively could live alongside people.	NA	a) Verifying indicator means are baseline survey and subsequent surveys, monitoring and evaluation assessments of tolerance via focus groups, and direct field observations	Will be evidenced after yr 3 social survey
4.2 In project sites, attitudes towards tigers have improved compared to baseline and	See 4.1 above	NA	a) Baseline data, monitoring, and evaluation assessments of	Will be evidenced after yr 3 social

comparison sites by end of yr 3.			attitudes, and opinions about life in the proximity of tiger populations via focus groups, observations, and surveys.	survey
4.3 In project sites, support for tiger conservation has increased compared to baseline and comparison sites by end of yr 3.	See 4.1 above	NA	a) Baseline data, monitoring, and evaluation assessments of perceptions, social norms, and behavioural intent via focus groups, observations, and surveys.	Will be evidenced after yr 3 social survey
4.4 Empirical data gathered, leading to a better understanding of ecological factors affecting human-tiger encounters in the buffer zones of CNP & BNP by end of yr 3	The LWT project collected ecological data in 2017 (Bardia NP so far) using camera traps and transect surveys (scats, tracks and prey), which can be used to map human-tiger-leopard overlaps and conflict hot spots.	First and Second camera trapping data collected and transect surveys in BNP and first phase data collected in CNP.	a) Transects, camera trapping and scat surveys to assess the distribution of tigers and leopards in the buffer zones and park edges and assess population health and diet consumption.	
5. Social Marketing Activities: The SM campaign will be used as necessary to enhance adoption rates of certain alternative behaviours (i.e. those for which the associated current behaviour is entrenched or particularly challenging to address as identified during the initial learning phase in project communities). As with all project activities, it will be tailored to each of the project communities.				
5.1. Baseline qualitative and quantitative data collection completed to explore the economic and social drivers of natural resource use behaviours and to assess prevalence of these behaviours and likelihood of change in these behaviours).	882 households interviewed, approximately 440 in each national park. Baseline data for social and economic drivers of behaviours that link to human-felid conflicts collected through household surveys and focus groups in 2016, 2017 and 2018.	Participatory approach conducted with community members, park and government officials and BZUCs.	a) Baseline data, monitoring, and evaluation assessments of perceptions, social norms, and behavioural intent via focus groups, observations, and surveys. b) Questionnaire designed and administered in the communities thus capturing data needed. Baseline reports produced every year and comparison between results where applicable will be done.	Will be evidenced after yr 3 social survey
5.2. Situation-specific and culturally relevant social marketing campaign developed in close collaboration with community members (target behaviours and influential community members identified; relevant campaign	No social marketing in Nepal has taken place.	Street Dramas and a radio dramas developed for social marketing campaign. Two local street drama performance	a) Baseline data, monitoring, and evaluation assessments of perceptions, social norms, and behavioural intent via focus groups, observations, and surveys.	

messages finalised and best means of Communicating messages within target communities established		groups were identified and trained (Total-35, Chitwan-18, Bardia-17)	b) Use survey to test if messaging correct and means of sharing the messaging was successful. Radio station stats of listeners, random trial. Progress report how many times broadcasted. Survey community if they heard message, what they perceived from it with a pilot test and if results successful scale up the effort. Also do the same for street drama messaging by conducting surveys. Door to door campaign and test by survey. Look at conflict statistics reports. Self-reporting surveys but need to follow with observations	
5.3. Campaign activities rolled-out in time to support the rollout of relevant project activities	No social marketing in Nepal has taken place.	Two street dramas in each national park have been performed which was attended by about 1200 (Bardia-800, Chitwan-400) individuals.	a) Baseline data, monitoring, and evaluation assessments of perceptions, social norms, and behavioural intent via focus groups, observations, and surveys	The street dramas were stories of local peoples human behaviours and how they put themselves at risk of HWC, and where they can get support through projects like LWT to reduce the risk of tiger attacks
5.4. Campaign monitored (with communities) and adapted as necessary	Baseline Social Survey done	NA	a) Evaluation method and strategy designed and implemented, with review of procedure and	

			results. On the ground constant observation of the campaign dissemination and comprehension of the messaging formalise in some way (random choose 12-15 HH and ask questions (2-3) or a conversation about interventions). Recording change by observing people's behaviours.	
5.5. Campaign evaluated (with communities) through mixed-methods M&E.	Baseline social survey done	NA	a) Evaluation of campaign that was designed by team and also outside 3 rd party evaluator. 3rd party person evaluating the campaign and project. Evaluation written as a report, based on survey results, and changing stats	Will be done in project evaluation

3.4 Monitoring of assumptions

Indicator	Assumptions	Comments
0.1-0.4	<p>Nepal's implementation of strict protection measures for tigers continues - no sudden, drastic changes in tiger numbers.</p> <p>No further major disasters (e.g. earthquakes) in project areas to hinder activities for longer than two months.</p> <p>No significant civil unrest in project areas to hinder activities for longer than two months.</p> <p>Communities willing and able to engage in project activities such as training events, discussions and trials of solutions or new ideas.</p> <p>Productive working relationships with partner organisations, advisors and stakeholders.</p> <p>Partner (DNPWC/NTNC) tiger conflict monitoring system remains in place for project duration.</p>	<p>No change in government's protection of Tigers.</p> <p>In year two major flooding in both project site BNP & CNP affected project implementation, and impacted both people and tigers (all wildlife).</p> <p>No civil unrest that has led to hindrance of activities for longer than two months.</p> <p>Communities have been willing to engage and assist with project activities and being interviewed.</p> <p>All Partners are working together and finding ways to collaborate and assist with project activities.</p> <p>DNPWC/NTNC Tiger monitoring is ongoing. The national census did prevent us from camera trapping in CNP in year 2, this had not been considered at time of project design. We hope that DNPWC will share their camera data with the</p>

		LWT team so that we can have a complete data set for both field seasons.
1.1-1.5	Villagers willing and able to attend training events Villagers willing to try new methods, modify their habits in working practices and livestock keeping Productive working relationships with partner organisations, advisors and stakeholders	Yes Yes, for things such as administering better livestock husbandry, will see when it comes time for them to change their own behaviour. Villagers did voice their preference for improving and building upon current livelihood practices versus trying a completely new livelihood. Yes to date
2.1-2.4	Villagers able to attend demonstration and training events, and willing to engage with suggestions and try new livelihoods. Productive working relationships with partner organisations, advisors and stakeholders	Yes to date To date yes, they have requested more funds and interventions from us, which Chester Zoo has supplied in order to run horticultural workshops, SM campaign events, and an electric fence workshop.
3.1-3.6	Villagers able to attend demonstration and training events, and willing to try new livelihoods. No local disasters (e.g. flooding) damages crop land or pasture for prolonged periods of time, making non-forest based alternatives unviable Markets for alternatives remain accessible and stable	Yes, for the training, slow to want to take up new livelihoods due to risks involved and uncertainty There was major flooding in both project sites which delayed project activities in winter of 2017 primarily the social marketing campaign activities. Assessment of markets and their accessibility and long-term viability were confirmed by independent livelihoods consult researcher during year 2.
4.1-4.4	Villagers communicate openly about their concerns, opinions, and ideas with project staff Conditions favourable to camera trapping (not stolen/damaged by villagers/wildlife); sufficient tiger/leopard scat can be found for analysis.	Yes In year two we were able to significantly decrease the amount of cameras destroyed, stolen or damaged by conducting community outreach meetings to inform the communities what we were doing with the cameras what the data was being used for and how it would ultimately help people reduce their risk of tiger attack. After the field season the LWT team returned to the villages to share with the community the findings of the research and to share the biodiversity found in the parks.
5.1-5.5	Communities (same households) willing to partake in survey every year. That social marketing is the correct tool and instrument to use at this time. That communities are willing to participate. Delays caused to SM campaign due to festivities,	Yes Delays incurred due to flooding in winter 2017, had to put off street dramas till beginning of 2018. Very little literature on social

	<p>political voting, environmental disasters, and/or rioting/terrorism events.</p> <p>Assuming all preliminary literature research, baseline survey and analysis has been done on time in order to formulate the SMC.</p> <p>That we have designed and implemented a campaign that communities are willing to engage with us and trial the behaviour change.</p> <p>The campaign was rolled out over a 1 year period allowing time to for as many people to participate in campaign and adopt positive human behaviour changes.</p>	<p>marketing used in conservation context especially in Asia has been published. Hopefully more research findings will be shared in the years to come.</p> <p>Yes</p> <p>Unfortunately the SMC took a lot longer to create than expected due to the fact that there is very little in country knowledge of social marketing and thus it took quite a while for the Nepalese people to understand the principles and significance of SM and how it could be useful. After a year and a half of training and working with our multi-stakeholders we were able to progress towards the creation of a campaign. We however were delayed in its delivery due to the floods which meant communities were pre-occupied with having lost crops, experienced property damage, and local infrastructure damage and thus had too much on their minds to engage with a campaign. Thus we made the decision to postpone the campaign activities till start of 2018. This will mean we will have less than a year to evaluate the impacts of the campaign.</p>
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3.5 Impact: achievement of positive impact on biodiversity and poverty alleviation

It is still too early to observe impact of project interventions on biodiversity and poverty alleviation. However, project impacts will be assessed at the end of the project period. To date we have managed to collect data as highlighted in section 3.1 for the horticultural workshops.

The mid-term evaluation of the project concluded that the project is contributing to biodiversity conservation and supporting local communities' livelihood improvement capacity building. Project communities have reported predator proof pens as very relevant to local context as a result the demand for support to build these has increased.

After providing predator proof pens peoples' willingness to goat farm has increased which can be evidenced by the increase in goat farming in project communities. Local groups are also motivated to improve their goat farming because they have requested improved genetic stock billy-goat for reproduction from the LWT project.

It is still too early to see the benefits reaped from the horticultural training but hopefully the favourable survey results will translate into positive proof of higher vegetable yields and increased income generation. Hopefully evidence will be captured in year 3 social survey.

4. Contribution to the Global Goals for Sustainable Development (SDGs)

LWT is helping contribute towards ending poverty (SDG 1) by empowering communities to earn income through various different streams. As well as assisting to ensure healthy lives and promote well-being for all ages (SDG 3) by installing biogas plants which reduces the amount of smoke inhalation inside the home, decreases carbon emissions, and risk of encountering big cats. The project is also focused on achieving gender equality and empowering women and girls (SDG 5) to play a role in community decision making especially concerning natural

resource management. Additionally, the project is helping to sustainably manage forest and natural resource use (SDG 15) by working with the Community Buffer User Groups and CBAPUs, and enhance global support for efforts to combat poaching and trafficking of protected species, including increasing the capacity of local communities to pursue sustainable livelihood opportunities.

5. Project support to the Conventions, Treaties or Agreements

The project's outcome (of improving the safety and poverty of people affected by tiger conservation) and its approach to achieving this are very relevant to the CBD, in particular the following Articles: 8) In-situ Conservation (8e sustainable development adjacent to protected areas; 8j equitable sharing of benefits; 10) Sustainable Use of Components (10c customary use of biological resources compatible with conservation); 11) Incentive Measures (economically and socially sound measures that act as incentives for conservation); 12) Research and Training (12b encourage research which contributes to conservation); 17) Exchange of Information (facilitate the exchange of information relevant to conservation). Our project also supports Nepal's National Biodiversity Strategy and Action Plan 2014-2020, which specifically mentions human-wildlife conflict as a key challenge, but also its commitment to doubling Nepal's tiger population by 2022, and its obligations to the Global Tiger Forum and Global Tiger Initiatives. In November 2017 the Project leader, Project coordinator and Project country coordinator met with the CBD Joint Secretary Dr. Maheshwar Dhakal in Kathmandu to provide an update on the progress of LWT and discuss HWC in general. The plan is to organise further meetings in the future. The project also indirectly supports Nepal's commitments to CITES by helping the implementing agency continue to protect the Appendix I listed Bengal tiger (*Panthera tigris tigris*) in the Terai of Nepal. We expect the tiger number increase evidence to be published by the Nepal National Government hopefully in July 2018 once the national tiger census has been completed and all data analysed.

6. Project support to poverty alleviation

Our focal communities are Community Forest User Groups, (CFUGs), of which there are two in each park. The project targets sub-groups who suffer the greatest levels of poverty, natural resource dependence, and/or marginalisation. Based on our scoping work, working with women and ethnic minorities is necessary as they are typically burdened with the task of grass cutting and have fewer income generating options available to them than do men. The Tharu and Darai people are some of the poorest within Terai communities.

We are well on our way of achieving our targets of helping directly up to 400 households across each of the Chitwan and Bardia sites, with women from a minimum of 25% of these households being empowered by project activities. In year two the project has directly benefitted 2427 individuals from neighbouring and project communities, of which 1093 are female.

The project has focused on the capacity development of the project communities for alternative livelihood opportunities, such as pickle making trainings, advance tailoring, horticultural training, goat farming, cow farming, pig farming and supporting improved breed billy-goat for reproduction. It is also expected that project activities will have a spill over effect on neighbouring households too.

7. Project support to gender equality issues

The project has directly promoted the participation of female participants in various project activities resulting in 634 women in BNP and 459 women in CNP benefitting out of 2033 and 1612 total participants in BNP and CNP respectively. The project is also promoting gender equity indirectly by installing biogas plants as an alternative source of cooking/heating energy that reduces women's fuelwood collection time, and has supported poor and disadvantaged households with predator proof pens. This is evidenced by the number of female participants in our trainings, and having women involved in decision making and management of resources.

8. Monitoring and evaluation

Systems and processes employed internally to monitor the project have been the use of the log frame, surveys of workshop participants, in addition to adhering to the monthly reporting system and review of the project assumptions. We have also collected household survey data in 2017

and an independent evaluator was hired for a mid-term evaluation of the project. The mid-term evaluation report can be provided upon request. In year three we will hire an independent evaluator to assess the entire project, additionally the Social Marketing and M&E advisor will analyse the results of the social marketing campaign activities.

9. Lessons learnt

In 2017, the project has successfully implemented activities as planned related to outputs 1-5. The LWT field team supported the implementation of the activities, monitoring, and reporting of the project activities. The project team instilled ownership of activities by community members, hence intervention activities were successfully completed. As there was shared ownership by the Buffer Zone User Committee, they also supported the interventions with match funding as well as the biogas installation company contributed match-funding support.

However, the demand from the communities for these interventions is higher than what the project budget can support. Therefore, our NTNC partner and other NGOs are also supporting neighbouring communities to build predator proof pens and biogas plants.

Challenges faced have been

- a) Getting partners to coordinate around the issue of sharing National Tiger Census data because camera trapping in CNP during National Tiger Census was not possible. In case of government's reticence to share data, first phase camera trapping data in CNP in national park areas will be missing.
- b) Other wild animals like elephant, wild boar, deer and rhino are also involved in human wildlife conflict and communities want us to help them address crop raiding. To this end, Chester Zoo independently organised in March 2018 an electric fence training by sending two members of its former Darwin Project in Assam (16-007 & EIDPO-040) to Nepal to train community members, park officials, and government authorities on fence installation, maintenance and repair.
- c) Due to increased market accessibility communities' prefer LPG gas to biogas plant thus there is a growing demand for this energy.
- d) The project team has more requests for project interventions (mitigation measures) from communities than we can possibly accommodate.
- e) The project's Bardia Field Officer left us for a job with DNPWC, and a replacement needs to be recruited.

10. Actions taken in response to previous reviews (if applicable)

The first year's annual report review was shared with partners. As a result in year two the team made a greater effort to share project findings with project communities and across larger audiences. Also the reviewer last year requested UC monitoring reports which we have added to our second year report.

11. Other comments on progress not covered elsewhere

As a spill-over effect of the project, we can see NTNC has replicated the improved predator proof pen construction in adjoining and project communities in BNP; Kareliya BZUC has supported matching funds for biogas plant installation and also supported seven predator proof pens through its annual budget. This has the potential of further decreasing HWC.

12. Sustainability and legacy

The biogas plants and predator proof pens if maintained properly, which communities have given us guarantees they will do, will sustain the project impacts beyond the life cycle of the project, leaving a short, mid and long term legacy. NTNC's contribution to supporting similar interventions to ours will also ensure sustainability and leave a legacy. Buffer Zone User Committees have taken the ownership of project interventions and provided supporting match funds to implement project activities. The project has also implemented livelihood improvement activities in partnership with user committee and they have allocated budgets for livelihood improvement annually. Hence, it is expected that buffer zone user committees will carry on the predator proof pen and livelihood improvement activities in their annual programme which will ensure the sustainability of project activities.

13. Darwin identity

The project has credited Darwin Initiative (DI) funding and used the logo in various programme banners, presentations, and intervention branding tags. The Darwin Initiative logo was used on every project update presentation to DNPWC, International Social Marketing Association and general assembly of GGN. The DI logo was also used on the poster tags placed on the biogas plants and predator proof pens and other programme event banners. Chester Zoo has used the DI logo on its website on the LWT webpage, and also mentions the DI funding support in all of its stories, blogs and media. The majority of the LWT tweets tagged Defra.

The project has been recognized as a distinct project with a clear identity. Darwin Initiative is widely known among the conservation oriented non-governmental and governmental organisations as well as among the local community of project sites in Nepal.

14. Project expenditure

Table 1: Project expenditure during the reporting period (1 April 2017 – 31 March 2018)

Project spend (indicative) since last annual report	2017/18 Grant (£)	2017/18 Total Darwin Costs (£)	Variance %	Comments (please explain significant variances)
Staff costs (see below)			-9.80	
Consultancy costs			0	.
Overhead Costs			0.10	
Travel and subsistence			0	
Operating Costs			-0.13	
Capital items (see below)			0	
Monitoring & Evaluation (M&E)			0.31	
Others (see below)			0.45	
TOTAL				

Annex 1: Report of progress and achievements against Logical Framework for Financial Year 2017-2018

Project summary	Measurable Indicators	Progress and Achievements April 2017 - March 2018	Actions required/planned for next period
<p>Impact</p> <p>In the Terai of Nepal, poverty is reduced and tiger conservation efforts are strengthened by increasing security and developing sustainable livelihoods to reduce human-tiger conflict.</p>			
<p>Outcome</p> <p>In project sites around Chitwan and Bardia, the safety of people and tigers is secured and poverty reduced by changing behaviours, building capacity, improving livelihoods, and reducing human-tiger conflict.</p>	<p>0.1 The number of people attacked by tigers is reduced by 80% in focal communities around Chitwan and Bardia by project end compared to pre-project levels.</p> <p>0.2 50% fewer livestock attacked by tigers or leopards in focal communities by the end of year 3 compared to pre-project levels.</p> <p>0.3 No tigers are killed by people from focal communities throughout project period, and number of 'problem tigers' removed by officials is reduced compared with pre-project levels and compared to comparison sites.</p> <p>0.4 Levels of poverty reduced and wellbeing improved in ca. 375 (20-60%*) focal CFUG households <i>per park</i> by year 3. (Indicators to be developed as part of the initial learning to understand what wellbeing means to the beneficiaries.)</p> <p>(* N.B. % ranges are broad due to number of households per CFUG (project site) varying from ca. 450 – 1,500)</p>	<p>0.1 & 0.2 too early to report</p> <p>0.3 No human casualties or loss occurred in project focal communities, however one woman was injured in an adjacent community, and one woman casualty in another community further afield from project sites in CNP.</p> <p>0.4 too early to report if levels of poverty reduced, however indicators have been developed as a result of the baseline household survey done in 2016.</p>	<p>0.4 indicators for wellbeing are: rising female employment, greater reported decision-making power between women, decisions on cooking for the household, decision on personal health, control of earnings, women's land ownership patterns, their social position, their happiness levels and opportunities at hand.</p>

<p>Output 1. Safe working practices in the buffer zone and community forests established, and predator-safe livestock husbandry methods adopted by project villages</p>	<p>1.1 Ca. 600 (40-80%) relevant target natural resource user households per park have had at least one member attend training sessions on safe working practices by end of year 2</p> <p>1.2 Ca. 450 (30-60%) relevant natural resource user households per park have members involved in safe working practice schemes by end of year 3</p> <p>1.3 Participating households' perceived ability to protect themselves from tigers increased compared to baseline levels by end of year 3</p> <p>1.4 Ca. 450 (30-60%) of livestock-owning households per park have built & maintain tiger proof pens by end of year 3</p> <p>1.5 Participating livestock-owning households' perceived ability to protect livestock from tigers improved compared to baseline by end of year 3</p>	<p>Reminder: Data will be collected over the three years.</p> <p>Year 2 results:</p> <p>1.1. Still have to analyse data from year 2 social survey, unable to do so yet because data is still being entered into excel format.</p> <p>1.2 & 1.4 161 (Bardia 75, Chitwan 85) households have built PPPs.</p> <p>1.3 & 1.5 Data will be collected during year 3 household social survey.</p>
<p>Activity 1.1 Baseline qualitative data collection completed (focus groups, semi-structured interviews) in project communities;</p>		<p>Baseline qualitative data collected in Sept 2017.</p>
<p>Activity 1.2 Baseline quantitative survey developed, piloted and administered in project and comparison communities;</p>		<p>Baseline quantitative data collected in Sept 2017.</p>
<p>Activity 1.3 Trial situation-specific and culturally-appropriate safe working and livestock husbandry practices developed and interest in these assessed;</p>		<p>Achieved in year 1</p>
<p>Activity 1.4 Training schemes developed and workshops held in project communities;</p>		<p>161 (Bardia 75, Chitwan 85) households have built PPPs</p>
<p>Activity 1.5 Trial safe working and livestock husbandry practices implemented in project communities, supported where necessary by SM campaign activities (see 5.1.-5.5.);</p>		<p>Completed.</p>
<p>Activity 1.6 Trial measures monitored, reviewed (with communities) and adapted as necessary;</p>		<p>Completed but ongoing through year 3.</p>
<p>Activity 1.7 Training and information-sharing events, to which neighbouring communities are invited, held to encourage replication of ideas;</p>		<p>Completed but ongoing through year 3.</p>

Activity 1.8 Mixed methods evaluation (with communities) of trial measures completed and results discussed with communities.	Completed.
Output 2. Household consumption of natural resources reduced by identifying, and building capacity for the uptake of, resource alternatives or more efficient use practices	<p>2.1 Ca. 600 (40-80%) target natural resource user households per park have at least one member attend training on alternative/efficient resource use by end of year 2</p> <p>2.2 Ca. 450 (30-60%) relevant natural resource user households per park adopt at least one alternative natural resource use behaviour by end of year 3</p> <p>2.3 Participating households' natural resource use (for fodder, household consumption) decreased by 50% relative to baseline end of year 3</p> <p>2.4 Time spent collecting natural resources has decreased by 50% in participating households compared to baseline by end of year 3</p>
Activity 2.1 Baseline qualitative data collection completed (focus groups, semi-structured interviews) in project communities;	Completed.
Activity 2.2 Baseline quantitative survey developed, piloted and administered in project and comparison communities;	Completed.
Activity 2.3 Viable alternatives to, or practices for the more efficient use of, natural resources identified and interest in these assessed;	Completed through FGDs and Livelihoods assessment report
Activity 2.4 Training schemes for alternatives/more efficient use practices developed and workshops held in project communities;	Workshops held.
Activity 2.5 Alternatives schemes/more efficient use practices implemented in project communities, supported where necessary by SM campaign (see 5.1-5.5);	Have supported the installation of biogas plants, and provided fodder seeds and tree seedlings.
Activity 2.6 Schemes and practices monitored, reviewed (with communities) and adapted as necessary;	Ongoing.
Activity 2.7 Training and information-sharing events, to which neighbouring communities are invited, held to encourage replication of ideas;	Completed through 1) Interaction programs covering the importance of PPPs in Kalabajar UC, Chitwan, 2) Awareness program on tiger conservation via drawing competition for students in Ayodhyapuri UC, Chitwan, 3) a Community Based Anti-Poaching Day celebration in Bardia, 4) and during national celebration days, such as World Environment Day, and Wildlife Week.

<p>Activity 2.8 Mixed methods evaluation (with communities) of schemes and practices completed and results discussed with communities.</p>	<p>To take place in year 3.</p>	
<p>Output 3. Capacity for, and new sources of, alternative livelihoods and income generation established in project villages</p>	<p>3.1 Ca. 600 (40-80%) target households per park have at least one member who has attended livelihoods training events by end year 2</p> <p>3.2 Number of cooperatives / self-help groups (SHGs) increasing in villages compared to baseline by end of year 3</p> <p>3.3 Ca. 450 (30-60%) target households per park have at least one member who has taken up an alternative livelihood by end of year 2</p> <p>3.4 Participating households' natural resource use (for income) decreases by 50% relative to baseline by end of year 3</p> <p>3.5 Time spent by participating households collecting resources for income has decreased by 50% compared to baseline by end of year 3</p> <p>3.6 Participating households' perceived ability to generate income from alternative livelihoods increased compared to baseline by end year 3</p>	<p>Too early to report, as interventions took place in year 2 and 3, will collect data in year 3.</p>
<p>Activity 3.1 Baseline qualitative data collection completed (focus groups, semi-structured interviews) in project communities;</p>	<p>Completed.</p>	
<p>Activity 3.2 Baseline quantitative survey developed, piloted and administered in project and comparison communities;</p>	<p>Completed.</p>	
<p>Activity 3.3 Assessment of markets, value chains and micro-finance opportunities completed and viable alternative livelihoods identified;</p>	<p>Completed see Annex 4 for report.</p>	
<p>Activity 3.4 Training schemes for alternative livelihoods developed and workshops held in project communities (e.g. acquisition of start-up equipment or materials, skills training such as book keeping and accessing markets);</p>	<p>Completed in year 2 and ongoing in year 3.</p>	
<p>Activity 3.5 Alternative livelihoods initiatives (including necessary SHGs or cooperatives) established in project communities with supported where necessary by SM campaign (see 5.1-5.5) and continuing guidance for start-up</p>	<p>Completed in year 2 and continuing in year 3.</p>	

households/groups provided;		
Activity 3.6 Livelihood practices monitored, reviewed (with communities) and adapted as necessary;		Ongoing
Activity 3.7 Training and information-sharing events, to which neighbouring communities are invited, held to encourage replication of ideas;		See activity 2.7
Activity 3.8 Mixed methods evaluation (with communities) of livelihood practices completed and results discussed with communities.		To take place in year 3.
Output 4. Social and ecological conditions favourable to continued or increasing tiger presence in project area are achieved in project focal areas	4.1 More people in project communities willing to tolerate tiger populations in their neighbouring forest compared to baseline and comparison sites by end of year 3 4.2 In project sites, attitudes towards tigers have improved compared to baseline and comparison sites by end of year 3 4.3 In project sites, support for tiger conservation has increased compared to baseline and comparison sites by end of year 3 4.4 Empirical data gathered, leading to a better understanding of ecological factors affecting human-tiger encounters in the buffer zones of CNP & BNP by end of year 3	4.1, 4.2, 4.3, 4.4 Too early to report, will be assessed after year 3.
Activity 4.1 Baseline qualitative data collection completed (focus groups, semi-structured interviews) in project communities;		Completed.
Activity 4.2 Baseline quantitative survey developed, piloted and administered in project and comparison communities;		Completed.
Activity 4.3 Camera trapping and line transect study completed in forest areas adjacent to project and comparison communities;		For the most part completed although unable to camera trap inside national park in CNP due to government national tiger census.
Activity 4.4 Buffer-zone wide HTC rapid assessment survey developed, piloted, and administered with a representative sample of buffer zone inhabitants.		Completed at beginning of project, next one to come in year 3
Activity 4.5 Monitoring and evaluation of social conditions favourable to tiger presence completed (mixed methods M&E);		To take place in year 3.

Activity 4.6 Data analysis, paper writing, and dissemination of findings.	To take place in year 3.
Output 5. Social Marketing Activities: Following feedback on our Stage 1 application to provide more information on social marketing and, as the SM campaign is potentially applicable to activities associated with several outputs (1-3), we summarise the SM campaign activities here rather than repeating for each of the outputs. The SM campaign will be used as necessary to enhance adoption rates of certain alternative behaviours (i.e. those for which the associated current behaviour is entrenched or particularly challenging to address as identified during the initial learning phase in project communities). As with all project activities, it will be tailored to each of the project communities.	
5.1. Baseline qualitative and quantitative data collection completed to explore the economic and social drivers of natural resource use behaviours and to assess prevalence of these behaviours and likelihood of change in these behaviours);	To be completed in year 3
5.2. Situation-specific and culturally relevant social marketing campaign developed in close collaboration with community members (target behaviours and influential community members identified; relevant campaign messages finalised and best means of communicating messages within target communities established	Completed, although radio programmes still to air in May 2018.
5.3. Campaign activities rolled-out in time to support the roll-out of relevant project activities;	Street dramas were rolled out in time to support project activities, radio programmes to be aired in May 2018.
5.4. Campaign monitored (with communities) and adapted as necessary;	Ongoing
5.5. Campaign evaluated (with communities) through mixed-methods M&E.	To take place in year 3.

Annex 2: Project's full current logframe as presented in the application form (unless changes have been agreed)

Project summary	Measurable Indicators	Means of verification	Important Assumptions
<p>Impact: In the Terai of Nepal, poverty is reduced and tiger conservation efforts are strengthened by increasing security and developing sustainable livelihoods to reduce human-tiger conflict.</p>			
<p>Outcome: In project sites around Chitwan and Bardia, the safety of people and tigers is secured and poverty reduced by changing behaviours, building capacity, improving livelihoods, and reducing human-tiger conflict.</p>	<p>0.1 The number of people attacked by tigers is reduced by 80% in focal communities around Chitwan and Bardia by project end compared to pre-project levels.</p> <p>0.2 50% fewer livestock attacked by tigers or leopards in focal communities by the end of year 3 compared to pre-project levels.</p> <p>0.3 No tigers are killed by people from focal communities throughout project period, and number of 'problem tigers' removed by officials is reduced compared with pre-project levels and compared to comparison sites.</p> <p>0.4 Levels of poverty reduced and wellbeing improved in ca. 375 (20-60%*) focal CFUG households <i>per park</i> by year 3. (Indicators to be developed as part of the initial learning to understand what wellbeing means to the beneficiaries.</p> <p>(* N.B. % ranges are broad due to number of households per CFUG (project site) varying from ca. 450 – 1,500.)</p>	<p>0.1- 0.2:</p> <p>a) Regional human-tiger conflict monitoring system & official records by partners (DNPWC, NTNC)</p> <p>b) Local reports to project staff and verification</p> <p>c) Baseline and evaluation panel questionnaire surveys (i.e. surveying same people before & after interventions) carried out in project sites and matched comparison sites.</p> <p>d) Baseline and monitoring participant observation & focus groups</p> <p>0.3. Regional human-tiger conflict monitoring system and official records by partners (DNPWC, NTNC)</p> <p>0.4 Baseline, monitoring and evaluation observations & focus groups to assess the material and subjective poverty and wellbeing (e.g. security, assets, decision-making, ability to cope etc.)</p>	<p>Nepal's implementation of strict protection measures for tigers continues - no sudden, drastic changes in tiger numbers.</p> <p>No further major disasters (e.g. earthquakes) in project areas to hinder activities for longer than two months</p> <p>No significant civil unrest in project areas to hinder activities for longer than two months.</p> <p>Communities willing and able to engage in project activities such as training events, discussions, and trials of solutions or new ideas.</p> <p>Productive working relationships with partner organisations, advisors, and stakeholders.</p> <p>Partner tiger conflict monitoring system remains in place for project duration.</p>
<p>Outputs: 1. Safe working practices in the buffer zone and community forests established, and predator-safe livestock husbandry methods adopted by project villages</p>	<p>1.1 Ca. 600 (40-80%) relevant target natural resource user households per park have had at least one member attend training sessions on safe working practices by end of year 2.</p> <p>1.2 Ca. 450 (30-60%) relevant natural</p>	<p>1.1 Attendance records, feedback surveys/discussions</p> <p>1.2 -1.5</p> <p>a) Baseline & evaluation panel questionnaire surveys in project sites and matched comparison sites to</p>	<p>Villagers willing and able to attend training events.</p> <p>Villagers willing to try new methods, modify their habits in working practices and livestock keeping.</p> <p>Productive working relationships with</p>

	<p>resource user households per park have members involved in safe working practice schemes by end of year 3.</p> <p>1.3 Participating households' perceived ability to protect themselves from tigers increased compared to baseline levels by end of year 3.</p> <p>1.4 Ca. 450 (30-60%) of livestock-owning households per park have built & maintain tiger proof pens by end of year 3.</p> <p>1.5 Participating livestock-owning households' perceived ability to protect livestock from tigers improved compared to baseline by end of year 3.</p>	<p>explore working practices & livestock keeping, knowledge, attitudes and behaviour (quantitative)</p> <p>b) Participant observation & focus groups in project sites (by project staff and at project end by independent evaluator) on perceptions, social norms, and behaviours (qualitative).</p>	<p>partner organisations, advisors, and stakeholders.</p>
<p>2. Household consumption of natural resources reduced by identifying, and building capacity for the uptake of, resource alternatives or more efficient use practices</p>	<p>2.1 Ca. 600 (40-80%) target natural resource user households per park have at least one member attend training on alternative/efficient resource use by end of year 2.</p> <p>2.2 Ca. 450 (30-60%) relevant natural resource user households per park adopt at least one alternative natural resource use behaviour by end of year 3.</p> <p>2.3 Participating households' natural resource use (for fodder, household consumption) decreased by 50% relative to baseline end of year 3.</p> <p>2.4 Time spent collecting natural resources has decreased by 50% in participating households compared to baseline by end of year 3.</p>	<p>2.1 Attendance records, feedback surveys/discussions</p> <p>2.2 -2.4 Baseline & monitoring data (as above) using:</p> <p>a) Interview surveys on natural resource use, knowledge, attitude and behaviour (quantitative).</p> <p>b) Participant observation & focus groups in project sites (by project staff and at project end by independent evaluator) on perceptions, social norms, and behaviours (qualitative).</p>	<p>Villagers able to attend demonstration and training events, and willing to engage with suggestions and try new livelihoods.</p> <p>Productive working relationships with partner organisations, advisors, and stakeholders.</p>
<p>3. Capacity for, and new sources of, alternative livelihoods and income generation established in project villages</p>	<p>3.1 Ca. 600 (40-80%) target households per park have at least one member who has attended livelihoods training events by end year 2.</p> <p>3.2 Number of cooperatives / self-help groups (SHGs) increasing in villages</p>	<p>3.1 Attendance records, feedback surveys/discussions</p> <p>3.2 - 3.6 Baseline & monitoring data collected (as above) using following methods of data collection and</p>	<p>Villagers able to attend demonstration and training events, and willing to try new livelihoods.</p> <p>No local disasters (e.g. flooding) damages cropland or pasture for prolonged periods, making non-forest</p>

	<p>compared to baseline by end of year 3.</p> <p>3.3 Ca. 450 (30-60%) target households per park have at least one member who has taken up an alternative livelihood by end of year 2.</p> <p>3.4 Participating households' natural resource use (for income) decreases by 50% relative to baseline by end of year 3.</p> <p>3.5 Time spent by participating households collecting resources for income has decreased by 50% compared to baseline by end of year 3.</p> <p>3.6 Participating households' perceived ability to generate income from alternative livelihoods increased compared to baseline by end year 3.</p>	<p>observation:</p> <p>a) Interview surveys on household economics, knowledge, attitude and behaviour (quantitative)</p> <p>b) Participant observation & focus groups in project sites (by project staff and at project end by independent evaluator) on perceptions, social norms, and behaviours (qualitative).</p>	<p>based alternatives unviable.</p> <p>Markets for alternatives remain accessible and stable.</p>
<p>4. Social and ecological conditions favourable to continued or increasing tiger presence in project area are achieved in project focal areas</p>	<p>4.1 More people in project communities willing to tolerate a tiger populations in their neighbouring forest compared to baseline and comparison sites by end of year 3</p> <p>4.2 In project sites, attitudes towards tigers have improved compared to baseline and comparison sites by end of year 3</p> <p>4.3 In project sites, support for tiger conservation has increased compared to baseline and comparison sites by end of year 3</p> <p>4.4 Empirical data gathered, leading to a better understanding of ecological factors affecting human-tiger encounters in the buffer zones of CNP & BNP by end of year 3.</p>	<p>4.1 Baseline, monitoring and evaluation assessments of tolerance via focus groups, observations, and surveys (as above).</p> <p>4.2 Baseline, monitoring and evaluation assessments of attitudes, and opinions about life in the vicinity of tiger populations via focus groups, observations, and surveys (as above).</p> <p>4.3 Baseline, monitoring and evaluation assessments of perceptions, social norms, and behavioural intent via focus groups, observations, and surveys (as above).</p> <p>4.4 Transects, camera trapping and scat surveys to assess the distribution of tigers and leopards in the buffer zones and park edges.</p>	<p>Villagers communicate openly about their concerns, opinions, and ideas with project staff.</p> <p>Conditions favourable to camera trapping (not stolen/damaged by villagers/wildlife); sufficient tiger/leopard scat can be found for analysis.</p> <p>Government supportive of our ecological research providing us the permits to collect data and conduct research.</p> <p>Nothing hinders LWT team from collecting data in the field.</p>

Activities (each activity is numbered according to the output that it will contribute towards, for example 1.1, 1.2 and 1.3 are contributing to Output 1)

- 1.1. Baseline qualitative data collection completed (focus groups, semi-structured interviews) in project communities;
 - 1.2. Baseline quantitative survey developed, piloted and administered in project and comparison communities;
 - 1.3. Trial situation-specific and culturally-appropriate safe working and livestock husbandry practices developed and interest in these assessed;
 - 1.4. Training schemes developed and workshops held in project communities;
 - 1.5. Trial safe working and livestock husbandry practices implemented in project communities, supported where necessary by SM campaign activities (see 5.1.-5.5.);
 - 1.6. Trial measures monitored, reviewed (with communities) and adapted as necessary;
 - 1.7. Training and information-sharing events, to which neighbouring communities are invited, held to encourage replication of ideas;
 - 1.8. Mixed methods evaluation (with communities) of trial measures completed and results discussed with communities.
-
- 2.1. Baseline qualitative data collection completed (focus groups, semi-structured interviews) in project communities;
 - 2.2. Baseline quantitative survey developed, piloted and administered in project and comparison communities;
 - 2.3. Viable alternatives to, or practices for the more efficient use of, natural resources identified and interest in these assessed;
 - 2.4. Training schemes for alternatives/more efficient use practices developed and workshops held in project communities;
 - 2.5. Alternatives schemes/more efficient use practices implemented in project communities, supported where necessary by SM campaign (see 5.1-5.5);
 - 2.6. Schemes and practices monitored, reviewed (with communities) and adapted as necessary;
 - 2.7. Training and information-sharing events, to which neighbouring communities are invited, held to encourage replication of ideas;
 - 2.8. Mixed methods evaluation (with communities) of schemes and practices completed and results discussed with communities.
-
- 3.1. Baseline qualitative data collection completed (focus groups, semi-structured interviews) in project communities;
 - 3.2. Baseline quantitative survey developed, piloted and administered in project and comparison communities;
 - 3.3. Assessment of markets, value chains and micro-finance opportunities completed and viable alternative livelihoods identified;
 - 3.4. Training schemes for alternative livelihoods developed and workshops held in project communities (e.g. acquisition of start-up equipment or materials, skills training such as book keeping and accessing markets);
 - 3.5. Alternative livelihoods initiatives (including necessary SHGs or cooperatives) established in project communities with supported where necessary by SM campaign (see 5.1-5.5) and continuing guidance for start-up households/groups provided;
 - 3.6. Livelihood practices monitored, reviewed (with communities) and adapted as necessary;
 - 3.7. Training and information-sharing events, to which neighbouring communities are invited, held to encourage replication of ideas;
 - 3.8. Mixed methods evaluation (with communities) of livelihood practices completed and results discussed with communities.

- 4.1. Baseline qualitative data collection completed (focus groups, semi-structured interviews) in project communities;
- 4.2. Baseline quantitative survey developed, piloted and administered in project and comparison communities;
- 4.3. Camera trapping and line transect study completed in forest areas adjacent to project and comparison communities;
- 4.4. Buffer-zone wide HTC rapid assessment survey developed, piloted, and administered with a representative sample of buffer zone inhabitants.
- 4.5. Monitoring and evaluation of social conditions favourable to tiger presence completed (mixed methods M&E);
- 4.6. Data analysis, paper writing, and dissemination of findings.

Social Marketing Activities: *Following feedback on our Stage 1 application to provide more information on social marketing and, as the SM campaign is potentially applicable to activities associated with several outputs (1-3), we summarise the SM campaign activities here rather than repeating for each of the outputs. The SM campaign will be used as necessary to enhance adoption rates of certain alternative behaviours (i.e. those for which the associated current behaviour is entrenched or particularly challenging to address as identified during the initial learning phase in project communities). As with all project activities, it will be tailored to each of the project communities.*

- 5.1. Baseline qualitative and quantitative data collection completed to explore the economic and social drivers of natural resource use behaviours and to assess prevalence of these behaviours and likelihood of change in these behaviours);
- 5.2. Situation-specific and culturally relevant social marketing campaign developed in close collaboration with community members (target behaviours and influential community members identified; relevant campaign messages finalised and best means of communicating messages within target communities established (e.g. Butler et al 2013: <http://www.rare.org/sites/default/files/Principles%2520of%2520Pride%25202013%2520lo%2520res.pdf>));
- 5.3. Campaign activities rolled-out in time to support the roll-out of relevant project activities;
- 5.4. Campaign monitored (with communities) and adapted as necessary;
- 5.5. Campaign evaluated (with communities) through mixed-methods M&E.

Annex 3: Standard Measures

Table 1 Project Standard Output Measures

Code No.	Description (* indicates that the nationality of trainees should be stated)	Gender of people (if relevant)	Nationality of people (if relevant)	Year 1 Total	Year 2 Total	Year 3 Total	Total to date	Total planned during the project
1A	Number of people to submit thesis for PhD qualification *	Female	British			1		1
1B	Number of people to attain PhD qualification *	Female	British			1		1
2	Number of people to attain Masters qualification (MSc, MPhil etc.) *							
6A	Number of people to receive other forms of education/training (which does not fall into categories 1-5 above) *							
6B	Number of training weeks to be provided							
7	Number of (e.g., different types - not volume - of material produced) training materials to be produced for use by host country				4		4	8
10	Number of individual field guides/manuals to be produced to assist work related to species identification, classification and recording							
11A	Number of papers to be published in peer reviewed journals							4
11B	Number of papers to be submitted to peer reviewed journals							4
12A	Number of computer based databases to be established and							

12B	handed over to the host country Number of computer based databases to be enhanced and handed over to the host country							
14A	Number of conferences/seminars/ workshops to be organised to present/disseminate findings					2	0	2
14 B	Number of conferences/seminars/ workshops attended at which findings from Darwin project work will be presented/ disseminated.					2		2
20	Estimated value (£'s) of physical assets to be handed over to host country(ies)			£5031.93 (3 motorbikes, 2 cameras, 4 GPS units, 5 laptops, 2 voice records, 2 generators)				5031.93 (3 motorbikes, 2 cameras, 4 GPS units, 5 laptops, 2 voice records, 2 generators)
23	Value of resources raised from other sources (e.g., in addition to Darwin funding) for project work					0	0	0

Table 2 Publications

Title	Type (e.g. journals, manual, CDs)	Detail (authors, year)	Gender of Lead Author	Nationality of Lead Author	Publishers (name, city)	Available from (e.g. weblink or publisher if not available online)

Checklist for submission

	Check
Is the report less than 10MB? If so, please email to Darwin-Projects@ltsi.co.uk putting the project number in the Subject line.	X
Is your report more than 10MB? If so, please discuss with Darwin-Projects@ltsi.co.uk about the best way to deliver the report, putting the project number in the Subject line.	
Have you included means of verification? You need not submit every project document, but the main outputs and a selection of the others would strengthen the report.	X
Do you have hard copies of material you want to submit with the report? If so, please make this clear in the covering email and ensure all material is marked with the project number.	X
Have you involved your partners in preparation of the report and named the main contributors	X
Have you completed the Project Expenditure table fully?	X
Do not include claim forms or other communications with this report.	