





Darwin Initiative Main Project Annual Report

Important note: To be completed with reference to the Reporting Guidance Notes for Project Leaders: it is expected that this report will be no more than 10 pages in length, excluding annexes

Submission Deadline: 30 April

Darwin Project Information

Project Reference	22-009
Project Title	Securing Suklaphanta Wildlife Reserve's Grassland and wellbeing of local communities
Host Country/ies	Nepal
Contract Holder Institution	Zoological Society of London
Partner institutions	Department of National Parks and Wildlife Conservation (DNPWC)
	National Trust for Nature Conservation (NTNC)
	Himalayan Nature (HN)
Darwin Grant Value	£ 284,417
Funder (DFID/Defra)	DFID
Start/end dates of project	1 April 2015 to 31 March 2018
Reporting period (e.g., Apr 2015 – Mar 2016) and number (e.g., Annual Report 1, 2, 3)	Apr 2015-Mar 2016, Annual Report 1
Project Leader name	Baral, Hem Sagar
Project website/blog/Twitter	
Report author(s) and date	30 April 2016

1. Project Rationale

The Suklaphanta Wildlife Reserve (SWR) Management Plan identified overgrazing in core and peripheral areas as a major cause of decline of grassland habitat and animals. Nearly 10,000 cattle, constituting 85% of the buffer zone population, graze freely within the core and peripheral area of SWR per day. The frequent and unregulated sharing of grazing land not only results in overgrazing, but also increases the risk of disease transmission between domestic ruminants and wild animals. For example, 20 swamp and hog deer died in a foot and mouth disease (FMD) outbreak in 2010-11. This failure to manage transmittable diseases poses a serious threat to wildlife.

Cattle, however, play a significant role in the local economy. Over 22000 households (143,395 people) reside in the buffer zone and are dependent on livestock for their income and nutritional needs. Cattle management is still based on traditional herding practices leading to low milk yields. There are inadequate veterinary facilities to address livestock health concerns, which often leads to severe economic losses. Women, typically responsible for fodder collection, sometimes suffer severe spinal injuries from falls from trees whilst collecting fodder in and

around SWR. These concerns have been highlighted by communities and DNPWC during meetings with NTNC and ZSL.

The project is being implemented in Suklaphanta Wildlife Reserve located in the far western lowland Nepal in Kanchanpur district. The reserve established in 1976, covers an area of 305 sq. km. An additional 243.5 sq. km area around the reserve was declared as buffer zone in 2004.

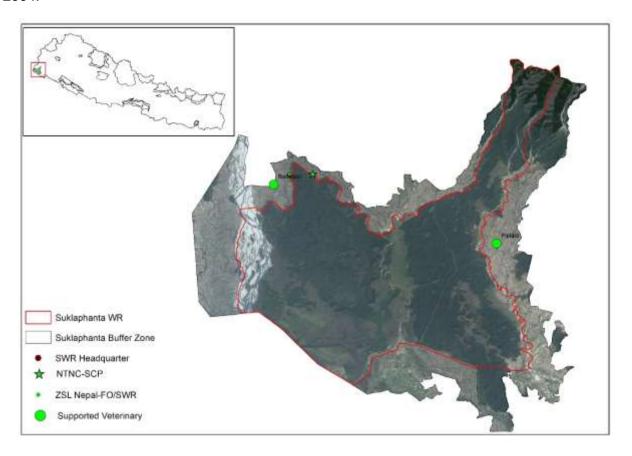


Fig 1: Map of the project location

2. Project Partnerships

ZSL has involved all major stakeholders in biodiversity conservation and protection in Nepal which includes Department of National Parks and Wildlife Conservation (DNPWC) and National Trust for Nature Conservation (NTNC) and Himalayan Nature (HN) Nepal facilitating improved communication and coordination. A Programme Coordination Committee (PCC) has been formed chaired by the Deputy Director General and members constitute section head of DNPWC and Country Manager of ZSL Nepal. Project proposal was shared with PCC for review and approval to carry out project activities. PCC is also responsible for monitoring of the project from the government side. Similarly, a Project Management Unit (PMU) has been formed in site for implementation of this project chaired by the Chief Conservation Officer of SWR. The members of PMU constitute representatives of NTNC and ZSL. Other important stakeholders are invited in the PMU meetings such as Chairman of Buffer Zone Management Committee and local conservation organisations. The PMU is also responsible for coordination among partners, Buffer Zone Management Committee and local communities, monitoring progress, facilitating project activitities and reporting to PCC.

ZSL has signed project agreement with its project partners, detailing the activities and responsibilities for each partner. ZSL provides needed technical assistance and coordination among the partners for effective implementation and tracking progress. All the partners and relevant stakeholders are involved during implementation, monitoring and evaluation of the project.

As community members are the direct beneficiaries of the project and also partially responsible for sustainability of the project activities, involvement of the communities is critical for success of this project. Communities have been engaged while implementing the project activities through regular meeting, interactions and active participation. Community members have been involved in site selection of the vet clinics, development of guidelines for operation of dairy cooperatives and finding solutions for improving fodder accessibility.

Apart from the partners identified during the project development, we have been successful to collaborate with District Livestock Service Office (DLSO) for this project. The DLSO of Kanchanpur District has been playing key role in running the veterinary clinics. DLSO is the government agency responsible for the development and promotion of livestock husbandry in Nepal. This has been therefore a remarkable achievement to ensure sustainability of project activities.

During this reporting period, ten events of meeting and workshop were conducted with participation from all project stakeholders including Suklaphanta Wildlife Reserve Office, Buffer Zone Management Council, Buffer Zone User Committees, Buffer Zone User Groups, Bhimdutta Municipaliity, District Livestock Service Office, project partners and ZSL. Similarly series of meetings were held with Department of National Parks and Wildlife Conservation at central level to discuss on the project implementation.

3. Project Progress

3.1 Progress in carrying out project activities

Two veterinary clinics have been supported (Photo 5, 6). Two trainings were conducted to enhance capacity for professional livestock management. Trained farmers were made aware of soft-loan scheme and project helped facilitate to access soft loans for buying improved breed of cows (annex 4.5, 4.6 and 4.7). Existing nursery managed by NTNC in Chandmari have been supported by this project to increase fodder access for the communities (Photo 7, 9). This additional support enabled NTNC to distribute 1778 fodder seedlings in addition to their regular distribution. (Photo 7, annex 4.8). Two cooperatives led by the executive committee of women have been formed in Garjamani and Pipraiya. One training has been provided to the management committee on administration and financial management of the cooperatives. A grassland management guideline specific to SWR has been drafted and is under review by the SWR management. Two highly degraded grassland areas for maintaining as 'community managed grasslands' have been identified. Key biodiversity metrics have been established though annual monitoring led by SWR (annex 4.3).

Output 1: Two fully functional veterinary clinics established within the SWR buffer zone.

Community meetings and survey were conducted to identify location for supporting veterinary clinics. One veterinary clinic each in Badaipur and Pipladi was established. Both vet clinics have sufficient space for examination of livestock, storing medicine, a separate lab and a staff room. Additional structures were set up as holding pans and the area has been reinforced with a compound wall. New veterinary staffs are supported through project partner whereas key permanent staffing is in place supported by DLSO.

Output 2: Women-run dairy cooperatives facilitating more productive cattle farms within the SWR buffer zone.

A socio-economic assessment was carried out in the buffer zone of SWR to understand the social dynamics and livestock husbandry practices prior to the project intervention. Based on the results of this study, our support for dairy cooperatives and livestock farming started.

Two women led diary cooperatives were setup in Piparaiya and Garjamani. Seed money has been provided to the cooperatives. Operational guidelines for the cooperative developed in consultation with the BZMC and SWR. The cooperative is formed and legally registered under the BZMC/SWR. The cooperative is managed by an executive committee and progress/operation monitored by the SWR/BZMC/NTNC team. The cooperative will be providing the farmers funds to purchase improved breed of livestock in soft loan basis from

year 2. The list of executive committee members is provided in annex 4.5, 4.6 and 4.7. Likewise project has facilitated milk-commercialisation through regional/national milk traders in the local market based on the market survey.

Output 3 - Grassland management guidelines in place and plan operational

Grassland management guidelines based on the best practices drafted and shared with the government agencies for review. Based on the grassland management guidelines and existing practices of SWR, grassland management experimentation is being carried out. Five experimental plots have been set up in Singhpur phanta where different interventions such as cutting, burning and mix of both are being applied to study the effectiveness and relevancy of these interventions in context of SWR and lowland terai grasslands of Nepal. The aim of grassland management is to maintain desired grassland assemblages and diversity to maximise biodiversity.

Output 4: Annual biodiversity monitoring programme for SWR in place. Target species include hog deer (Axis porcinus), swamp deer (Cervus duvaucelii), Bengal tiger (Panthera tigris), Bengal florican (Houbaropsis bengalensis) and Hodgson's Bushchat (Saxicola insignis).

The project supported annual monitoring survey for Hodgson's Bushchat. The project initiated dialogues with DNPWC and other conservation organisations for sharing of the biological and socio-economic monitoring data. Biological monitoring surveys are primarily carried out by SWR, NTNC, HN, ZSL, Bird Conservation Nepal (BCN) and World Wildlife Fund (WWF). ZSL provided human resources and technical support for these surveys. The annual monitoring surveys for key species will be continued in Year 2 and Year 3 of the project.

3.2 Progress towards project outputs

Output 1:	Two fully functional veterinary clinics established within the SWR buffer zone.			Output will be achieved by the end of the project. The proposed indicators are sufficient to measure the project output
	Baseline	Change recorded by 2016	Source of evidence	
Indicator 1 Two clinics refurbished and equipment procured by the end of year 1.	Clinics lack basic facilities	Two veterinary clinics refurbished; one clinic at Badaipur and other clinic at Pipladi.	See Photo 6. Partners report.	
Indicator 2 Four veterinary staff recruited and trained by the end of year 1.	0	Four veterinary staff providing service from these clinics	Completion report by partner	
Indicator 3 Each veterinary clinic served at least 750 households by the end of year 2 and 1250 households by the end of year 3.	Badaipur clinic = 1264 and Pipladi = 1789 households	Baseline value	Annex 4.1 of the annex section	Significant increase in the number of households served by both clinics
Indicator 4 Each clinic	Badaipur= 500	Baseline value	Annex 4.1 of the Annex section	Significant increase in

vaccinates at least	Pipladi= 248		the number of
300 cows against			households
FMD by the end of			served by
year 3.			both clinics

Output 2:	Women-run dairy cooperatives facilitating more productive			Comments (if
	cattle farms within the SWR buffer zone.		necessary)	
	Baseline	Change recorded	Source of	
		by 2016	evidence	
Indicator 1 Two dairy cooperatives with 15-25 female members established through existing cooperative legal structures by year 1.	0	Two women-led dairy cooperative established. Active participation of village women for dairy business helping support livelihood of the families.	Photos 1,2,3 Annex 4.5 and 4.6 of Annex section	
Indicator 2 Number (target = 20) of households with improved cows obtained with support from the project by the end of year 2	0	Mechanism for soft loan in place and farmers are aware of the scheme.	Not available	
Indicator 3 Increases in household annual milk yield, consumption and commercialisation from year 1 baselines.	Annual Milk Production HH in Trishakti is 890.24 ltr/year and in Suklaphanta 998.58 ltr/year Annual milk marketed is found from the survey is 27557.5 liter per year.	Trained farmers looking after their livestock more professionally with increased yield of milk	Household survey, 2015	

Output 3:	Grassland manager operational.	Grassland management guidelines in place and plan operational.		
	Baseline	Change recorded by 2016	Source of evidence	
Indicator 1 10 reserve staff and 40 community members trained in grassland management techniques by the end of year 2.	0	0		Activity for year 2
Indicator 2 50% reduction of	17000	Not available	Field survey carried by,	

area of SWR experience illegal grazing from year 1 to year 3			NTNC in August 2015	
Indicator 3 Number of households planting fodder species increases by 20% from year 1 baseline by the end of year 3.	358 households	1778 fodder seedlings distributed in year 1 to 90 households.	Partner annual report (2014) Annex 4.8 of the annex section	
Indicator 4 Number of households practicing stall feeding increases by 30% from year 1 baseline by the end of year 3.	0	.N/A	ZSL Socio- economic report (2015)	Final assessment in Year 3

Output 4:	Biodiversity monitoring programme for SWR in place.			Comments (if necessary)
	Baseline	Change recorded by 2016	Source of evidence	
Indicator 1 Baselines for key indicator species established for year 1 of the project in consultation with other stakeholders	Tiger 15 Rhino 8 Bengal Florican 8 Hog Deer 6.76 ±3.42/km² Hodgson's Bushchat 7 Swamp Deer 2301 (2014)	Annual survey ongoing led by SWR	SWR Annual report (2014) Annex 4.3, Annex section	
Indicator 2 Monitoring surveys carried out in year 2 and year 3 of the project	Baseline figure of at least five key species in place	Not available	Not available	
Indicator 3 Results are fed into SWR Management Plan and grassland management guidelines by the end of year 3	SWR management plan outdated and no grassland management guidelines	Draft grassland management guidelines for SWR prepared.	Draft grassland management guideline report	

3.3 Progress towards the project Outcome

Outcome:

Healthy grassland ecosystems in and around Suklaphanta Wildlife Reserve contributes to the well-being for 2500 households through productive livestock, better access to veterinary

	services and more a	accessible fodder		
	resources.			
	. 5000.			
	Baseline	Change by 2016	Source of	
	Daseillie	Change by 2016	evidence	
Two VDCs around	0	Meetings held	i.e. Annex 4.4,	
SWR actively		with Buffer Zone	annex section,	
implementing		Management	Photo 5 and 6	
community		Committee to		
managed		prepare		
grassland		management		
guidelines		guidelines for		
covering at least 10 km ² of the		community		
buffer zone by		managed grasslands. Sites		
year 3.		selected for		
) • • • • • • • • • • • • • • • • • • •		interventions in		
		Bhimdatta		
		Municipality,		
		buffer zone area.		
DNPWC managing	0	Draft grassland	Draft grassland	
grasslands according to		management guidelines for	management guideline report	
guidelines in at		SWR in place.	guideline report	
least 16 km2 of the		Experiment plots		
PA by the end of		setup in Singhpur		
year 3.		phanta		
		grasslands.	N	
Key biodiversity metrics stabilised	Tiger population :	Not available	Not available	
or improved within	15 (SWR 2015 census)			
SWR by year 3.	CC113d3)			
Increase of tiger	Bengal Florican			
population from 15	population: 8			
to 20, swamp deer	(BCN, 2015)			
and hog deer				
populations stable, Hodgson's	Swamp deer			
Bushchat and	Population 2301			
Bengal florican	(SWR 2014)			
population	,			
increased by 10%	Hodgson's			
from 2014 levels.	Bushchat 7			
	(SWR/ZSL 2014)			
	Hog deer: 6.76			
	±3.42/km ²			
80% reduction in	171 cases treated	897 cases treated	Annex 4.1 of	
zoonotic disease	by two clinics in	by Badaipur	annex section	
outbreaks by the	2014	veterinary clinics		
end of year 3.	105 !!	N		
Economic losses	105 livestock lost	Not available	Annex 4.12 of	
from lack of	to diseases		Annex section	
veterinary care reduced by 50%				
from year 1				
	ļ ·			
baseline	Middle class 24.24		Household	

households respondents (disaggregated by gender) report average improvement in wellbeing scores (using locally defined indicators and material style of life) by year 3	% Average 46.97% Poor Ultra-poor 6.82%	21.97%	Not Available	survey data Annex 4.13 of Annex 4 of the report	

3.4 Monitoring of assumptions

	Outcome Assumptions	Comments
Assumption 1	Nepal political situation remains conducive to work.	Economic blockade during early quarters of first year made the construction work to delay for few months.
Assumption 2	Partners involved remain committed to the project.	Partners are highly committed to the project implementation.
Assumption 3	Communities recognise the benefits from management practices and adopt them.	Communities are actively participating with the implementation of the project and appreciate the benefits of the project support.

	Output Assumptions	Comments	
Assumption 1	Ministry of Agriculture and Cooperatives, Government of Nepal continues promoting improved cow breeds to increase milk yields	put agriculture as high priority sector	
Assumption 2	Existing dairy value chains and markets remain in place during and after the project.	,	
Assumption 3	Appropriate grassland management, fodder plantations and introduction of stall feeding are sufficient to support the food needs of the improved cows	There is no possible reason to doubt that the assumption does not hold true.	

3.5 Impact: achievement of positive impact on biodiversity and poverty alleviation

The project aims towards poverty alleviation through its income generating activities supported by women run dairy subcommittee. The dairy sub-committees provide support for poor households who cannot afford to have improved breed of livestock through soft loan programmes. The executive committee for the dairy cooperatives has been formed and ensured that it is led by the women addressing also the gender component, to provide loan in the lowest interest to its members. The operational guidelines for providing soft loans have also been prepared by the community following discussions among the community members. Fodder seedlings distributed to 90 households have enabled them to grow fodder in their private farms reducing their dependency on reserve. Farmers have been made aware and linked to tap more out of the existing national livestock insurance scheme. Permanent grasslands experiment plots have been established to improve understanding of the grasslands

ecosystem and how they change over time. These plots will form part of a long term monitoring and research led by the SWR. The annual monitoring of key animal species has helped in the adaptive management of the SWR.

4. Contribution to SDGs

The following SDGs are relevant to the project.

Goal 2: No poverty: The project is in initial stage of implementation so no contributions toward the goal has been made but soft loan programme for dairy subcommittee has been done which will help for promoting access for alternative income through sustainable dairy farming.

Goal 3: Good Health and Wellbeing: Through its income generating activities and increased resource to fodder collection, the project aims to increase wellbeing of local community in the project site.

Goal 5: Gender Equality: The Women Run Dairy cooperative established under the project is major indicator of promoting women towards income generating sources and ultimately to community development.

Goal 15: Life on Land: Through community managed grassland, the project aims to reduce illegal grazing pressure on the wildlife reserve thus protecting and restoring threatened grassland ecosystem while also promoting easier access to fodder resources.

5. Project support to the Conventions, Treaties or Agreements)

S.N.	Convention, treaty, agreement	Project contribution to meet national obligations
1	Convention of Biological Diversity	The project completed awareness raising programme for grassland management (Target 1), drafted grassland management guidelines which support target 4, 5, 7 and 9 of the CBD. Similarly, grassland management work as part of the experimentation help meets the target 12, 17, 18 and 19 by collecting robust set of data (See Annex 4.3). The project also supporting local communities to reduce fodder pressure on forest and wellbeing of the communities by supporting for improved breed of livestock thus meeting target 12.
2	Convention on the International Trade on Endangered Species of Fauna and Flora	The project does not directly contribute to this convention. However, the activity to improve data sharing among the partners is in line with the obligations of the convention.
3	National Biodiversity Strategy and Action Plan	The overall goal of the project is in line with the NBSAP. The draft management guidelines support to meet the target of NBSAP in 'sustainable management of at least five grasslands and five wetlands inside protected areas prepared and implemented by 2020.'

6. Project support to poverty alleviation

The project is largely aimed to poverty alleviation through direct and indirect measures. The project has already contributed in setting up dairy subcommittee which will directly help for monetary assistance for upgrading dairy farming through soft loan programme, increased food security through increased dairy production, easier reach to veterinary health service through establishment of veterinary clinic and increased income through adding up the product in existing dairy value chain. Almost all members of the subcommittee are women which also help in promoting women's role in economy and decision making. The project is promoting stall feeding practices through awareness raising programmes and fodder seedling support reducing the number of women going inside the reserve for collecting fodder. This will have positive impact on the health of women and reduce chances of injuries due to animal attack and falling off the trees while collecting fodder.

7. Project support to Gender equity issues

Socio-economic studies have pointed out that women are poorly represented in decision making process and access to resources. The inclusion of women in the meetings as well as during implementation of the activities has been ensured. As women are primarily engaged with rearing of livestock and fodder collection, they are the main beneficiaries of the project. The project has focused on providing better access to fodder, health care of livestock and empowering women.

One of the main activities proposed in the project is formation of women-led dairy cooperatives (Annex 4.5, 4.6 and 4.7). The project has empowered women with decision making ability in selection and disbursement of the loans for better investment. Similarly out of 90 households supported for fodder seedlings, 64 households were represented by women (4.8). The likelihood of the success of fodder seedlings being planted increases as women are mostly involved with ensuring fodder for livestock in Nepal. The project activities have supported the gender equity and social inclusion by empowering women.

8. Monitoring and evaluation

Programme Coordination Committee and Project Management Unit are the key monitoring unit setup by the project monitoring and evaluation of project implementation, progress and results. Similarly SWR in coordination with project partners is conducting regular monitoring of the project progress at the site. Regular visits have been conducted by project manager to monitor and evaluate the project implementation. Consultant hired by the project has provided independent assessment of the project implementation especially on the setup of the clinics. Four monitoring visits were made in the Year 1 (See Annex 4.10).

9. Lessons learnt

Administrative: A detailed work plan involving all the partners and their respective responsibilities along with agreement is vital for project involving various partners.

Implementation: Use of established community managed institution body such as for a dairy development subcommittee sitting under the umbrella of Buffer Zone Management Committee has proven to be easier than to establish a new institutional setup. As direct beneficiaries are managing the subcommittee, a greater sense of ownership and effective management is hoped to be a step forward for success of the project.

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

Not applicable

11. Other comments on progress not covered elsewhere

An earthquake of 7.9 magnitude hit Nepal on April 25, 2015. This was followed by hundreds of aftershock which are still occurring. This had a significant impact on the timetable of the project. There was a delay in national level engagement with government institutions in the first month of the project impacting our project implementation workplan as most of the Department of National Parks and Wildlife Conservation (DNPWC) staff were engaged in the assessment of damage, rescue and relief work in earthquake affected protected areas.

Nepal has been in the process of adopting a new constitution as well as a federal form of government. The release of the draft constitution resulted in a series of strikes and riots all across the lowlands which slightly affected the implementation of the project activities.

Due to above reasons the project suffered delays in the implementation of some activities for this reporting period. However, the project team has made commendable efforts in

collaboration with our partners to ensure that most activities are completed on time and that the project achieves the outputs for the first year as planned.

The project has come at a critical time for SWR in the wake of the natural disasters and political turmoil. People in the buffer zone are sending more livestock inside the park for grazing and often disowning the livestock. These stray livestock are mostly suffer from diseases therefore do not carry any value to local people often seen as economic burden. The veterinary services provided through this project is critical to improve the livestock health of the buffer zone inhabitants some of them have no second means of living. This project also aims to minimise livestock disease transmission to wild stock at SWR and viceversa.

12. Sustainability and legacy

The key achievement toward sustainability of the project activities are:

- 1) Active involvement of SWR, BZMC and DLSO in the setup of the veterinary clinics. DLSO has agreed to provide support for these clinics in future through their annual programmes. Similarly, radio awareness programmes conducted by this project is important for marketing the presence of clinics ensuring increased use of these clinics by communities. The effectiveness of awareness programme is yet to be measured and we will be able to report more on this in Year 2 and 3.
- 2) Setup of women led-cooperatives has been completed in lead of the local communities and BZMC. The cooperatives were formed within the existing setup of BZMC and thus BZMC has fully owned the operation and management of these cooperatives. Guidelines document for management and operation are in place (Annex 4.11)
- 3) Support provided to upgrade nursery managed by NTNC. NTNC has permanent presence at the site and also runs several projects for community development. NTNC will be taking forward this work even after the completion of project.
- 4) Experimental plots to study the effect of management intervention based on the recommendations of draft grassland management guidelines has been initiated. Integration of the grassland management guidelines into the management plan has been discussed. This will be again completed in year 2 and 3.

13. Darwin Identity

Darwin Initiative has been mentioned in each agreement signed with the partners. Similarly, Darwin Initiative has been mentioned in awareness raising materials. ZSL Quarterly Newsletter started from this year will be mentioning DI logo and brief description of the project.

The contribution of the DI will be mentioned in a special plaque to be kept in the veterinary centres. The DI logo along with other project partners will be placed in the clinics after its completion. DNPWC, partner organisations, other conservation organisation working at national level and site, BZMC, DLSO and local communities know about the DI support through various education and awareness programmes.

14. Project Expenditure

Table 1 Project expenditure during the reporting period (1 April 2015 – 31 March 2016)

Project spend (indicative)	2015/16	2015/16	Varian	Comments
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since last annual report	Grant (£)	Total Darwin Costs (£)	ce %	(please explain significant variances)
Staff costs (see below)			6%	
Consultancy costs			4%	
Overhead Costs			-1%	
Travel and subsistence			0%	
Operating Costs			5%	
Capital items (see below)			8%	
Others (see below)			0%	
TOTAL				

No change in project budget was requested to Darwin Initiative.

Annex 1: Report of progress and achievements against Logical Framework for Financial Year 2015-2016

Project summary	Measurable Indicators	Progress and Achievements April 2015 - March 2016	Actions required/planned for next period
Impact ⇒ This project will lead to improvement habitat with associated increases in underpinned by a more sustainable	n grassland dependant wildlife,	The project has completed all the activities planned for the year 1 despite some delays due to earthquake and political turmoil. The project has improved the access of the veterinary services for local communities, fodder seedlings and better grassland management in SWR. As the project is only in first year of implementation, the impact of the project will be more reflected in year 2 and 3.	
Outcome Healthy grassland ecosystems in and around Suklaphanta Wildlife Reserve contributes to the wellbeing for 2500 households through productive livestock, better access to veterinary services and more accessible fodder resources.	Indicator 1 Two VDCs around SWR actively implementing community managed grassland guidelines covering at least 10 km2 of the buffer zone by year 3. Indicator 2 DNPWC managing grasslands according to guidelines in at least 16 km2 of the PA by the end of year 3.	Two veterinary clinics have been supported (Photo 5, 6). Two trainings were conducted to enhance capacity for professional livestock management. Trained farmers were made aware of soft-loan scheme and project helped facilitate to access soft loans for buying improved breed of cows (annex 4.5, 4.6 and 4.7). Existing nursery managed by NTNC in Chandmari have been	Operation of veterinary clinics. Finalisation of grassland management guidelines. Continuation of annual monitoring surveys, coordination with DLSO to link farmers supported by the project to tap more benefits from government schemes, Training for SWR/NTNC staff on
	Indicator 3 Key biodiversity metrics stabilised or improved within SWR by year 3. Increase of tiger population from 15 to 20, swamp deer and hog deer populations stable, Hodgson's Bushchat and Bengal florican population increased by 10% from 2014 levels. fodder access for the communities (Photo 7, 9). This additional support enabled NTNC to distribute 1778 fodder seedlings in addition to their regular distribution. (Photo 7, annex 4.8). Two cooperatives led by the executive committee of women have been formed in Garjamani and Pipraiya. One training has been provided to the management	(Photo 7, 9). This additional support enabled NTNC to distribute 1778 fodder seedlings in addition to their regular distribution. (Photo 7, annex 4.8). Two cooperatives led by the executive committee of women have been formed in Garjamani and Pipraiya. One training has been provided to the management	grassland management, Training for cooperatives management team on fund operation etc.
	Indicator 4 80% reduction in zoonotic disease outbreaks by the end of year 3.	committee on administration and financial management of the cooperatives. A grassland management guideline specific to SWR	

	Indicator 5 Economic losses from lack of veterinary care reduced by 50% from year 1 baseline. Indicator 6 At least 50% of households respondents (disaggregated by gender) report average improvement in wellbeing scores (using locally defined indicators and material style of life) by year 3 compared to Year 1 baseline.	has been drafted and is under review by the SWR management. Two highly degraded grassland areas for maintaining as 'community managed grasslands' have been identified. Key biodiversity metrics have been established though annual monitoring led by SWR (annex 4.3).	
Output 1. Two fully functional veterinary clinics established within the SWR buffer zone. We will establish two clinics, one in the south eastern corner of the Reserve and the other in the Northeast, to enable access to the highest number of farmers and highest level of people-reserve interaction and highest number of cattle.	Indicator 1 Two clinics refurbished and equipment procured by the end of year 1. Indicator 2 Four veterinary staff recruited and trained by the end of year 1.	Community meetings and survey were conducted to identify location for supporting veterinary clinics. One veterinary clinic each in Badaipur and Pipladi was established. Both vet clinics have sufficient space for examination of livestock, storing medicine, a separate lab and a staff room. Additional structure were set up as holding pans and the area has been reinforced with a compound wall. New veterinary staffs are supported through project partner whereas key permanent staffing is in place supported by DLSO. The indicator proposed for measuring output progress is able to reflect the success and failure.	
	Indicator 3 Each veterinary clinic served at least 750 households by the end of year 2 and 1250 households by the end of year 3. Indicator 4 Each clinic vaccinates at least 300 cows against FMD by the end of year 3.		
Activity 1.1 Hold community meetings to discuss clin	ic set up, benefits and needs.	A total of 10 meetings was held at site to Clinics. See details in Annex 4.9.	discuss on setup and operation of the
Activity 1.2 Conduct survey on current levels and use	e of veterinary services.	Survey conducted in Garjamani area. (Da	ata)

Choose and agree the location to ensure maximum benefit with DNPWC and		A total of 4 meetings was held with community representatives and project partners held. The meetings agreed two sites for veterinary clinics support in Badaipur and Pipladi.
Set up the veterinary clinics, refurbishing as needed and procuring equipment		One in Badaipur, west of SWR (new building supported) and one in Pipladi east of SWR (partially supported for renovation). Supplies and equipment being purchased.
Activity 1.5 Recruitment and training of vets, technicic cattle breeds and other needs as determ		New veterinary staffs recruited by NTNC. The project is also supporting staff already in place.
Activity 1.6 Encourage gradual handover to the DNP	WC via regular joint monitoring visits	Five joint monitoring visits by SWR, BZMC, NTNC, ZSL and DLSO conducted. BZMC and DLSO have committed to take responsibility of management and operation of these veterinary clinics.
Activity 1.7 Clinics handed over to DNPWC		Dialogue initiated in lead of SWR to engage DLSO in the maintenance and operation of the clinic after the project termination. DLSO has committed to increase support for these vet clinics through government funding in future.
Activity 1.8 Reporting		Half yearly report and newsletter article on project progress submitted to DI.
Output 2. Women-run dairy cooperatives facilitating more productive cattle farms within the SWR buffer zone.	Indicator 1 Two dairy cooperatives with 15-25 female members established through existing cooperative legal structures by year 1.	A socio-economic assessment was carried out in the bufferzone of SWR to understand the social dynamics and livestock husbandry practices prior to the project intervention. Based on the results of this study, our support for dairy cooperatives and livestock farming started. Two women led diary cooperatives were setup in Piparaiya and Garjamani. Seed
	Indicator 2 Number (target = 20) of households with improved cows obtained with support from the project by the end of year 2.	money has been provided to the cooperatives. Operational guidelines for the cooperative developed in consultation with the BZMC and SWR. The cooperative is formed and legally registered under the BZMC/SWR. The cooperative is managed by an executive committee and progress/operation monitored by the SWR/BZMC/NTNC team. The cooperative will be providing the farmers funds to purchase improved breed of livestock in soft loan basis from year 2. The list of
	Indicator 3 Increases in household annual milk yield, consumption and commercialisation from year 1 baselines.	executive committee members is provided in annex 4.5, 4.6 and 4.7. Likewise project has facilitated milk-commercialisation through regional/national milk traders in the local market based on the market survey. Indicators proposed are sufficient and appropriate to track the progress towards output.
Activity 2.1 Assessment of current livestock holdings in the 4 VDCs adjacent to SWR and identify potential farmers interested in adopting an improved cow(s), using FPIC		Socio-economic assessment completed. 84 % of the households rear livestock.

Activity 2.2 Familiarisation visit for interested farmers to area where improved cattle farming is in place		Interest Interested 50 farmers identified and two areas for familiarisation visit completed by partners.
Activity 2.3 Facilitate purchase of improved breed of cows – e.g. via soft loans, facilitating access to existing government loan programmes		Two Cooperatives led by the executive committee of women have been formed in Garjamani and Pipraiya. Training provided to the management committee on administrative and financial management of the cooperative. Interested farmers were facilitated to access soft loans to buy improved breed of cows.
Activity 2.4 Promote and link to existing livestock ir investing in improved breeds of cows	nsurance schemes for households	Meetings held with Department of Livestock Services and insurance company. Awareness raising materials produced to inform communities.
Activity 2.5 Facilitate increased milk commercialisation through regional/national milk traders in local markets		Market research in Dhangadi and Mahendranagar completed. Existing successful Dairy industry were visited eg. Pathak Dairy Industry consulted.
Activity 2.6 Reporting and preparation of a peer-reviewed paper		Reporting completed. A newsletter article submitted to Darwin Initiative. Manuscript drafted for peer-review.
Output 3 - Grassland management guidelines in place and plan operational Indicator 1 10 reserve staff and 40 community members trained in grassland management techniques by the end o year 2. Indicator 2 50% reduction of area of SWR experience illegal grazing from year 1 to year 3. Indicator 3 Number of households planting fodder species increases by 20% from year 1 baseline by the end of year 3.	10 reserve staff and 40 community members trained in grassland management techniques by the end of	Grassland management guidelines based on the best practices drafted and shared with the government agencies for review. Based on the grassland management guidelines and existing practices of SWR, grassland management experimentation is being carried out. Five experimental plots have been set up in Singhpur phanta where different interventions such as cutting, burning and mix of both are being applied to study the effectiveness and relevancy of these
	50% reduction of area of SWR experience illegal grazing from year 1	interventions in context of SWR and lowland terai grasslands of Nepal. The aim of grassland management is to maintain desired grassland assemblages and diversity to maximise biodiversity. Indicators proposed are sufficient and appropriate to track the progress towards output.
	- output	
	Indicator 4 Number of households practicing stall feeding increases by 30% from year 1 baseline by the end of year 3.	
Activity 3.1 Meeting with DNPWC with relevant stakeholders to discuss grassland		Meetings held with DNPWC and SWR. Committee has been formed under the lead of Deputy Director General of DNPWC. Grassland management guidelines

drafted.
Two key areas for community managed grasslands identified within the buffer zone in consultation with partner and community representatives.
Literature review and villager perception completed for information to be incorporated into the management plan of SWR.
Draft management plan in place.
Draft guidelines prepared. Guidelines under review by DNPWC.
Interested DNPWC staff and community members identified and taken for field visits. Training proposed for first and second quarter of year 2.
Support provided to re-run the nursery in Chandmari managed by NTNC. Nursery distributed 1778 fodder seedlings in year 1.
Awareness raising radio jingles aired through local FM radio stations.
Research design approved and endorsed by SWR. Area has been selected and setup of plots has been started
Proposed in Year 3

Output 4 – Annual biodiversity monitoring programme for SWR in place. Target species include hog deer (Axis porcinus), swamp deer (Cervus duvaucelii), Bengal tiger (Panthera tigris), Bengal florican (Houbaropsis bengalensis) and Hodgson's bushchat (Saxicola insignis).	Indicator 1 Baselines for key indicator species established for year 1 of the project in consultation with other stakeholders Indicator 2 Manitoring curveys carried out in year 2	The project supported annual monitoring survey for Hodgson's Bushchat. The project initiated dialogues with DNPWC and other conservation organisations for sharing of the biological and socio-economic monitoring data. Biological monitoring surveys are primarily carried out by SWR, NTNC, HN, ZSL, Bird Conservation Nepal (BCN) and World Wildlife Fund (WWF). ZSL provided human resources and technical support for these surveys. The annual monitoring surveys for key species will be continued in Year 2 and Year 3 of the project.
(Caracola moigino).	Monitoring surveys carried out in year 2 and year 3 of the project	Indicators proposed are sufficient and appropriate to track the progress towards output
	Indicator 3	
	Results are fed into SWR Management Plan and grassland management guidelines by the end of year 3	
Activity 4.1 Hold discussions with relevant conservation agencies (e.g. DNPWC, NTNC, WWF, BCN) working in SWR to encourage data sharing and cooperation and agree on monitoring protocols		Meetings held in the lead of Director General of the DNPWC to improve the coordination among conservation partners in Nepal. DNPWC acting as a focal point of coordination among different conservation organisations.
Activity 4.2 Provide technical and logistic support for annual monitoring surveys for target species. The project will conduct some surveys – e.g. Hodgson's bushchat and hog deer – and will liaise with other NGOs/SWR to get survey results on other target species (i.e. tigers and Bengal floricans), providing technical advice wherever needed.		Support provided for Hodgson's Bushchat survey (data in baseline) Hog deer survey completed by DNPWC from its internal resources. Other species monitoring is planned by project partners. Project staff provided technical support for the monitoring work.
Activity 4.3 Collate information and publish yearly monitoring reports		Compilation of data from survey led by SWR in progress. Data collected for year 1 which forms the baseline.

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
Impact: This project will lead to improvement in Su	ıklaphanta Wildlife Reserve habitat with asso	opiated increases in graceland dependents	wildlife, underninged by a more sustainable
livelihood base for communities.	iniapriarita Wilullie Neserve Habitat With assi	ociated increases in grassiand dependant t	wiidilie, diideipiililed by a mole sustailiable
Outcome: Healthy grassland ecosystems in and around Suklaphanta Wildlife Reserve contributes to the well-being for 2500 households through productive livestock, better access to veterinary services and more accessible fodder resources.	Indicator 1: Two VDCs around SWR actively implementing community managed grassland guidelines covering at least 10 km2 of the buffer zone by year 3. Indicator 2: DNPWC managing grasslands according to guidelines in at least 16 km2 of the PA by the end of year 3. Indicator 3: Key biodiversity metrics stabilised or improved within SWR by year 3. Increase of tiger population from 15 to 20, swamp deer and hog deer populations stable, Hodgson's Bushchat and Bengal florican population increased by 10% from 2014 levels. Indicator 4: 80% reduction in zoonotic disease outbreaks by the end of year 3. Indicator 5: Economic losses from lack of veterinary care reduced by 50% from year 1 baseline. Indicator 6: At least 50% of households respondents (disaggregated by gender) report average improvement in wellbeing scores (using locally defined indicators and material style of life) by year 3 compared to Year 1 baseline.	 VDC annual report, project reports SWR annual report, project reports SWR reports, clinic reports Veterinary clinics log book of service recipient in the clinic, project reports, household surveys Socioeconomic profile survey report of households; report of baseline and annual changes in wellbeing. 	Assumption 1 Nepal political situation remains conducive to work. Assumption 2 Partners involved remain committed to the project. Assumption 3 Communities recognise the benefits from management practices and adopt them.

Outputs:	1a. Two clinics refurbished and	Grassland management	1 Ministry of Agriculture and
Two fully functional veterinary clinics	equipment procured by the end of year	guidelines	Cooperatives, Government of Nepal
established within the SWR buffer zone. We will establish two clinics, one in the	1.	Biological and socioeconomic survey reports	continues promoting improved cow breeds to increase milk yields
south eastern corner of the Reserve and the other in the Northeast, to enable access to the highest number of farmers	1b. Four veterinary staff recruited and trained by the end of year 1.	Training manuals and evaluation reports	2 Existing dairy value chains and
and highest level of people-reserve		4. Veterinary clinic records	markets remain in place during and after the project.
interaction and highest number of cattle.	1c. Each veterinary clinic served at least 750 households by the end of year 2	GIS and satellite maps of grassland areas	. ,
	and 1250 households by the end of year 3.	6. Project progress reports	3 Appropriate grassland management, fodder plantations and introduction of
	G.	7. Peer-reviewed papers	stall feeding are sufficient to support the
	1d. Each clinic vaccinates at least 300 cows against FMD by the end of year 3.	Website information, blogs, social media, images and videos	food needs of the improved cows
Women-run dairy cooperatives in place facilitating more productive cattle	2a. Two dairy cooperatives with 15-25 female members established through	 9. Department of Agriculture and Cooperatives records 	
farms around SWR.	existing cooperative legal structures by year 1.	Department of Livestock Services records and reports	
	2b. Number (target = 20) of households with improved cows obtained with support from the project by the end of year 2.		
	2c. Increases in household annual milk yield, consumption and commercialisation from year 1 baselines.		
3. Grassland management guidelines in place and plan operational. The plan will be prepared for DNPWC to improve grassland habitat, which will also include	3.a 10 reserve staff and 40 community members trained in grassland management techniques by the end of year 2.		
sections on community managed grasslands.	3.b 50% reduction of area of SWR experience illegal grazing from year 1 to year 3.		
	3.c Number of households planting fodder species increases by 20% from		

	year 1 baseline by the end of year 3.
	3.d Number of households practicing stall feeding increases by 30% from year 1 baseline by the end of year 3.
4. Annual biodiversity monitoring programme for SWR in place. Target species include Bengal tiger (<i>Panthera tigris</i>), swamp deer (<i>Cervus duvaucelii</i>), hog deer (<i>Axis porcinus</i>), Bengal florican (<i>Houbaropsis bengalensis</i>) and Hodgson's bushchat (<i>Saxicola insignis</i>)	4a. Baselines for key indicator species established for year 1 of the project in consultation with other stakeholders 4b. Monitoring surveys carried out in year 2 and year 3 of the project 4c. Results are fed into SWR Management Plan and grassland management guidelines by the end of year 3

- 1.1 Hold community meetings to discuss clinic set up, benefits and needs.
- 1.2 Conduct survey on current levels and use of veterinary services.
- 1.3 Choose and agree the location to ensure maximum benefit with DNPWC and VDCs
- 1.4 Set up the veterinary clinics, refurbishing as needed and procuring equipment
- 1.5 Recruitment and training of vets, technicians and support staff, especially on new cattle breeds and other needs as determined by Activity 1.1
- 1.6 Encourage gradual handover to the DNPWC via regular joint monitoring visits
- 1.7 Clinics handed over to DNPWC
- 1.8 Reporting
- 2.1 Assessment of current livestock holdings in the 4 VDCs adjacent to SWR and identify potential farmers interested in adopting an improved cow(s), using FPIC
- 2.2 Familiarisation visit for interested farmers to area where improved cattle farming is in place
- 2.3 Facilitate purchase of improved breed of cows e.g. via soft loans, facilitating access to existing government loan programmes
- 2.4 Promote and link to existing livestock insurance schemes for households investing in improved breeds of cows
- 2.5 Facilitate increased milk commercialisation through regional/national milk traders in local markets
- 2.6 Reporting and preparation of a peer-reviewed paper
- 3.1 Meeting with DNPWC with relevant stakeholders to discuss grassland management plan as per the SWR management plan. Set up core committee to draft management guidelines and lead activities. Director General of DNPWC will be head of the committee.
- 3.2 Meeting with VDC leaders and buffer zone user groups to discuss community needs in terms of grassland use. Set up committees for community managed grasslands/make use of existing forest user groups.
- 3.3 Conduct literature review, field visits, villager perception surveys to be reflected in the management plan
- 3.4 Draft management plan and review meetings with committee and other stakeholders.

3.5	DNPWC publish grassland management guidelines for SWR, including community managed areas
3.6	Provide training for capacity building on grassland management (10 DNPWCs staff and 40 community members)
3.7	Identify areas for nurseries and/or existing nurseries to strengthen and plant fodder species
3.8	Implement grassland management awareness and teaching programme in the 4 VDCs
3.9	Set up grassland management plots and provide tools to SWR to be used by community and DNPWC
3.10	Support DNPWC to draft national Terai grassland management guidelines to be finalised after the completion of this project
4.1 on mor	Hold discussions with relevant conservation agencies (e.g. DNPWC, NTNC, WWF, BCN) working in SWR to encourage data sharing and cooperation and agree nitoring protocols
4.2	Provide technical and logistic support for annual monitoring surveys for target species. The project will conduct some surveys – e.g. Hodgson's bushchat and hog
deer –	and will liaise with other NGOs/SWR to get survey results on other target species (i.e. tigers and Bengal floricans), providing technical advice wherever needed.
4.3	Collate information and publish yearly monitoring reports

Annex 3 Standard Measures

Table 1 Project Standard Output Measures

Code No.	Description	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
6A	Training on administrative and account management	7 Female and 3 male	Nepalese	10				20
6A	Professional Cow Buffalo farming training.	19 F and 6 M	Nepalese	21				40
6A, 6B	Grassland Management (1 Week)							50
20	Veterinary clinics			£31000				£35060
22	Grassland management research plots			5 plots established				5 plots

In Table 2, provide full details of all publications and material produced over the last year that can be publicly accessed, e.g. title, name of publisher, contact details, cost. Mark (*) all publications and other material that you have included with this report.

Table 2 Publications

Title	(e.g. journ als, man ual, CDs)	Detail (author s, year)	Gen der of Lea d Aut hor	Nation ality of Lead Author	Publis hers (name, city)	Available from (e.g.weblink or publisher if not available online)
Bylaws for dairy coopera tives	man ual	Tri- Shakti and Sukla Phanta improve d cows/b uffalo milk producti on sub- committ ee (2016)	Fem ale	Nepale se		https://drive.google.com/open?id=0B3qsekxWA BYuSDVIbWp1TWINcU0 https://drive.google.com/open?id=0B3qsekxWA BYubW5fNTRscDA5Q1U
Operati onal guidelin		Tri- Shakti and	Fem ale	Nepale se		https://drive.google.com/open?id=0B3qsekxWA BYudTBXT3lubW1SekU

es for dairy coopera tives	Sukla Phanta improve d cows/b uffalo milk product on sub- commit ee (2016)	i		https://drive.google.com/open?id=0B3qsekxWA BYuRGZyOHFoOGh6V3M

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